

# 4. The Blended Educator: Advanced Activities



*All growth depends upon activity. Life is manifest only by action.  
There is no development physically or intellectually without effort.*

Calvin Coolidge – Adequate Brevity.



# The Blended Educator: Advanced Activities

Now that we have looked at some of the key considerations associated with developing blended content, let us take the six activities we looked at in the pilot one step further, and explore advanced versions of each of those activities.

The six activities are, Presentations, Podcasts, Videos, Documents, Games, and Searching.

For each of the six activities we have selected two tasks to give you some options to choose from.

For each of these tasks we have detailed instructions as to how to start doing them.

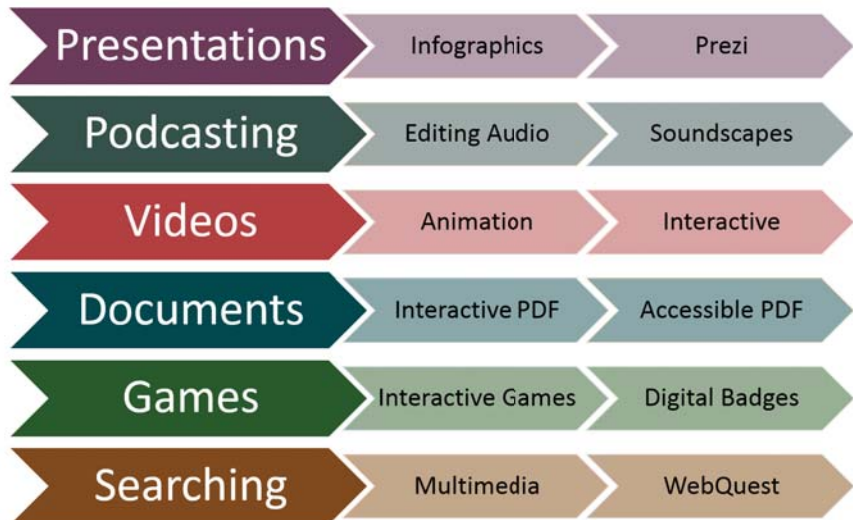


Fig. 4.1 – Topics in this Chapter.

Each task is presented based on the following structure: (See Table 4.1.)

Table 4.1 – How the following sections are structured	
<b>What do I need?</b>	This section covers what hardware and software is required for you to achieve this task.
<b>Where to look for help?</b>	This section mentions online and offline resources that will help you learn more about this task.
<b>How do I prepare?</b>	We have mentioned it before: preparation is key before you start developing content. This section gives some advice on what to do to begin doing this task.
<b>What do I do?</b>	This section details a step-by-step guide to doing this task.
<b>Teaching benefits</b>	This section lists some of the teaching benefits that can occur when you do this task.
<b>Common mistakes to avoid</b>	This section looks at some of the common mistakes people make when developing and teaching this task.
<b>Online or offline?</b>	This section explains whether or not you need internet access for you and your learners to do this task.

## 4.1 Presentations

Creating presentations is a really important skill to develop for the blended educator. You may already use them in a classroom setting. In a blended context, however, it is important to remember to add a little more information into the presentations, to make them independent units of learning.

In this section we'll look at two tasks associated with presentations: creating infographics, and using Prezi, which is an online tool for creating presentations.

### 4.1.1 Creating Infographics with Canva

Infographics are poster-style representations of information in a quick and clear way. The combination of text and graphics allows for the information to be more easily understood by readers.

As always, it is best you do this with totally within your own means. You could draw it on paper, or if you have good graphic design software available (e.g. Adobe Illustrator, Adobe InDesign or Corel Draw) you could use this.

In this book, and in this chapter, we do not assume that you have such expert tools available. Therefore, let us do this tasks by using free online tools.

Caveat: The advantage is that it is quick, and that it is free. The disadvantage is that the results often are boilerplate and standard using just a ready-made template. The templates available are usually overly perfect in visual appearance; carrying a particular aesthetic (starting with the way they use type-faces). You can however reduce this by heavy editing, and creating your own designs from scratch. But these disadvantages aside, you may find online tools for making infographics worth trying.

For example, we managed to create the book cover (Fig. 4.1., this page) in about 4 minutes from a template available at [www.canva.com](http://www.canva.com):

#### What do I need?

- Computer
- Internet access
- The Canva site: [www.canva.com](http://www.canva.com)
- Before using the Canva site you need to create an account. Click on the link above and register for free.

#### Where to look for help?

- <https://support.canva.com> offers tutorials and step-by-step user guides. As a complete novice, click *Getting Started* first.
- You can also watch a wide range of Canva tutorials at <https://designschool.canva.com/tutorials>

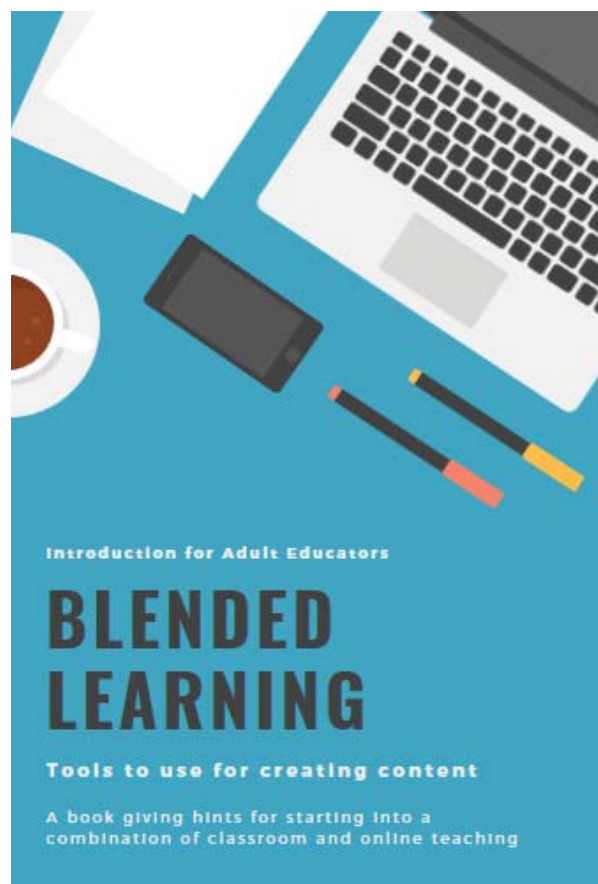


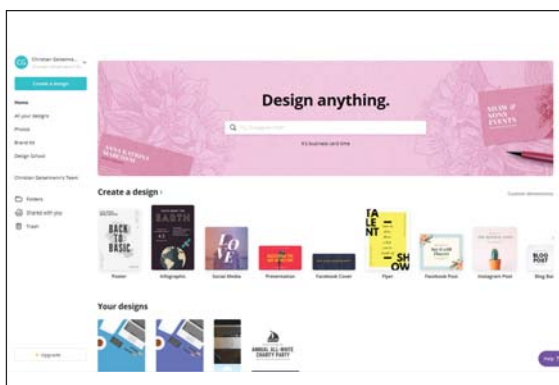
Fig. 4.1 – Book cover quickly created using Canva, from a pre-fabricated template.

## How do I prepare?

- The first thing to do is develop a script for the topic you want to cover. Write down the key words you need to mention about this topic, and based on these words create some sentences. (Some people do not do this by physically writing as they have some clear enough idea in their head. It simply depends on what type of a person you are. Taking notes can help in the beginning.)
- If you want to include photos, make sure you pay attention to copyright and that the photos are of appropriate quality.

## What do I do?

- Once you have registered you enter the application and land on your account page.
- The application asks you what you want to design. Search around until you find “Infographic”. You can also type “Infographic” into the search field. (Adding more information here about how to find that section on the Canva websites does not make much sense as website layouts can change quickly) When we checked last in April 2019, the website looked like this:

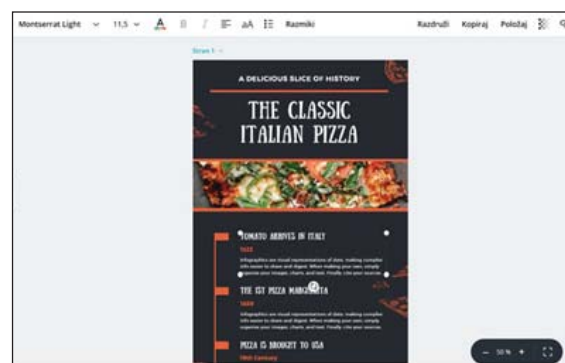


- In this case the icon for “Infographic” is bottom left. Click it. You will then get a number of ready-made designs for infographics to choose from. (See Fig. 4.2.)



Fig. 4.2 – Ready-made designs offered by Canva. (Screenshot taken in late 2018.)

- By clicking on one of the templates the window with the selected template opens.



- By clicking on the template, the toolbar appears above the selected infographic. You can add text, photos, change the font, use colours etc.



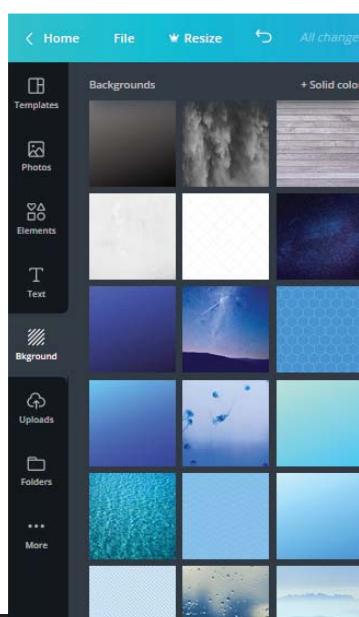
Fig. 4.3 – Toolbar for editing content in Canva.

(See Fig. 4.3)

- There is another menu on the left side of your page. The first icon is about templates. Once you have chosen the template, you can start playing with it: you can add different elements such as photos and graphics, add text, change background, upload your own photos, create folders and use one of many apps to further design your infographics.



- If you for example click on the *Background*' icon, you are offered a number of free templates you can use to change the original one you selected.



- After choosing the background of your infographic, you can start playing with content by adding text. Click on "Text" and then drag and drop heading types. You can change font faces and colours.
- Under "Elements" you can add free photos, grids, frames, shapes, lines, illustrations, icons and charts to your infographic. To select a graphic element, select your chosen category, and then double-click the element, or drag and drop it to the editing screen.

### Teaching Benefits

- Benefits Infographics take textual information and convert it into a highly visual piece of content that people are more likely to read, understand, and remember.
- A good infographic can tell a story.
- Infographics encourage learners to think visually about topics.
- They can help learners to better remember statistical information.

### Common Mistakes to Avoid

- You must define a clear entry point into your graphics. That's the thing to watch (or read) first. The opposite is "weak flow": that's when the reader does not know where to look first.
- You should organise your information clearly and effectively.
- Keep your colour palette small.
- Ensure you choose colours with good contrast. Some people have problems differentiating certain colours.<sup>1</sup>
- Don't forget your hierarchy.

### Online or Offline?

- You can download your infographic in files: .jpg, .png or pdf

<sup>1</sup> Making sure that colour-blind people can read graphics is a science in itself, all the more as there are several types of colour-blindness. A good point to start is watching your graphic with your eyes narrowed to slits. This helps you see contrast of brightness rather than colour.

- You can share your infographics with your colleagues. Simply click the “Share” button on the top right of the editor.

## 4.1.2 Creating a Presentation with Prezi

Prezi is an online tool which allows the user to create presentations. It is an alternative to slide-based tools like PowerPoint (Windows) and Keynote (Mac). The peculiarity is: you draw your presentation on a single canvas, and you zoom in and out of parts of the canvas.

### What do you need?

- Computer
- Internet access
- The Prezi site:

<https://prezi.com>

### Where to look for help?

- Prezi Knowledge base:  
<https://support.prezi.com/hc/en-us>
- The book *Prezi For Dummies* (2010) by Stephanie Diamond

### How do I prepare?

- A good way to begin is by preparing a few points of what you would like to cover in your presentation. You can also decide what supporting details you would like to put in your subtopics.
- It can be useful to sketch on paper the overall shape you want to create on the canvas and create a few sketches of specific elements within the canvas.

### What do I do?

#### 1) Create your account

Go to the Prezi website. Once there, click on the blue *get started* button. There are several options to pick from:

- Basic: This is the basic membership, and comes with a small amount of online storage. All presentations made with this membership are public and can be viewed by everyone.
- Plus and Premium: for higher monthly fees, you get a number of additional services, for example offline access to your presentations. When we last checked

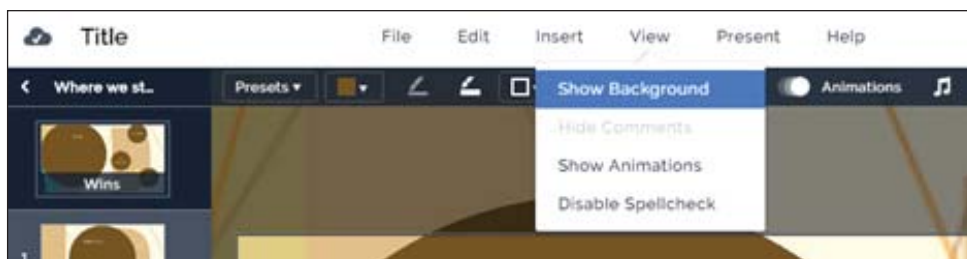


Fig 4.4 – Changing the background.

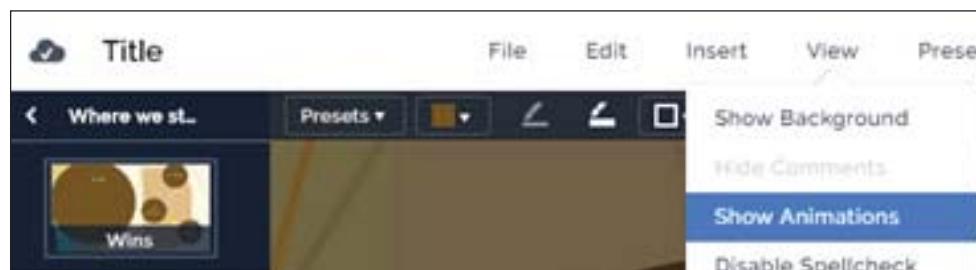


Fig. 4.5 – Show animations.



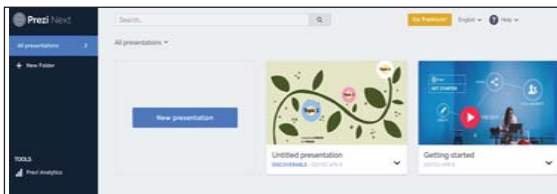
in June 2019, prices were between 19 und 59 euros per month. – There is also an option for a free trial for two weeks.

- To make a new Prezi account, the website will ask for your name, e-mail address and a password. Once you have entered all your information, simply click on the *Create your free Basic account* button.

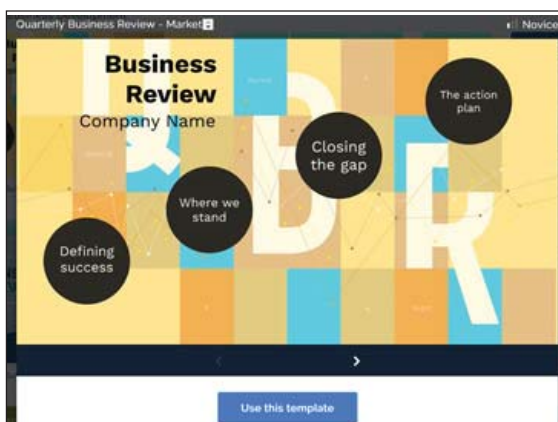
## 2) Making a presentation

### a) Create

- Once you are in the dashboard, click on the *New presentation* button to get started with making your new presentation. This button will take you to a new tab called the “Canvas” which is where you will edit your Prezi presentation.



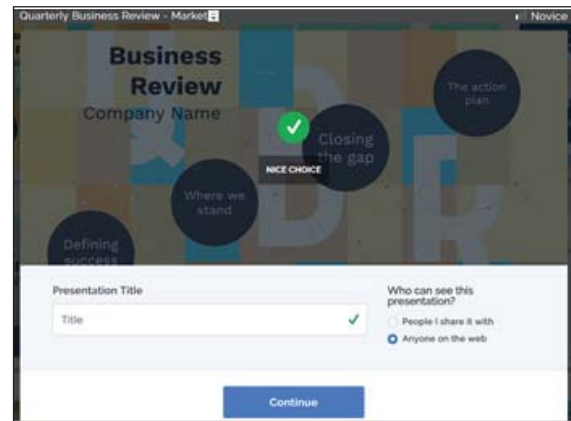
- It will prompt you to select a pre-made template by clicking on one of them and then clicking on the *Use template* button on the bottom.



- You can also start from an empty sheet of paper (in category “General”). Sometimes this is the better

solution because you are more free to develop your ideas.

- Write a title of presentation and choose who can see this presentation. If you are using the free version you must choose: “anyone on the web”.



### b) Customize the theme

- Change theme options to customize. You can choose a predesigned theme, change the background colour, or add a background image.
- From the editor, click the *Background & Theme* button in the context toolbar, or go to *View > Show Background & Theme* to get the pop-out sidebar. (See Fig. 4.4)

### c) Lay out your topics

- To begin creating your presentation, click on the field that reads “Click to add text”.



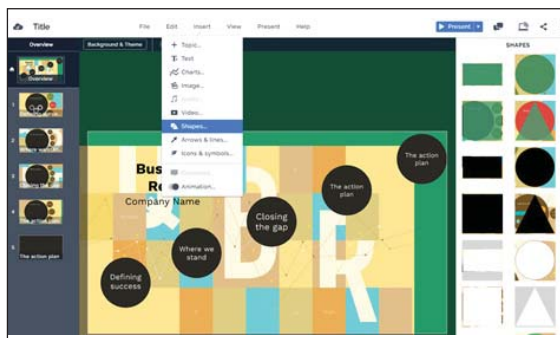
### d) Add content

- Topics can also include subtopics that are revealed when you enter a topic so your content remains hid-



**e) Adding and editing shapes**

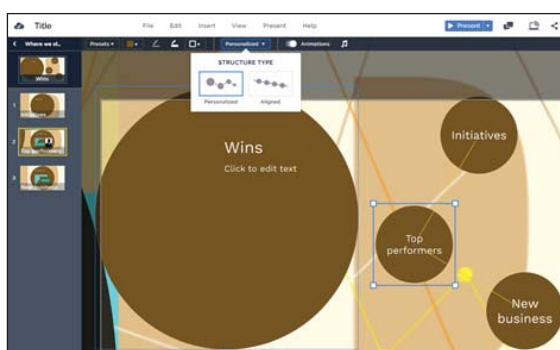
- To add a shape to your presentation go to the area where you'd like to add it. Go to *Insert > Shape...* from the top menu. Find the shape you would like to add in the sidebar and drag it on to your canvas.



- In the context toolbar you can adjust the colour, border colour, and border thickness. You can also select a present colour according to the theme of the template.

**f) Structure type**

- You can freely place subtopics anywhere on your canvas. Select *Subtopic* and then click the *Structure type* button in the context toolbar and select *Personalized*. If you want to move a subtopic simply click on it and drag it. The order subtopics appear when presenting is shown in the left sidebar.

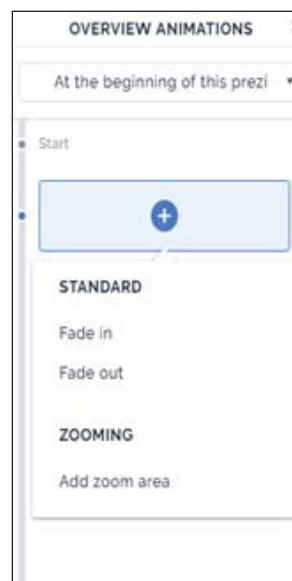


**g) Using animations**

- In the editor, click on the animation icon in the context toolbar or go to *View > Animations* to show the sidebar. Once you open the sidebar, you'll see start and end points that show where the animations appear in your presentation.

(See Fig. 4.5)

- Select the object or text and select the animation you'd like to add.



- Fade in and fade out. With *Fade-in animation* you control when the object or text appears or disappears. You can fade in or out of images, text, video, topics, and subtopics.
- Add zoom area. Click *Add zoom area* and a rectangle will appear. Resize it and place it to fit the area you'd like to include in the zoom.

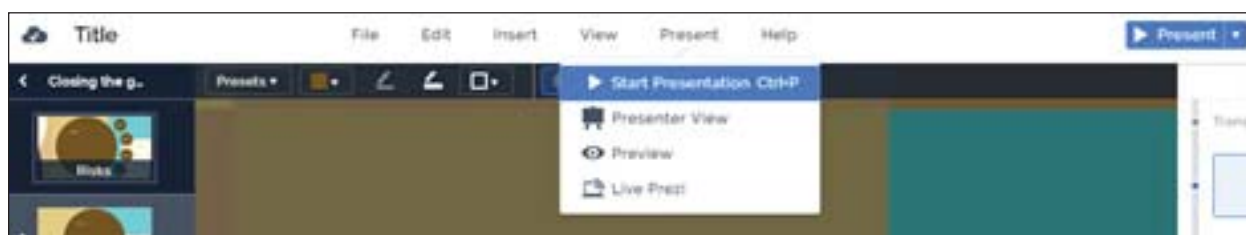
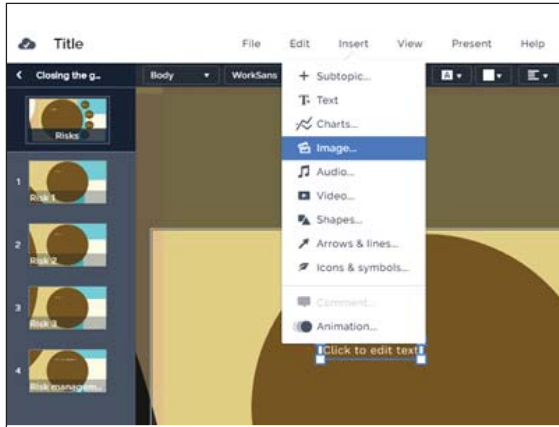


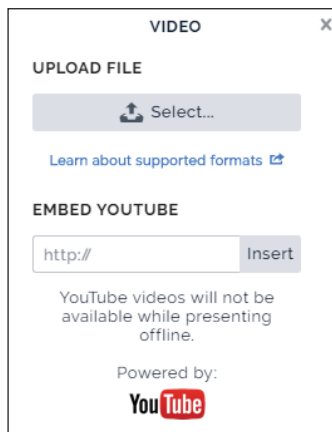
Fig. 4.6 – Start presentation.

### h) Adding image, video, audio

- Click on *Insert* at the top of the page. A drop down menu will appear that will allow you to add an image, video, audio and much more.



- To add a video, you paste the YouTube video URL (that's its address in the internet) into the text field and click on the *Insert* button. The video will be added to your presentation. Or you can select a video from your files.



## 3. Present

- For presenting your presentation to an audience, you click the *Present* button top right. Prezi will switch to presentation mode, usually in full screen.

(See Fig. 4.6)

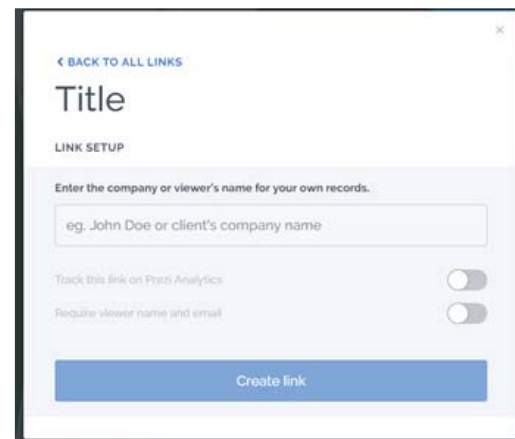
- Using the mouse, you can easily jump between slides.
- Instead of displaying the presentation in a classroom through a project, you can also use the Prezi mobile app to show the presentation anywhere, whenever opportunity strikes.

## 4. Share

- You can send a link to your colleagues. Anyone with link can view it but not edit it.



- Click on the *Share* button and give the link a name so that you later remember what it is for (what presentation, to be shown to whom)



## Teaching Benefits

- With Prezi you can focus on detail, but you can also see the big picture.
- It creates visual impact. With the zoom in/zoom out function, it brings your message to life.
- Your audience can navigate the Prezi themselves, observe connections of ideas and get a visual impression of concepts.
- If you already have all your notes in PowerPoint, you don't need to start all over again. Use the PowerPoint Import feature to transfer your existing content directly into your Prezi.

## Common Mistakes to Avoid

- Confusing transitions: Consider your transitions and make sure that you aren't constantly moving from one corner of the presentation board to the other.
- Printing: Other than standard desktop presentations such as PowerPoint and Keynote, Prezi presentations are not printer friendly. If you need to hand out

your slides be aware that this might present a bit of a road block.

- Presentations can fail at a crucial moment: If you don't have the Prezi desktop app, Prezi completely depends on your internet connection. But the desktop app is only available in paid subscription plans.

## Online or Offline?

- The default mode of using Prezi is in online mode. To show your presentation you go to your account on the Prezi site and click the blue "Present" button. For situations where you do not have access to the Internet, there is the Prezi desktop app (paid subscription required).
- If you and your learners have access to the internet, you can share it with them. A view link allows anyone with the link to view, but not edit, a presentation.
- Downloading a presentation is available for users with a paid subscription such as Prezi Plus.
- Exporting a presentation to PDF: also only for paying subscribers.

## 4.2 Podcasts

A podcast is an audio recording mimicking a radio programme, but usually distributed as a downloadable file via the internet. – The term “Podcast” is a blending of two words<sup>1</sup> with pod referring to portable audio device-

es such as the iPod (which got its name because it remotely resembles a pod of peas), and broadcast relating to radio programmes.

### 4.2.1 Podcasts – How and Why

#### *What do you need?*

- Pen and paper. Or perhaps you are used to take notes on your computer. Anyway, you need something to write with for planning and scripting.
- A device to record audio with good quality. You could use a voice recorder, but usually you would use a computer. Almost all mobile phones, laptops and tablets have recording software on them. However, important for good quality is a good microphone. So, Podcasters usually use external microphones of better quality. Good USB microphones start currently (2019) at around 60 euros. Standard advice is to purchase a dynamic microphone that is front-firing with good rejection, meaning it picks up your voice clearly without the unwanted sounds of wherever you are recording. That helps for example recording your voice but not the hum of your computer’s fan or noise from the street outside.
- Of course, you theoretically can use any microphone, even the built-in one of your computer or mobile phone. But this will usually result in less enjoyable audio quality.
- Audio editing software, for example Audacity, which will be introduced in the next chapter in detail.
- An online platform to host your files. Or storage memory to save them, and give them to your audience.

#### *Where to look for help?*

- Simply look in the internet, using your preferred search engine, for terms like “Podcast tutorial”. This will get you to websites, videos etc. published by experienced podcasters. It would not make much sense to publish a selection here, as these things become outdated quickly.
- You will find good up-to-date podcasting tutorials on specialised websites that offer podcasting hosting, such as Podomatic, Soundcloud or Audioboom.
- Be aware that many of those who publish tutorials for podcasting are actually trying to sell stuff, e.g. software, podcasting platforms (where you could publish your podcasts), or simply equipment like microphones.
- But to start with, on the following pages of this book you will find introductions to two crucial topics: audio recording, and audio editing.

#### *Further reading*

If you want to read more about the use of podcasts in education, try these research papers:

- Andrea Chester, Andrew Buntine, Kathryn Hammond and Lyn Atkinson: *Podcasting in education: Student attitudes, Behaviour and Self-Efficacy*.  
<https://pdfs.semanticscholar.org/c5dd/a0851367ef6582fad-42be08a2454ad9dd869.pdf>

<sup>1</sup> Linguists like calling this a portmanteau word, the notion going back to Lewis Carroll’s *Through the Looking Glass*.

- Brandon I Collier-Reed, Jennifer M. Case and Angela Stott: *The influence of podcasting on student learning: a case study across two courses.*  
<https://core.ac.uk/download/pdf/43958163.pdf>
- Publish your podcast on your preferred podcasting platform. – Well, right. Where to publish podcasts, that's an entire topic of its own. It is, unfortunately, not covered by this book.

## What do I do?

### Writing your script

For a start: think of a 5 minutes lecture to give to your students (learners, auditory).

Usually you will need a written text which you then read / perform for the record. Experienced teachers and writers will be able to write their text right away. But for beginners it is better so develop a script step by step. Write down the key words you need to mention about your topic, and based on these words create some sentences. Using those sentences and the content from the Template Script above, create a script that you can read for the podcast.

Think also of reading your text together with a colleague, in dialogue. This can be much more palatable for the audience. One of our colleagues produces a podcast for learning French, and she regularly publishes interesting dialogues in French where she debates issues of French language with her friend.

If you want to create a 5 minutes podcast, that is usually somewhere between 500 and 750 words.

### Record your audio

- Rehearse reading the script a few times before recording.
- Some of us prefer sitting down at a table when recording, others like to do it standing. Just stay comfortable.
- Start the recording device and read the script.
- If you make a mistake, just stop the recording, and take a breath and start again. If you keep making mistakes after 5 recordings, take a break, make yourself a cup of tea and come back to it later.

### Publish your audio

- When you are happy with the recording, save that recording, e.g. as an mp3 file.

## Teaching Benefits

- Podcasts allow for portability and convenience; learners can access learning resources anytime, anywhere and anyhow, with very little effort. It only needs a mobile device.
- Podcasts can be listened to in otherwise wasted time, or alongside a routine activity (sitting on the bus, driving the car, washing the dishes or in the gym).
- Learners can be involved in the creation of podcasts, asking them to contribute with questions, discussions, presentations or projects.
- Podcasts may consist in the simple recording of your lectures, allowing learners to review them or to make up for missed classes.
- Podcasts can be a great aid for learners with mental or visual impairments.

## Common Mistakes to Avoid

### Use of technology

- Avoid poor recording quality, which might discourage learners to listen until the end of the podcast.
- Try to place your microphone so it picks up a minimum of the room's noise (including computer noise). Set up the microphone so that it is 4 to 6 inches away from your mouth.
- Avoid poor recording quality, which might discourage learners to listen until the end of the podcast.
- Try to place your microphone so it picks up a minimum of the room's noise (including computer noise). Set up the microphone so that it is 4 to 6 inches away from your mouth.
- Avoid rooms with a lot of echo from bare walls, ceilings and floors. If necessary, cover parts of them with sheets of acoustic foam. Sometimes even a woollen blanket or curtains may help.

## Being a voice artist

- Don't move too much. While talking, try to look only in one direction - moving your head left or right, up or down, while you're talking will change the tonal quality of your voice, and may be distracting to your listeners.
- Don't speak in monotone with a flat voice. Stress meaningful parts and try to hold the attention of your audience.
- Speak in a normal, clear and conversational tone of voice.
- Be consistent in your speech and follow the logical progress of your arguments.
- Avoid extensive vocal pauses.
- Don't break your discourse with a large use of interjections (*uhm, ahem, etc.*).
- While talking, speed and slow down at different moments. Find your own speech pace.
- Follow your script. Improvisation doesn't always pay off.

### Online or offline?

To make your audio record (your podcast) available to your audience, you can do various things.

- You can simply copy the file to a memory stick (or any other memory, even a CD) and hand it out to our audience. This is called "offline" distribution.
- If you and your learners have access to the internet, you have a lot of options to distribute your recording to your learners.
- You can share it with them using cloud storage (e.g. Dropbox, Google Drive, and AWS).
- You can email it to them
- If you have a website you can upload it there
- You can upload it to a Virtual Learning Environment (such as Moodle, Blackboard, and Edmodo) if you have access to one. This could be the Moodle site of your adult education organisation.
- You can add it to a dedicated podcasting site (e.g. Podomatic, Soundcloud or Audioboom). They usually provide a basic account for free, and ask for money if you want more sophisticated features.
- Some people publish their audio records also by uploading them as videos (with simply one picture added to it) on video sharing platforms such as YouTube.

## 4.2.2 Record Audio with Audacity

Being able to edit audio recordings is an important skill for the blended educator. It is therefore a good idea to do even the initial recording with a suitable audio recording device (as opposed to simply pressing the Record button of your smartphone's audio recording app). Also, usually your audio will not be perfect just from the initial recording. You will have to do some audio editing. We are considering here the use of Audacity, a free software programme that allows us to do this.

### What do you need?

- A script for your podcast. (See Chapter 4.2.1 *Podcasts*.)

- Audio editing software, here specifically Audacity ([www.audacityteam.org](http://www.audacityteam.org)), and a device to run it. That's usually your computer, plus ideally a good external microphone.
- An online platform to host your files, or a storage memory to save it.

### Where to look for help?

- The Audacity online guide: [https://manual.audacityteam.org/quick\\_help.html](https://manual.audacityteam.org/quick_help.html)
- The Audacity tutorials: <https://manual.audacityteam.org/man/tutorials.html>

- Simply use an internet search engine and type e.g. "Audacity export mp3". Audacity is a very popular programme, so people discuss questions they have about using it broadly.

### How do I prepare?

- Go to the Audacity website and download the software version compatible with your device (Windows, Mac, or whatever).
- Install it.  
Here is a little obstacle: usually you will want to save your podcasts in the .mp3 audio file format. Audacity can do this, but for reasons of patent law, the audio encoding software for this format is not included in the installation package. You need to download and install it separately. The Audacity website will lead you through that process.
- Be sure that audio on your computer is working properly, especially that there is a microphone, and

that it is working. If not, you have to figure out how to solve the problem.

- Usual things to do in case of problems are checking your computer's sound control panel or the custom mixer application for your specific sound card. If you use an external microphone, sometimes you have to select it in the audio settings to make it work. Select the input device you want to use and verify that you are getting sound into the computer from that device.

### What do I do?

When Audacity is launched, you will see something like this:

(See Fig. 4.7)

First, pay attention to the *Device Toolbar*.

(See Fig. 4.8)

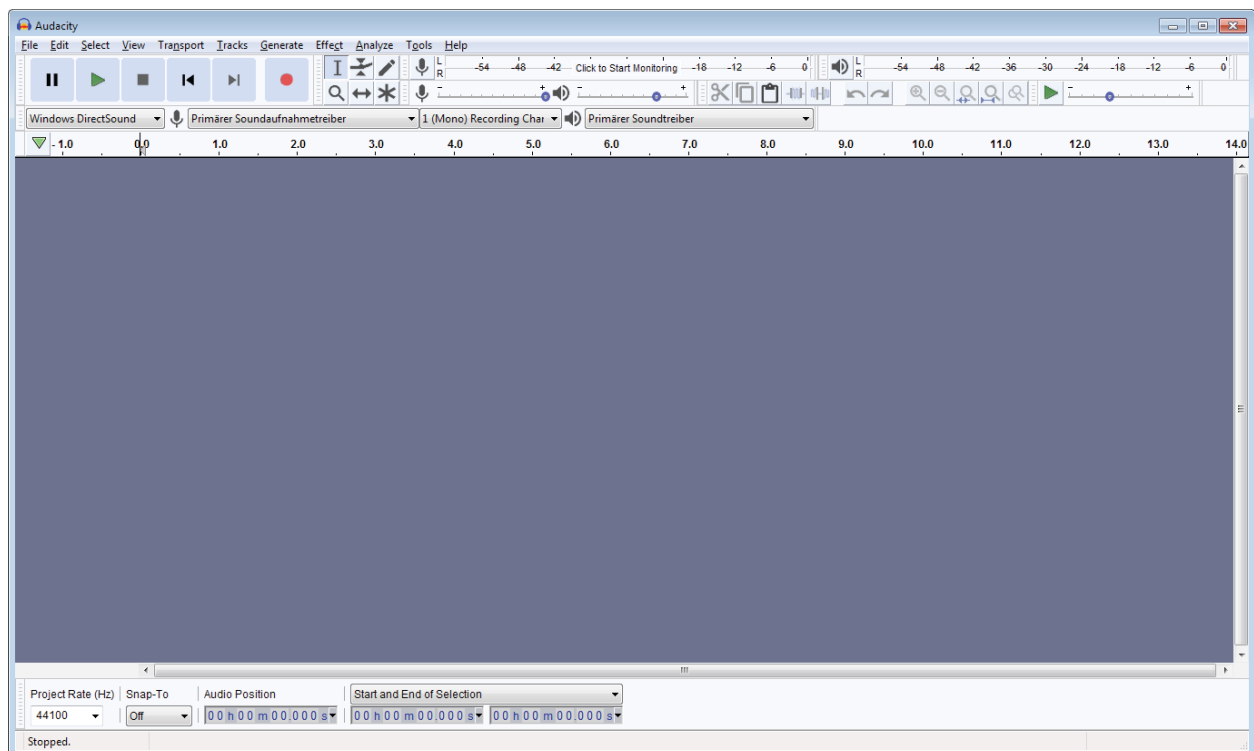


Fig. 4.7 – The Audacity screen on start of the programme, with not yet any tracks created.

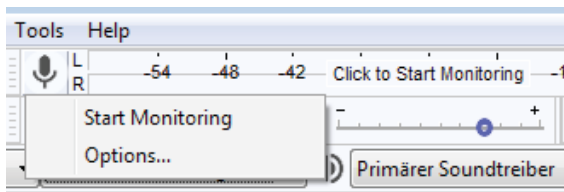


Fig. 4.8 – Audacity's Device Toolbar. Settings here are crucial for getting the software working with your hardware.

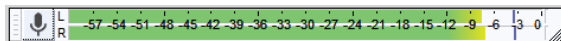


You see four dropdown fields. They allow you to select (from left to right) a) audio host b) recording device c) recording channels e) playback device.,

- Choose your preferred *Audio Host* from the dropdown menu. The *Audio Host* is the software interface between Audacity and the physical sound device on your computer. The available choices will vary depending on the operating system and your hardware.
- Choose your preferred recording device from the dropdown menu *Recording Device*. For recording podcast, you will simply choose your microphone. – Other choices would include *loudspeaker*. This means that the audio signal is taken from the input port of your loudspeakers. Or in other words: you record what your loudspeakers are currently playing.)
- In the *Recording Channels* dropdown menu you can choose whether you want to record in mono (1 channel) or stereo (2 channels). Usually when recording with one microphone you will want to record in mono.



- Turn on the monitoring: click on the microphone symbol in the recording meter and start monitoring your audio input.
- Get your microphone in place and talk at a normal volume and watch the recording meter:



Try to aim for a maximum peak of around -6 dB (or 0.5 if you have your meter set to linear rather than dB). You can always increase the level later after you have completed your editing. But recording with too low a volume will increase the amount of background voice on your record, so avoid recording at low levels.

- Adjust the recording volume with the Recording Volume Slider:



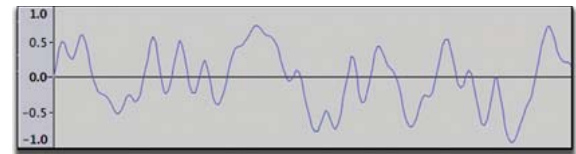
The meter should get close to the right-hand edge without hitting it during the loudest parts (-6 dB is a good target).

- Now you are ready to start with a test recording. Click the red *Record* button in the *Transport Toolbar*:



Try and record a few sentences, and then click on the *Stop* button.

Have a look at the recorded waveform. This is how a properly recorded waveform should look like:



This is in strongly zoomed-in view. The default view is more like this:

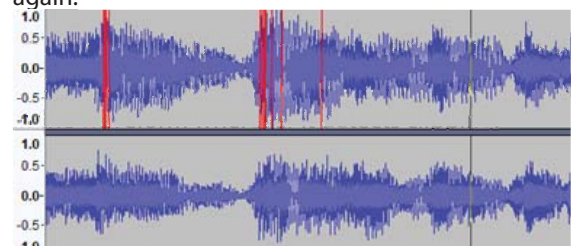


A *clipping* waveform, on the other side, has the tops and bottoms of the wave chopped off.

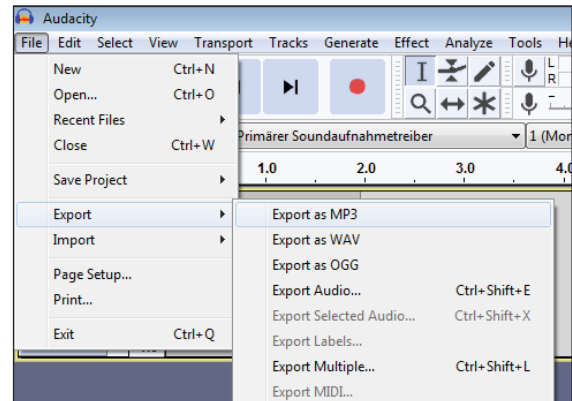


This is what happens when the volume of the source sent to Audacity is louder than what Audacity can record.

Checking the waveform of your record can help you create audio files with good quality. If clipping occurred, turn down the recording level a bit and try again.



- When you are done with your recording, there might be some bits at the beginning or end that you want to delete – between the time you clicked the Record button and the time you started talking. In that case, click repeatedly the *Zoom in* button until the displayed waveform expands so you can see from the beginning of the recording to the time you started talking. Select the area that you want to get rid of and choose *Edit > Delete* (or simply the *Delete* button of your keyboard).
- If you realise that the volume of your recording is not as loud as it needs to be, you can adjust this using the Normalize effect. Choose *Select > All* to select the entire track and then click on *Effect > Normalize* to normalise the volume.
- When you are happy with the final result, save your track by clicking on *File > Save Project*. Choose a name for your project and a place to save it.
- To export your audio file and listen to it in other audio software, choose *File > Export > Export Audio*, selecting your preferred file format (usually mp3).



- You can now use this file for publishing your podcast.

### Online or offline

(See the section at the end of Chapter 4.2.1 above.)

## 4.2.3 Editing Audio Records by Adding Other Audio Elements

Audio recordings can be augmented with background music, ambient sound, audio effects etc. The final product is sometimes called a “soundscape” (think of an acoustical landscape). For example, the intro, the outro and transitions can be highlighted with the use of audio pieces, making your whole podcast more attractive and engaging. You know this from radio programmes.

In this chapter we introduce you to a number of things you can do in audio editing with Audacity.

### What do you need?

- A script describing the interaction between oral texts and music pieces; or at least a good plan for this in your mind.
- A device to record audio with good quality (computer, voice recorder, etc.)
- Audio editing software, here: Audacity

- Music or other audio files you want to mix with your voice; of course only such that you have to right to use for.

### Where to look for help?

- The Audacity online guide: [https://manual.audacityteam.org/quick\\_help.html](https://manual.audacityteam.org/quick_help.html)
- The Audacity tutorials: <https://manual.audacityteam.org/man/tutorials.html>
- Just do an internet search for topics you are interested in. Audacity is very popular, so there is a lot of help sites and forum discussions around using it.

## How do I prepare?

We assume here that you have already recorded your podcast text and saved it to an audio file. (See Chapter 4.2.2 above)

- Choose the music or sound effects you want to mix with your voice, and where to place them.

For royalty free soundtracks you can check here:

<http://freemusicarchive.org/genre/Soundtrack/>

- Check that the selected music or sounds effects are of good audio quality, making sure that they won't sound bad on your recording.

## What do I do?

### Setting up the project:

- Start a new project in Audacity. In practical terms that means: open Audacity with a clean screen.
- Import the background music file on your project. Click on *File > Import > Audio...* to choose the audio file you selected. This will appear as a stereo track on the Audacity screen.
- Import your podcast record *File > Import > Audio...* This will become a second track on your Audacity screen.

Or alternatively, if you haven't yet recorded your own voice and rather want to talk and record while listening to the background music: first, make sure that the option *Transport > Transport Options > Overdub (on/off)* is checked; then, using headphones to

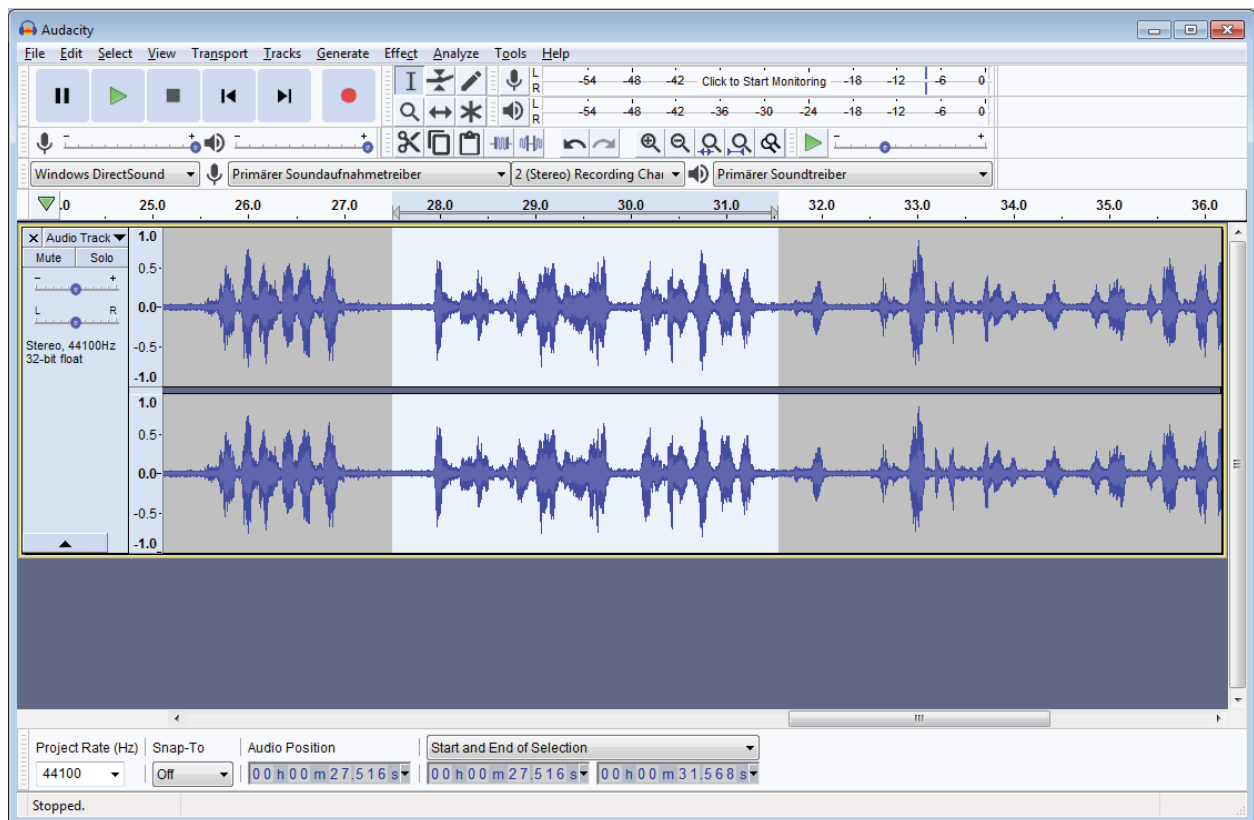


Fig. 4.9 – Typical sight of an Audacity screen with a stereo track, a section of it marked (that's the lighter area).

listen to the background track, record your voice. The Overdub function makes sure that while recording on a new track, you listen to the sound that is already there on other tracks.

- Save everything as an Audacity project: *File > Save Project As > [Give it a name]*. This creates a set of files (.aup) that allow for editing.

Your screen will now look more or less like this: (See Fig. 4.9)

## Editing the record:

- Click the *Skip to Start* button (to make sure you start from the beginning), then click the *Play* button.

Note that Audacity automatically mixes the music and speech from the two tracks for you. Click the *Stop* button when you're done.



The *Mute* and *Solo* buttons of each track can be used to control which track will be heard when clicking on

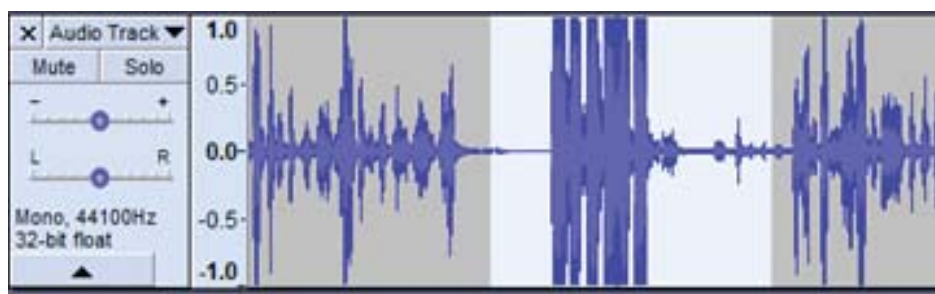
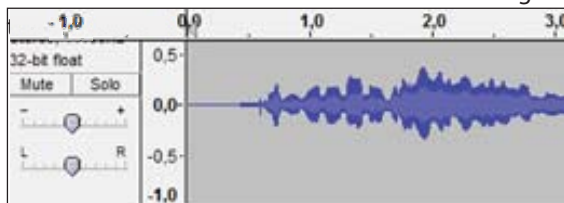


Fig 4.10 – Marked sections have a different shade, here: lighter grey.

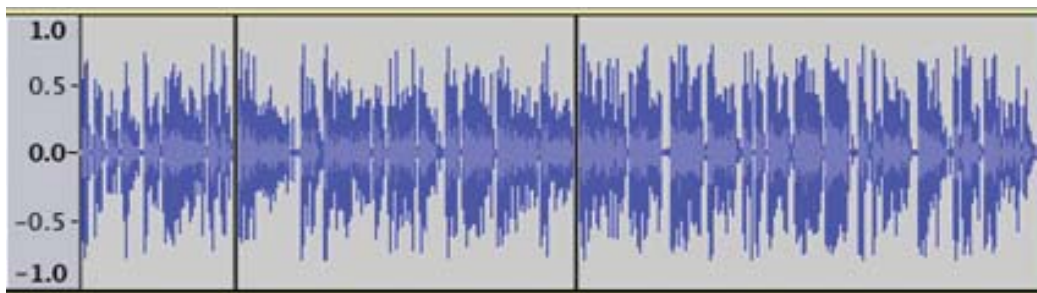


Fig 4.11 – A track with two split points. This splits the track in three parts that can be moved independently.

- In the record of your voice, you may want to remove some sections, e.g. where you coughed, cleared your throat or misspoke and started again.

You do this by marking the section in question with the selection tool:



With this as your mouse pointer, drag-select a section of an audio track. A marked section of the audio appears in lighter grey (in older versions of Audacity it was darker grey) like here:

(See Fig. 4.10)

In the waveform above, the speaker wanted to cut a piece of recording where he/she paused, cleared his/her throat and continued with the next sentence. To do so, the throat-clearing chunk has been selected (light grey area), with extra space around it to make the transition sound natural.

To remove the selected area, use the *Cut* tool:



Or simply press the *Delete* button on your keyboard.

But before you do this, you perhaps want to check if the cut is well selected. You can do this using *Cut Pre-*

*view*. Simply press “C” on your keyboard, and Audacity will play the section as it would sound after cutting. It starts playing about 2 seconds before the cut. That’s the *Cut Preview* feature. If you are happy with the cut, do the cut (*Delete* or *Scissors*). If not, adjust the selection, until you are happy with the result.

- You can split your narration in different clips by choosing *Edit > Clip Boundaries > Split*. This will split the track either where you left the Select tool, or at both the beginning and the end of a selected area (dark grey, or light grey).

For example, the track below has two split points, resulting in three separate .

(See Fig. 4.11)

With the track split that way, you can now move the individual parts around (back and forth) on the timeline. For doing this, use the *Time Shift Tool*.



- To let the talk start at a certain point of your background music: find the spots in the background music where you want each of the different narration clips to start. You might even put a label on each section, to identify them best throughout your work.

(See Fig. 4.12)

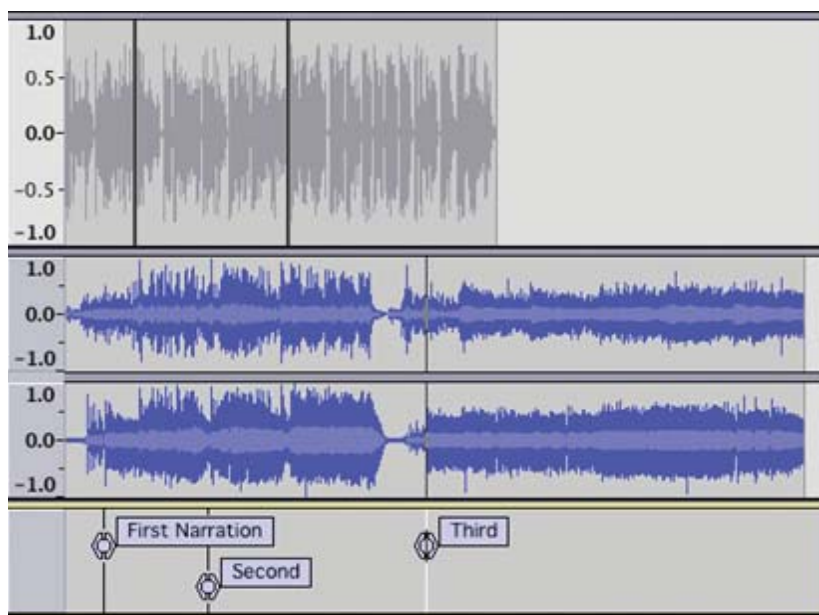


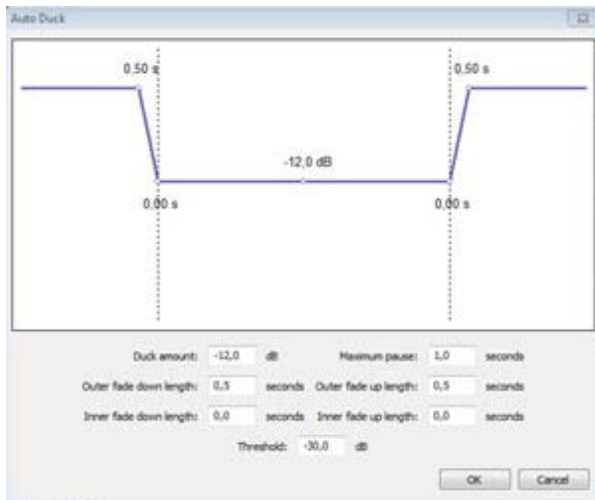
Fig. 4.12 – Use labels (bottom row) to mark spots on the timeline in order to find them quickly later.

Using the *Time Shift Tool*, drag the narration clips to line them up with the background music’s points where you want them to start.

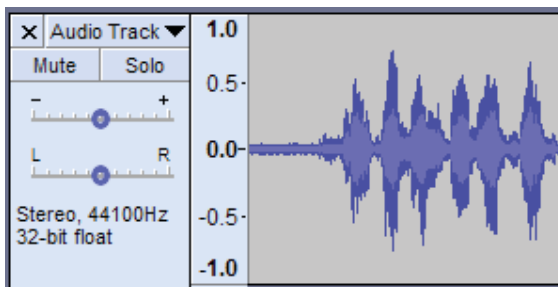
- When you have the narration clips where you want them to be, lower the volume of the background music so your listeners can hear what you are saying. You can do it manually by clicking on the *Envelope Tool* on the Tools Toolbar selecting two control points and then adjusting them to get the length of the track you want the fade to be effective. Go back and change the fades until you are happy with the result.



Alternatively, you can use the Auto Duck effect which does the same job automatically (*Effects > Auto Duck*). With *Auto Duck* you can pre-set a certain characteristic of transition, and then apply it to selected sections of a track. (But note that this needs a second track being there against which the reduction of volume will be measured.)



- If you want to fade out the music, first find the point where you want the effect to begin. Then choose *Select > Region > Cursor* to track end, then choose *Effect > Fade Out*.
- Check your waveform for possible clippings or bad signal.
- Use the *Gain Slider* left of your current track to set the gain for the track (thus correcting possible clippings). “Gain” means effectively the strength of the signal.
- Use the *Pan Slider* to balance the signal between right or left side of your speaker or earphone.



*Gain* and *Pan* sliders are underneath the Mute and Solo buttons.

- Save and export the final version of your project. Saving means: you save Audacity’s .aup files. If you want to create a file that you can give others to listen (usually .mp3), you use *File > Export*.

## Online or offline

(See that part of Chapter 4.2.1 Podcasts)

## 4.3 Videos

Videos can be useful in e-learning environments to add more of the human element of teaching. Videos – as opposed to classroom presentations of content – can help learners to control the pace of their learning.

There are many kinds of videos for educational purposes. A simple concept (but demanding in terms of equipment) is video-recording a gifted teacher lecturing. Or you probably have seen full-sized educational films presenting historical events and developments, explaining phenomena of physics or chemistry, mathematics, or whatever topic, often with a lot of special effects used

to visualize things. Producing such videos is, of course, a lot of work.

In this part of the book, we want to focus on something very simple, but effective: creating short animated videos that can be used to present some facts. We use an online service by the name of Powtoon. This allows us to create animated videos in cartoon style. The result is something like a beefed-up slides presentation: Powerpoint with much more animation than usual, so to say.

### 4.3.1 Creating Animated Videos with Powtoon

Powtoon ([www.powtoon.com](http://www.powtoon.com)) allows you to create and publish animated videos in a relatively simple way as you do not need anything but internet access for your computer. Everything is done online.

Powtoon is a London based company founded in 2012.

Here is a summary of what you do with Powtoon: You create animated slide shows online. You add to your slides cartoon characters that can move; text elements; all kinds of drawings; you can use a repertoire of visual elements from Powtoon, or you can upload our own (images, drawing, videos), and add animated effects to them. You can add sound to your slideshow for creating a soundtrack with background music and with text spoken (“voiceover”). The animated video can be watched on the Powtoon website; it can be exported to video places such as Youtube; or you can download it as a video file and store it on your own device.

The company running Powtoon advertises it chiefly for business communication. They suggest employees using animated slide shows to present information to superiors, or HR departments create health and safety instructions for employees. But it can also be used for creating e-learning content for Blended Learning.

Basic functions are free. For more sophisticated options, however, including the option to download your video file, you would need to buy a subscription. Subscriptions are currently (2019) sold from 228 dollars per year (including VAT) for the cheapest version. There is no option to subscribe for a shorter period. There are, how-

ever, special “education” subscriptions that are cheaper, starting from 85 dollars per year for a “student” account (videos up to 10 minutes) and 228 dollars per year for full access to everything (for 90 students).<sup>1</sup>

The Powtoon site ([www.powtoon.com](http://www.powtoon.com)) has a number of sample videos, and a detailed help centre. As there are many functions, it would fill a book of its own to describe them all. What we can do here – in this collection of useful tools for creating content for Blended Learning in adult education – is give you the basic idea, and lead you through first steps.

But be aware that creating such animated videos (or animated slideshows) that you can use in your Blended Learning environment, you will need to dive much deeper into the topic. You will need to learn to use the many options, and you will need to get a feeling for when to use ready-made elements (characters, drawings, chiefly available for paying subscribers), and when to use elements you create and upload yourself.

Another thing to be aware of: Powtoon is not the only company providing such services. One recent alternative is Doodly ([www.doodly.com](http://www.doodly.com)) which is for creating doodle videos. “Doodle videos” is a name for that famous type of videos where you see cartoon-style drawings being created on the fly by a moving pencil, and sometimes a hand.

In the future other such services will appear, and as we have seen old ones will disappear e.g the Google+ social media site has recently been discontinued (2019).

<sup>1</sup> These were the conditions when checked in April 2019. Of course they will change over time.

Now, here is our “First steps into Powtoon” tutorial:

### What do you need?

- A computer
- Internet access
- The Powtoon site:

[www.powtoon.com](http://www.powtoon.com)

### Where to look for help?

- The Powtoon Knowledge base:  
<https://support.powtoon.com/en/>
- Powtoon tutorials:  
[www.powtoon.com/tutorials/](http://www.powtoon.com/tutorials/)
- A good book is *Power Up Your PowToon Studio Project* (2015) by Bruce Graham, Packt Publishing.
- Another good book is *The Power of Cartoon Marketing* (2013) by Ilya Spitalnik, CreateSpace Independent Publishing Platform.

### How do I prepare?

- The first thing to do is develop a script, that’s the story you want to tell. This should include the text you need, and ideas about visualisation: what to show, and in what sequence. Ideally, your story has a dramaturgical curve, for example getting back at the very end to something that was introduced at the beginning.
- If you want to create a 5 minutes video with somebody talking, that is usually somewhere between 500 and 750 words in the script.

### What do I do?

- Go to the Powtoon site
- Create an account (if you do not have one)
- Skip any initial screens
- Create a new slideshow by selecting a *Blank Powtoon*:



(Note: The appearance of buttons and all other elements shown here may be different when you visit the site. Websites are under constant reconstruction and re-design. Screenshots printed in a book like here get outdated quickly.)

- You will be presented with a number of themes:  
(See Fig. 4.13, next page)
- Select one, and you will get to the main composition page:



- Powtoon uses a slide-based approach to videos. That means that the whole story is split over a number of basic pages (or slides). In traditional film, you would call this a scene. You create and edit one slide at a time. Each slide is by default 10 seconds long, but you can change this from 1 to 20 seconds.
- You see your stack of slides in a column at the left hand side of the main page (quite similar as in Powerepoint).





- At the bottom of the main page you see the timeline for the current slide.

(See Fig. 4.14)

- If you want to increase the time a slide is displayed you can do this using the + and - buttons on the right. A slide can last between 1 seconds to 20 seconds:

(See Fig. 4.15)

The dark triangle indicates the timeline position of what is displayed at the moment.

- To add content to the slides, you use the control tabs on the right

(See Fig. 4.16)

- First select a background:



You add elements to your slide simply by clicking on them in the right column. The element then appears in the middle of your slide, and you can move, resize it or otherwise edit it.

- Next you can add in some text:



- When you added a text element, look down at the timeline: a tab has appeared at Second 1 with the first letters of your text, here "TEX". This means the slide will display for one second blank, after which the text will appear. You can change the moment for the text element to appear by moving its tab to any position along the timeline.

(See Fig. 4.17)

- Next you might want to add "characters".



"Characters" are cartoon figures readily available for you to use. Each character is provided in various moods or activities (called "poses"), such as a greeting, typing at a writing desk, thinking, being happy, being angry, or having an idea.

Powtoon offers various sets of characters. Only two or three of them are free. The others are available only when you are a paying customer (subscriber).



Fig. 4.16 – Categories of things you can add to your video timeline.

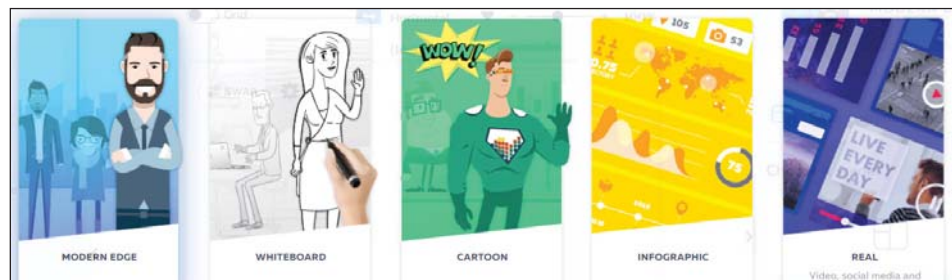


Fig. 4.13 – Themes for animated videos as available on Powtoon in April 2019 (free account).



Fig. 4.14 – Timeline of the Powtoon video.



Fig. 4.15 – Increase the time a slide is presented with the +/- buttons right hand side.

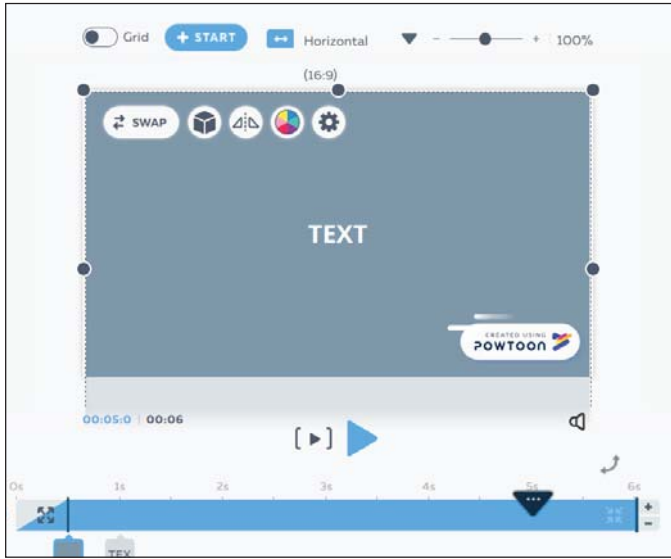


Fig. 4.17 – A text element inserted at Second 1 of the Timeline.

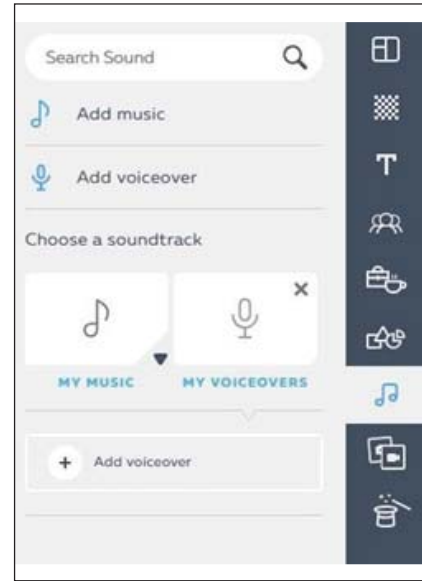


Fig. 4.21 – Adding sound clips.

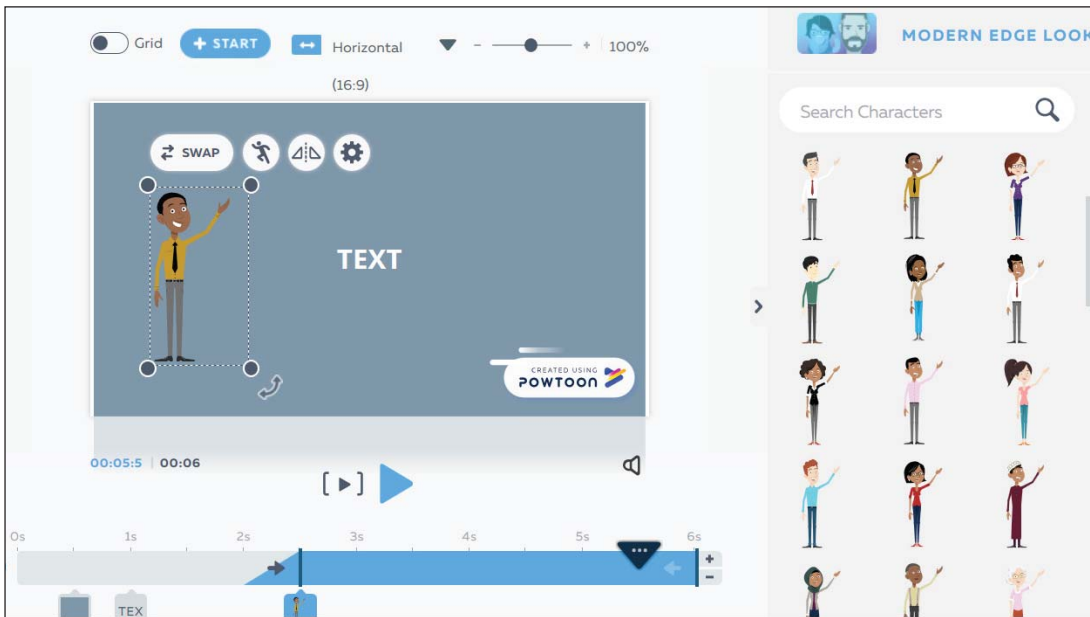


Fig. 4.19 – Adding a character into the current slide.

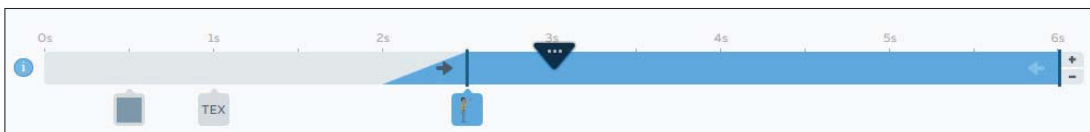


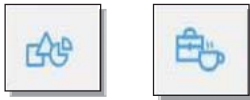
Fig. 4.20 – Move the appearing of the new object (here: a character) on the timeline.

- Select from the menu of characters:  
(See Fig. 4.18, this page)
- Select a character, and add them into the current slide:  
(See Fig. 4.19, previous page)
- We see that the character will appear 2 seconds into the timeline. We can change this by moving the tab:  
(See Fig. 4.20, previous page)
- We also note that each character has four controls associated with it (Settings, Pose, Swap, and Flip):



With these you can swap a character with another (by keeping the other settings); select its different poses; flip it; control a number of other settings, for example how it moves.

- Adding in Shapes works the same way:



Shapes are things like squares, triangles and circles. Props are drawings of various objects – everything that exists in the world, from cars over machines, clothing, furniture, and so on. Props are the requisites of your tiny video theatre. As always: only a very small selection are available for free, for the rest you need a paid subscription.

- Adding in sound works as follows:

(See Fig. 4.21, previous page)

You can add voiceover (spoken text). You can record this yourself, or you can upload a ready-made record.



- You can add Media (Videos and Images) and Special features. Special features are drawings for various events such as Birthdays, Christmas, etc.



## Multiple slides make a movie

- So far you have worked only on one slide, or one “scene” of your animated video. A typical animated video of 2 minutes would have about 12 or more slides. You have to create all of them. You see: this can be rather time-consuming. You will be doing this especially when you know that you have a large audience and can use the video over a longer period of time.
- What we explained here is how to create a an animated video starting with a blank slide (or stack of slides). Powtoon offers also something else: they have a number of ready-made animated videos that can be used as templates that you fill with your own



Fig. 4.18 – Character sets to choose from (as in May 2019).

content, particularly by leaving the story flow as it is, but change the text (written and spoken words). For testing we created this video.

You can watch it at:

[www.youtube.com/watch?v=zYDYuVekfJl](http://www.youtube.com/watch?v=zYDYuVekfJl)



As you can see in this video, one problem of those pre-fabricated video templates can be their shallowness and their sales- and marketing focus. Adult educators usually seek more substance, and that would mean that the templates cannot be used as they are but need heavy editing. The good news is: this is possible. Although it is a lot of work.

## Download or share

- Once you are happy with the completed project, by clicking on the *Preview* and *Export* button on the top of the page, you can upload, download or share the project (options vary with subscriptions):

(See Fig. 4.22)

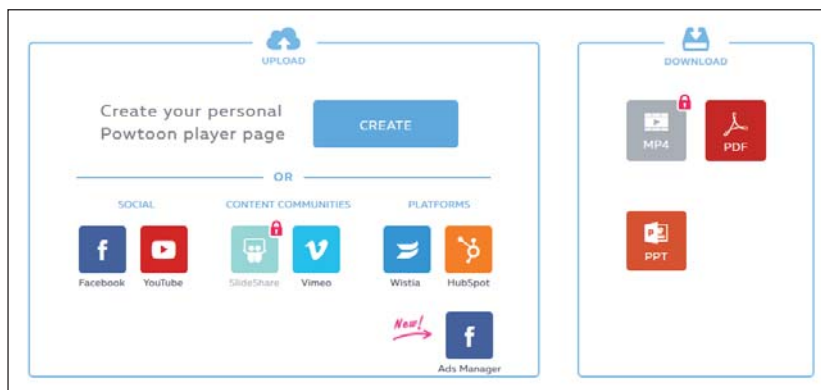


Fig 4.22 – Various options for sharing the video, download it, and export it.

## Teaching Benefits

- There can be great novelty and thus motivation in using animated videos.
- Sometimes when dealing with sensitive issues like plagiarism or bullying, it can be better having animated characters discussing it rather than real people.
- When explaining intangible concepts, like magnetic fields, animation can give the learners a concrete conceptualisation.
- Animated videos can appeal to a wide range of learners.

## Common Mistakes to Avoid

- As you create each slide, always ask yourself, what are the educational value of each of the element in the slide. It is very easy to add a wide range of effects, but they must have a purpose to help the learners learn, so don't add special effects unnecessarily.
- In a related piece of advice, there is no need to clutter a slide with too much content, since Powtoon is a slide-based system, you can break content over a number of slides.
- When you are doing your recording, speak with passion and don't be too deadpan.
- Maintain continuity between slides by using the same fonts and design elements. But don't use the same graphics to represent different things on different slides.
- Avoid using fancy transitions between slides.
- Read one of Edward Tufte's books.

### *Online or Offline?*

- If you want to distribute this recording offline, you can copy the video file onto a USB memory stick and hand it out in class. However: for downloading the video you need a paid subscription.
- If you and your learners have access to the internet, you have a lot of options to distribute the video to your learners. Except from sharing the video file with them via e-mail or file sharing services, you can present the video on your website etc. Powtoon also offers direct publishing on major video platforms such as Youtube, Vimeo and others.

## 4.3.2 Making Videos Interactive Through Add-on Quizzes

There are a number of ways to add quiz questions to pre-existing videos. Here we present one of them: Edpuzzle.

The Edpuzzle website allows you to add questions to existing videos at any point of their timeline. It also allows you to edit existing videos to some extent, e.g. by cropping or adding content. In this short introduction, however, we use it only for adding quiz questions to videos.

Edpuzzle is run by a company with its headquarters in Barcelona, Spain. Registered in 2014, it is a typical start-up company supported by business angel and venture capitalist money.<sup>1</sup>

When we last checked (in April 2019) the pricing model was as follows: the service is free of charge, but with the restriction that only up to 20 videos can be stored in one's space. If you need more, you can try to invite friends to subscribe to Edpuzzle, and consequently you get more storage. Or you subscribe to the paid service, starting at 8,50 dollars per month. And this time the pricing is really on a monthly basis, meaning that other than for other web services discussed in this book you indeed can subscribe only for a short time, for thorough testing.

### What do you need?

- A computer
- Internet access
- The edpuzzle site: <https://edpuzzle.com/>

### Where to look for help?

- The edpuzzle help centre: <https://support.edpuzzle.com/hc/en-us>
- Edpuzzle resources: <https://go.edpuzzle.com/resources/>

- Edpuzzle on twitter:

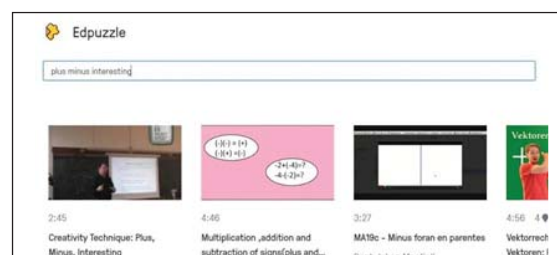
<https://twitter.com/edpuzzle>

### How do I prepare?

- The first thing to do is to locate a video that you want to add quiz questions to. "Locating" means: make sure it is available somewhere on the typical video places in the internet such as Youtube, Vimeo, etc. That means: you can use practically every video that is out there in the internet. For example, if you want to teach maths, you can use the fantastic videos of the *Numberphile* series in Youtube, and add quiz questions to them. Or of course you can upload your own education videos to one of the platforms, and then tell Edpuzzle to use that. The important thing to understand here is simply that you do not upload videos to Edpuzzle. You tell Edpuzzle to use a video from one of the popular channels.
- Watch the video, and identify what parts of the video you want to create quiz questions for.
- Create the quiz questions – so far just as a script for yourself.

### What do I do?

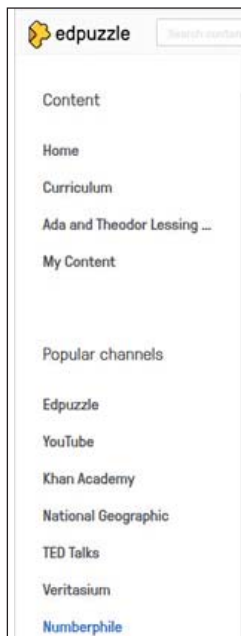
- Go to the Edpuzzle site
- Click on *Sign up*
- Sign up as a teacher
- Add yourself to an existing or new school.
- You will be presented with a search window:



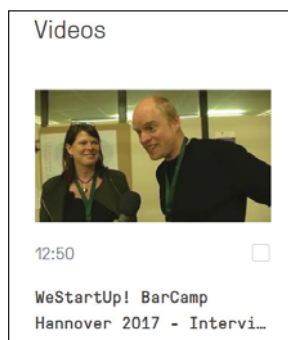
<sup>1</sup> Information as publicly available in April 2019.

Search for the title of the video you wish to add questions to. As explained above, Edpuzzle can take any video that is somewhere on the popular video platforms in the inter

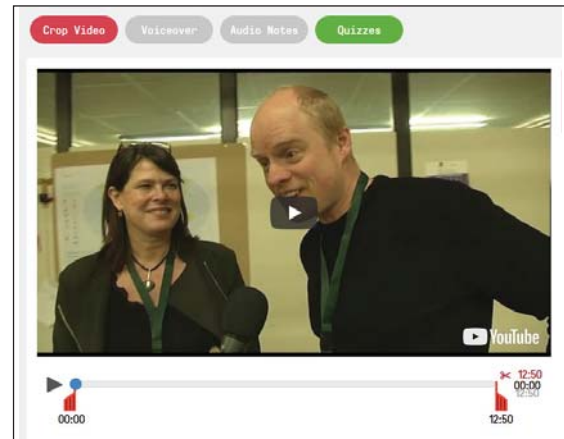
In the left column of your screen there are places to select from:



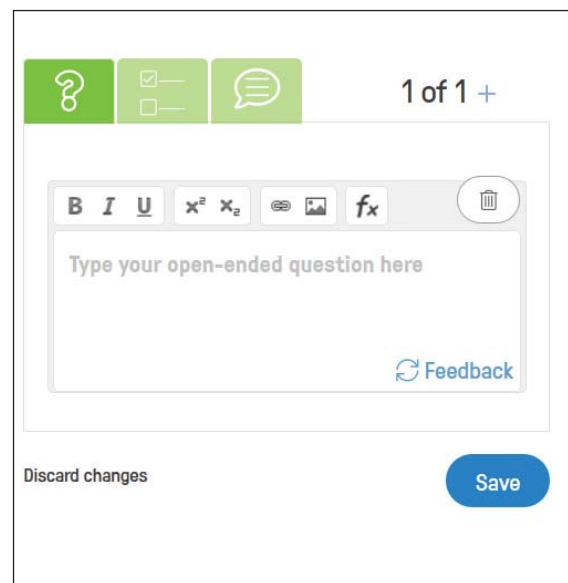
- After selecting the channel (Youtube etc) search for your video by entering appropriate search terms in the search bar.
- When you have found it, put your mouse pointer on the video. Three icons will appear:



- You can now add this video to your personal collection of videos by clicking the *Copy* button.
- Go then to *My content* (menu item in the left column) to get your personal collection of videos displayed.
- Select the *Edit* icon, and you'll have the options to crop the video, add voiceover, add audio notes, or add a quiz:



- Select *Quizzes* and you'll be presented with the video, with a progress bar, with a pointer with a green box containing a question mark (?):
- Play the video to the point you want to add a question in, pause the video, and click on the green question mark underneath the timeline.
- A small window will appear to the right of the video:

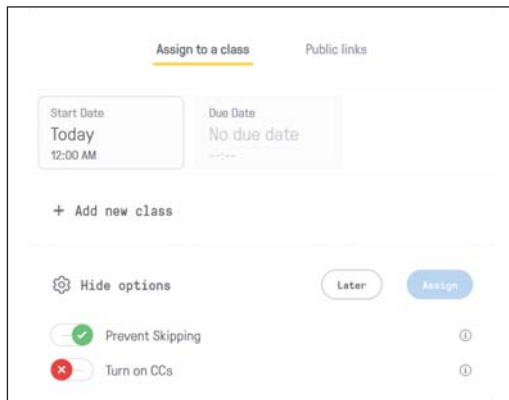


Using the three green buttons, you can create either an open-ended question, a multi-choice question, or simply add a comment.

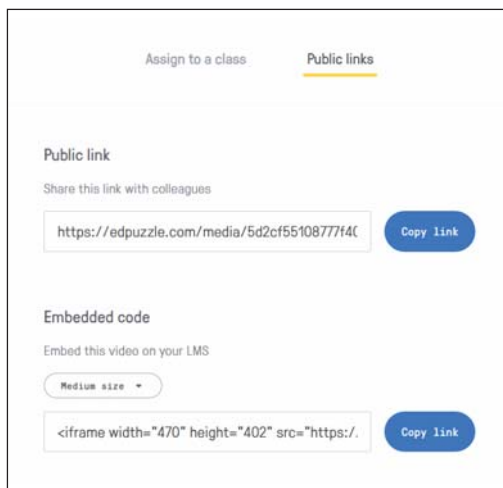
You then continue playing the video until you reach the next point on the timeline where you want to interrupt the video for a question or comment.

- Once you have completed your edits, click *Save*, then *Finish*.
- Now you have two options: either assign the video quiz to a class, or create a public link.

- To *Assign to a class* you need to create a new class:



- By selecting *Public links* you can get a URL or an Embedded code:



You can give your learners that link, or you embed the video quiz in your website, e.g. your Moodle learning environment.

## An experimental video with quiz

Here is a video with quizzes that we created whilst proofreading this book:

<https://edpuzzle.com/media/5ca751dc7270df407df877e4>



## Teaching Benefits

- Video quizzes can be a great novelty and thus a great motivator<sup>1</sup>
- They help learners remember key points in the videos
- They can help the learners to self-assess their progress
- They increase the interactivity of the blended content
- They can lead to learners taking active ownership of their learning

Admittedly, this is all quite oriented to a school-type learning environment, or possibly to vocational training in a company. In classical liberal adult education, where direct interaction between people is as valued as building upon their rich life experience, and where topics often are more complex and philosophical, opportunities to use such simple quizzes are restricted. But if you think of learning foreign languages, video quizzes can indeed be a nice add-on teaching and learning element. So, as always, everything depends on finding the right place for the right tool.

<sup>1</sup> Szpunar, K.K., Khan, N.Y., Schacter, D.L. (2013): *Interpolated Memory Tests Reduce Mind Wandering and Improve Learning of Online Lectures*. Proceedings of the National Academy of Sciences, 110(16), 6313-6317.



## Common Mistakes to Avoid

- Try to make sure the questions are phrased as clearly, and as simply, as possible. Consider piloting the questions on a test group.
- Don't add too many questions to the video. It will make the learners feel that they are being over-tested.
- Review each question: is there a strong reason to add it to the video? Could it be merged with another question?
- Try to avoid "negative" questions, as they can be confusing, e.g. Avoid "Which of the following *are not* ...". Instead, try to have questions that ask "Which of the following are..."
- Consider using fun alternative answers in the questions
- Read Oppenheim's book *Questionnaire Design*.<sup>1</sup>

## Online or Offline?

You need to be online to use Edpuzzle

<sup>1</sup> Abraham Naftali Oppenheim: *Questionnaire Design, Interviewing and Attitude Measurement*. First issued 1966

## 4.4 Documents

A vital part of Blended Learning is providing content to learners that they can interact with at their own pace. One thing in common use are simple documents delivered in file formats such as Odt, Docx, or Pdf, which have become a world-wide quasi standard. They can be seen

as electronic representations of an actual piece of printed paper. But there are ways to make such documents interactive and thus more engaging for the learners.

### 4.4.1 Creating Interactive PDF Content

Documents such as reports, articles, or e-magazines often come as PDF files (Portable Document Format). This is a file format initially created to get documents into a printing press whilst being sure that formatting is meticulously preserved across platforms, i.e. on all different computer systems. But in the recent 20 years, PDFs have also become a standard for distributing documents of high visual quality to everybody.

Typically such documents are not meant to be editable by the reader. However, today it is possible to create PDFs that comprise plenty of tricks and multimedia content to make them interactive documents – behaving not much different from a website.

For example, you can

- add links
- add entire menus from where the reader can select where to go next
- add audio or video files and let your reader view them without leaving the document
- add quiz elements, etc.

These all are elements you probably know from websites. In an interactive PDF, all these things are included in the document. The document can be delivered to other people the usual way (e.g. via e-mail). It will display these functions when opened with Acrobat Reader or another suitable PDF reader software. These are usually available for free.

#### *What do I need?*

- Computer or laptop (of course)
- PDF reader software, for example the free Adobe Acrobat Reader

- A programme to create interactive PDFs. We recommend here Adobe InDesign. That's what this section is about. InDesign has become the industry standard application to prepare professionally printable documents. This is actually an expensive application. But you can install it and use it for seven days free of charge, for testing. Adobe also has rebates for educational institutions.

Note that there are also other ways to create interactive PDFs. Very basic things such as hyperlinks to external resources can be done in text processing software (MS Word, etc.) and then exported to PDF. For more options, using Adobe Acrobat Pro was standard over a long time, especially with the "PDF form" functions.

#### *Where to look for help?*

You will definitely need more help than this book can offer you. Adobe InDesign is a complex product. If you are so far only familiar with Microsoft products, the way organisational layout in Adobe products may be difficult to grasp (briefly: "palettes" instead of "menus"), and you need some time to get used to it. InDesign also has a lot of functionalities, and you will need guidance in order to find your way through them. Finally if you have an older product version, you may run into considerable differences as compared to functionality in the newer versions. Here are some places to look for help:

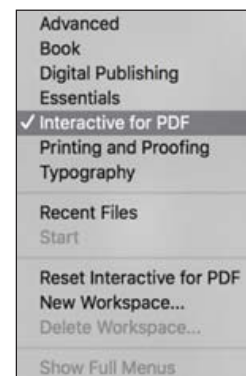
- The Adobe help centre (online) gives useful tips on how to get started, tutorials to expand your skills and step-by-step instructions. You can also see frequently answered questions and forum discussions for solving problems.

[https://helpx.adobe.com/gr\\_en/support/indesign.html](https://helpx.adobe.com/gr_en/support/indesign.html)

- There are many websites providing advice on how to create interactive content:
  - Create PDF button tips:
    - <https://indesignsecrets.com/pdf-button-tips-tricks-and-problem-solving.php>
  - Create an Interactive PDF form from a word document:
    - <https://theblog.adobe.com/create-an-interactive-pdf-form-from-a-word-document/>
  - Note however that this then involves the use of Adobe Acrobat (full version, not the reader), another piece of pricy software that is good to have, but not accessible to everyone.
  - A nice blog that provides instructions for first steps with Adobe InDesign:
    - <https://mariahalthoff.com/blogposts/create-interactive-pdf-indesign>
- Use marketing psychology to trigger their curiosity
  - Use your creativity to make your content fun
  - Combine data with visual content
  - Invite your learners to participate
  - Last and most importantly: personalize your content.

### What do I do?

- Open your InDesign file and select the *Interactive for PDF* workspace.<sup>2</sup>



This will display a set of panels on the right side of the screen. Panels (or palettes) in Adobe products are like menus in other software: collections of tools to use. Here you get the following:

(See fig. 4.23)

You can now do various things to make your Pdf document interactive. Let's start with creating hyperlinks.

### How do I prepare?

We do not have the space here to explain how to use InDesign for total beginners. Adobe programmes work in different fashion to Microsoft or OpenOffice. In what follows we presuppose that you have already some experience with InDesign e.g. because you used it to create leaflets, posters, or a brochure.

- Design your pages in InDesign as you would normally do. Your document needs to be (almost) finished before you start adding interactivity into it.
- Decide which kind of interactivity you would like to add.

The field of expertise you might want to explore here is called Instructional Design. It can help you on where it is useful to include interactive objects in order to not overdo it with them.

For a start read the [Golden Principles of High-Quality Instructional Design](#) to find out more.<sup>1</sup>

- Prepare yourself for engaging interactive content:
  - Identify your target audience and their needs

<sup>1</sup> This is a commercial website selling a tool for creating e-learning courses. They have, however, also a good collection of brief instructions and tips. - Website checked last in April 2019.

<sup>2</sup> That's if you use a newer version of InDesign. If you happen to have an older version (such as CS3), you do not have these workspaces. But the palettes you need are available there as well: Windows  Interactive  Bookmarks/Hyperlinks/States. You will not have some of the more fancy things such as page transitions.

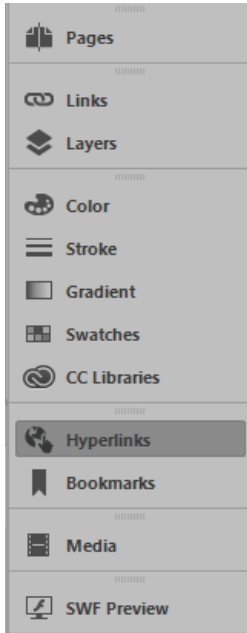
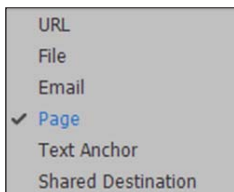


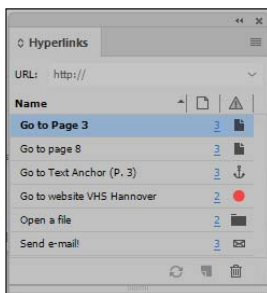
Fig. 4.23 – Collection of panels (palettes) under the “Interactive pdf” workspace environment.

## 1) Adding hyperlinks

As in websites, hyperlinks let the reader quickly jump to some place, e.g. a different page, an external website, a file stored on the same computer, etc. These are the types of hyperlinks InDesign currently offers:



This is the *Hyperlinks* palette (here already filled with various hyperlinks). Most functions you will need are hidden behind the small *Menu* icon in the top right.

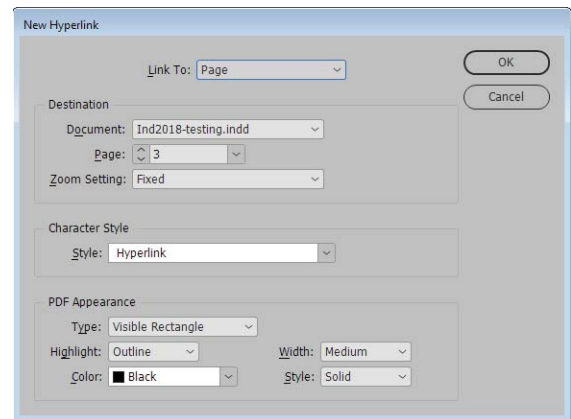


### a) Hyperlinks to jump to a different page

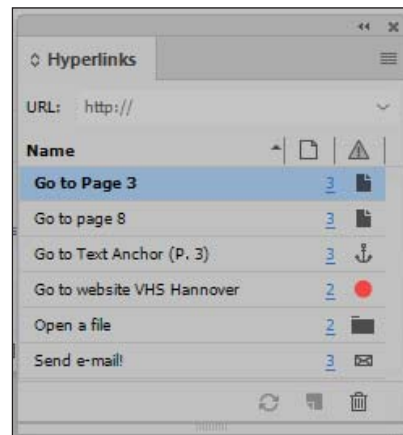
Let’s start with a very simply one: jumping to a different page.

- Select any element in your document, for example a line of text saying “Got to Page 5”.
- Open the *New Hyperlink* dialogue. – To do this, in the Hyperlinks palette click the Menu icon, then select *New Hyperlink*.<sup>1</sup>

This is the *New Hyperlink* dialogue:



- Give it the desired settings, here especially: what page to go to. The other settings are optional. You can play around with it to find out what they do.
- Hit *OK* to save your settings.
- The *Hyperlink* palette will now display your freshly created link:



### b) Hyperlinks to jump to any piece of text

Sometimes you want to send the reader not only to a different page in your document but to a more specific section of text. Here is how you do this.

<sup>1</sup> Alternatively, there is the *Create New Hyperlink* icon on the bottom of the palette, shaped like a tiny piece of paper. As in all palette in Adobe software, this is to create a new item (specific for the type of palette).

- **First you should set a text anchor.** That's a hidden mark in InDesign that you can attach to any piece of text. Setting such a text anchor is easy, but the function to do it is hidden away a bit. Do the following: 1) Mark a piece of text in your document. 2) In the *Hyperlinks* palette, select from the menu: *New Hyperlink Destination*. Under Type, the option *Text Anchor* should be preselected; if not, select it. (Alternatives are *URL* or *Page*). 4. Click *OK*. That's it.

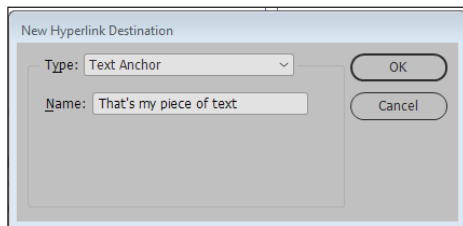
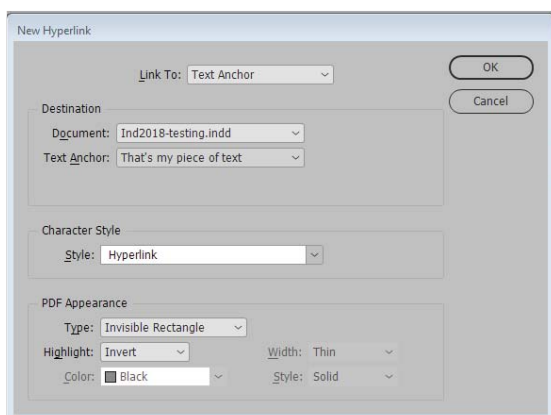


Fig. – *New Hyperlink Destination* dialogue, for setting text anchors.

- **Now you can set a hyperlink** pointing to that text anchor.

On any page of your document, select any element (a text, box shape, whatever) which you want to carry the hyperlink. On the *Hyperlinks* panel, in the menu, click *New Hyperlink* to open the *New Hyperlink* dialogue you already know. Under *Link to select Text Anchor*, then under *Destination* select the text anchor you previously created. Click *OK*.



(Fig. 4.24 – *The New Hyperlink* dialogue with settings for creating a link to a text anchor. Existing text anchors can be selected from the *Text Anchor* dropdown. Here a text anchor "That's my piece of text" has been selected.)

### c) Further types of hyperlinks

Further types of links you can use:

- To create a **link to a web page** (URL), simply select *URL* instead of *Text Anchor*, and fill in the URL.
- **Link to create an e-mail** including the address and a pre-defined subject line. – This can be useful if e.g. you want your learners send you an email, e.g. for submitting homework. This, of course, requires that they have some e-mail software installed on their computer, for example Thunderbird or MS Outlook. In standard office environments, this will be the case most probably. But already now (2019) many, especially younger, people write e-mails only via online services (Gmail and so on), and with those this function might not work.
- A **hyperlink to a file** will open a different file, for example another PDF, or a DOCX, or XLSX.

Standard procedure to create such a link to open a file: In the *New Hyperlink* dialogue box, under *Link* to click on *File*. If you have a path, type the pathname; otherwise click on the *Folder* button and locate the file on your computer system (or computer network, see below). Remember to click *OK* to save your actions.

For such links to work, the precondition is that this file is available on your learner's computer. This unfortunately is a more problematic issue than you would think. If all of your students are in one large shared (company) computer network, you are okay, because they typically can all access the same folder on your network. But as you are an adult educator, it is more likely your students use their own computers. So, what you can do is send them the interactive PDF together with the accompanying files and ask them to store them in one and the same folder. But: InDesign's file links cannot be set to be *relative*, they are always absolute.<sup>1</sup> That means you cannot just save the PDF and the other files in some folder and expect that everything works fine.

There is one workaround though: if you do not use the ordinary *Hyperlink - File* method, but instead create a *Button* (see below) and assign to it a *File Open* action, the link to the folder will be relative (although it is still displayed as absolute).<sup>2</sup>

1 If you have programmed website, you know what this is. – The last version we tested was InDesign CC 2018, Version 13.1.

2 Thanks for this tip to Keith Gilbert, <https://indesignsecrets.com/creating-relative-hyperlinks-in-indesign.php>. We checked his method, and found it working in InDesign CC 2018 (Version 13.1)

For more on hyperlinks, the Adobe online help may be a good place to search: <https://helpx.adobe.com/indesign/using/hyperlinks.html>

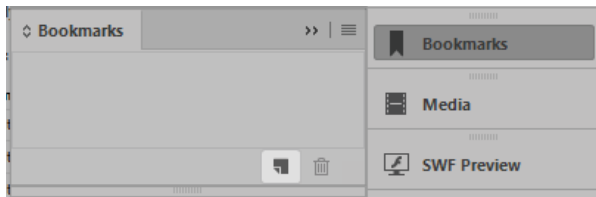
## 2) Adding bookmarks

A very good service to your readers is adding bookmarks to your document. This helps readers navigate through your document quickly and precisely. Bookmarks are an extremely useful feature in PDF documents, especially in cases with larger numbers of pages. Strangely, not many people seem to know about them or use them actively.

Below you see how a PDF with bookmarks looks when opened in Acrobat Pro or Acrobat Reader, and with the *Bookmarks* pane switched on (left hand side):

(See Fig. 4.25)

For creating bookmarks in InDesign, you use the *Bookmarks* palette:



(Fig. – The Bookmarks palette provides you with the tools needed to create a set of bookmarks for readers to quickly navigate through your document. Here it is empty since no bookmark has yet been created.)

Bookmarks can refer to either an entire page, or to a specific element on a page. If you want a bookmark to refer to a page, simply put the cursor on that page, then click the *Create new bookmark* icon on the palette (highlighted in the bottom area of the palette seen above). – If you want the bookmark to refer to a specific element on the page (a headline, a paragraph, a word), first mark that element, then click *Create new bookmark*.

As bookmarks can be nested, you should pay attention to which existing bookmark is highlighted in the *Bookmarks palette* when you click *Create new bookmark*. In case a bookmark is highlighted, the new bookmark will be created as a subordinate (child) to it. If nothing is selected, the new bookmark will simply be added at the end. Eventually you will see a tree-like structure like here:

(See Fig. 4.26)

You can also manually rename, delete, arrange, group or nest a list of bookmarks. Nesting is used to show a connection between topics.

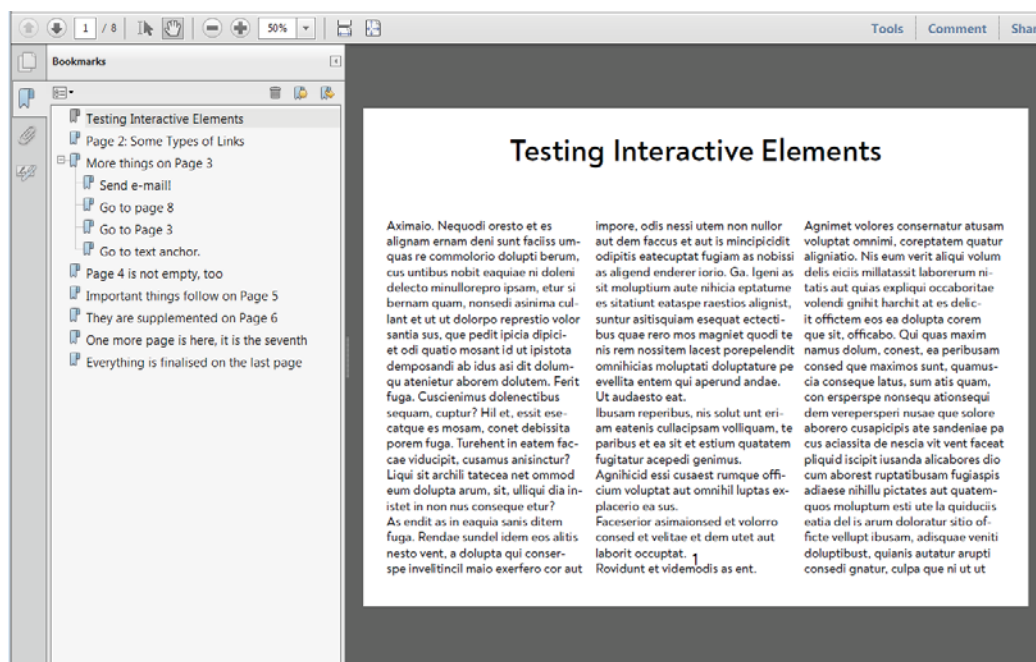


Fig. 4.25 – A bookmarked PDF, with the bookmarks displayed in the special *Bookmarks* column left hand side in Adobe Acrobat. Note that bookmarks can be nested.

### 3) Adding action buttons

Adding action buttons to a PDF document is an idea that obviously came from the world of websites. In websites, buttons are used to offer users the option to select a topic, do the next step in a procedure, etc.

Buttons are not totally different from hyperlinks, but they are distinguished through their visual appearance: usually like physical buttons on a machine (although in recent years with the emergence of “flat design” the old-styled pseudo-three-dimensional buttons have widely disappeared). You can use such buttons also in your interactive PDF.

To create buttons, open the *Buttons and Forms* palette.

(See Fig. 4.27)

In your document, select any element you want, for example a shape or a text box. Then, click on the *Convert to button* icon (footer area of the panel). Finally, click the ‘+’ sign next to *Actions* to select the required action. Click *Event* to select how the button is activated and how it will act. A whole host of *Actions* are available:

(See Fig. 4.28)

We cannot explain all these actions here. Most of them are largely self-explanatory. We recommend trying some of these options out to get a feeling for what you can do with them.

A very simple thing would be to use a button to jump to a different page (*Go to First Page*, *Go to Next Page*, *Go to Previous Page*, and so on).<sup>1</sup> Or use a button to link to a certain website that your learners should visit. Also pay attention to the *Open File* action we mentioned already above, because this offers a (secret) way to use relative file paths that otherwise are not supported.

Now, creating buttons yourself is quite a bit of work. You have to mind a lot of settings for their behaviour, and you have to invest time and energy into graphic design. Here is a typical *Button and Forms* palette with settings for buttons with different visual appearance depending on where is the mouse pointer.

(See Fig. 4.29)

One thing to help you saving time for creating graphic design for your buttons: In the *Buttons and Forms* pal-

<sup>1</sup> Unfortunately, the *Go to Page* function where you can set the page number to go to manually does not work in interactive PDFs. (We tested in InDesign CC 2018, Version 13.1)

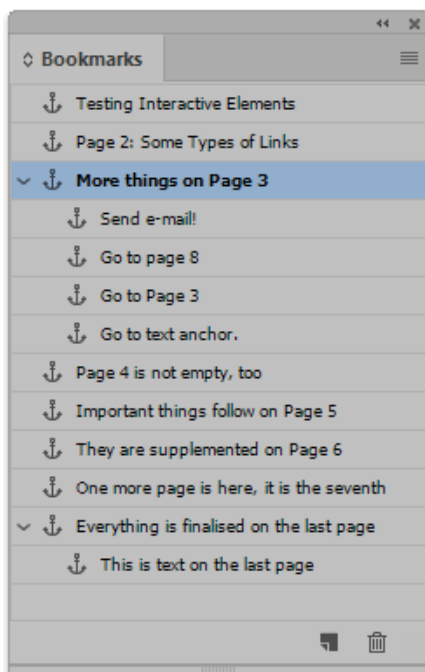


Fig. 4.26 - Bookmarks palette with a number of bookmarks created. Two of them have bookmarks nested in them.

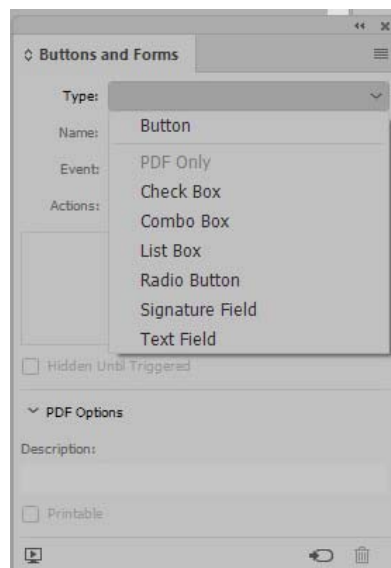


Fig. 4.27 – The Buttons and Forms palette, here with the Types dropdown opened to select various types of elements such as buttons, check boxes etc.

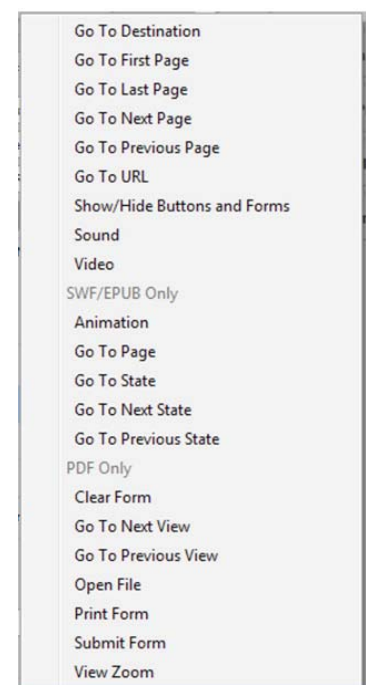


Fig. 4.28 – Quite a number of “actions” can be assigned to buttons.

ette, from the menu, choose *Sample Buttons and Forms*, to get a selection of pre-formatted elements that you can use:

(See Fig. 4.30)

For more on buttons in InDesign:

- General introduction to interactive pdfs:  
<https://helpx.adobe.com/indesign/using/interactivity-5.html>
- Nice and easy introduction into using buttons:  
<https://www.youtube.com/watch?v=SikuzxPwufM>
- First steps into the more complicated stuff: use buttons to make things appear and disappear on your pages with buttons:  
<https://indesignsecrets.com/showing-and-hiding-objects-in-interactive-pdf.php>

## 4) Adding sound and videos clips

Making audio and video material accessible directly in your interactive PDF can improve the learners' experience considerably. One click in the PDF, and they will hear you talking or see you dancing (or whatever audio-visual material you include).

The downside is that such files – especially videos – often take a lot of space, and thus your PDF can become so large that you cannot reasonably ship it to your learners. Or you have first to create sufficiently small video files.

Anyway, here is, in brief, how you add audio-visual media files do your PDF. It is surprisingly simple:

- Click *File > Place*, select the file and position it in your PDF.
- A resizable media object appears, linking to the media file.
- See below for how audio and video files appear in InDesign.  
(See Fig. 4.33)
- There are various settings you can make, e.g. change the audio icon, change the picture for the video, determine if these clips play automatically or only when the reader clicks them, and so on. All these settings are accessible in the *Media* palette.  
(See Fig. 4.31)
- If you want to change the video or audio file, use the *Links* palette.

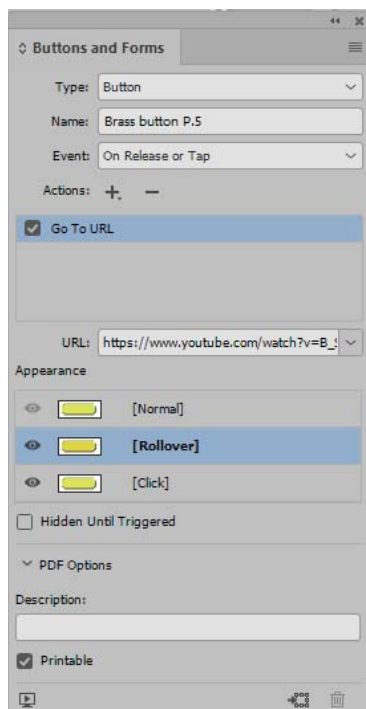


Fig. 4.29 – Buttons and Forms palette, filled in with various settings for a typical button. You can set different visual appearance for the button depending on what the mouse does, but doing this well needs a lot of attention to graphic design.

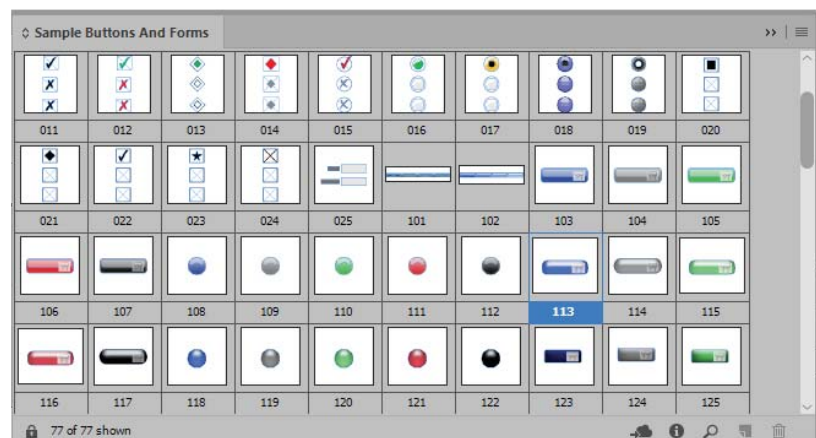


Fig. 4.30 – Ready-made buttons and other elements.



- Instead of including the video file into the PDF, you can also reference it to a file that sits somewhere on a server on the internet. Do this by first creating an empty frame in your document, then in the *Media* palette menu, click *Video from URL*. But note that this needs a real file sitting on that URL. A Youtube link does not work. A practical scenario is that you store your video files on your organisation's server. This allows you to display larger videos without pumping up your PDF file size too much.

More about video and audio in PDF documents:

<https://helpx.adobe.com/indesign/using/movies-sounds.html>

## 5) Page transition effects

Page transitions can decorate your content when turning the page. They are those optical effects you probably know from presentation tools such as PowerPoint: pages move away, dissolve, pop up etc. Such visual effects don't contribute much to the didactical value of your material, but used in healthy doses they can make a document look a bit more "professional". InDesign provides a number of effects. You can add different transitions to different pages or one transitions to all. This is what is offered currently (2018):

(See Fig. 4.32)

To apply page transition effects:

- On the *Pages* panel and select the spreads (or pages) that you want to add transition to.
- Then use the *Page Transitions* palette (if not visible, choose *Window > Interactive > Page Transitions*) and choose from the *Transition* dropdown the one that is most suitable.

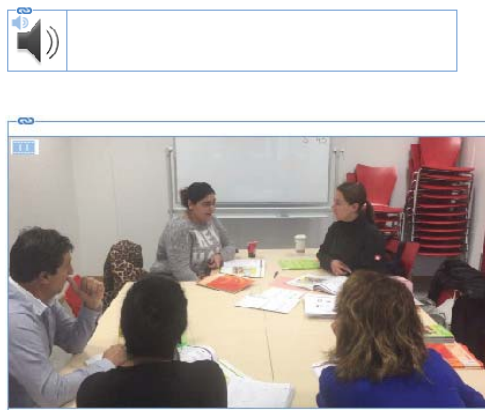


Fig. 4.33 – That's how audio (above) and video (below) files typically appear in the InDesign file: A loudspeaker icon for audio, a picture from the video clip, both with tiny symbols for audio and video top left.

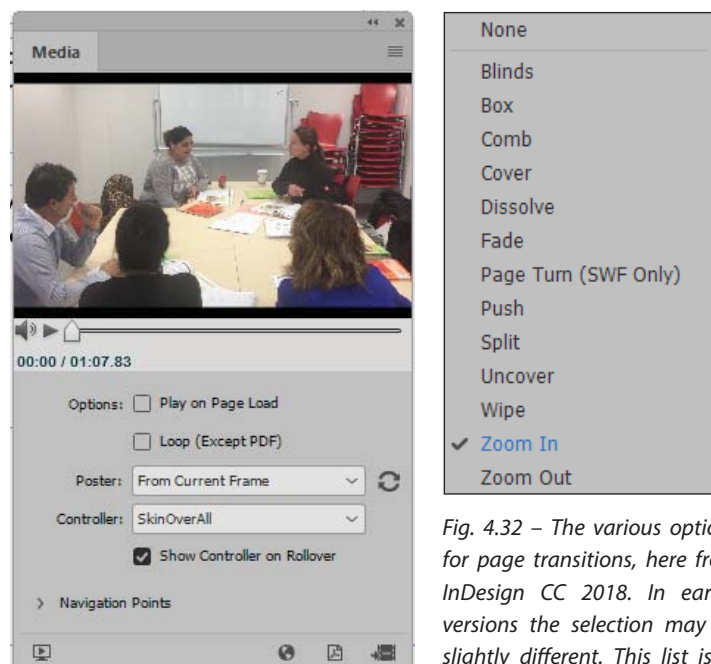


Fig. 4.31 – The Media palette offers a number of settings for the appearance of the element in the PDF document, and for its behaviour.

Fig. 4.32 – The various options for page transitions, here from InDesign CC 2018. In earlier versions the selection may be slightly different. This list is in the Transition dropdown on the Page Transitions palette.

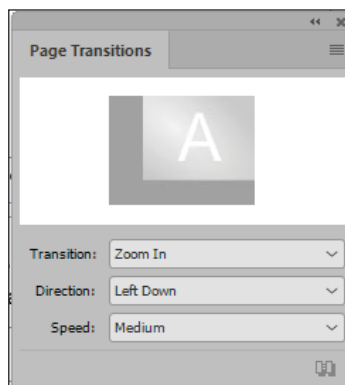


Fig. 4.33 – The Page Transitions palette let's you select and fine-tune a transition effect for one or multiple pages. Mouse pointer over the little image shows the animation that will be produced.

- You can customize the effects a bit via the *Direction and Speed* dropdown fields.

## 6) Other elements for interactive PDFs

There are many more options for interactivity in PDF documents. You can add checklists, checkboxes, fillable forms with text or signature fields, or cross-references.

Before you start, take some time to navigate through the tool and discover their features. Here are some useful notes:

- In InDesign you may see an option to include animations (palette: *Animation*), that make elements (shapes, text elements, etc.) move and change their shape similar to an animated movie. However, this does not work for PDFs. To use this, you would need to create Flash files (Shockwave Flash, SWF), which is a form of video that does not work across all platforms.

For more on this, see

<https://helpx.adobe.com/indesign/using/animation.html>

- It is possible to create entire quizzes, or sequences of elements that appear on a page step by step. But this needs a lot of settings to be done in the *Buttons and Forms* palette.

- A good introduction is here:

<https://indesignsecrets.com/showing-and-hiding-objects-in-interactive-pdf.php>

- More on check boxes:

<https://www.webucator.com/how-to/how-create-check-box-form-field-adobe-indesign.cfm>

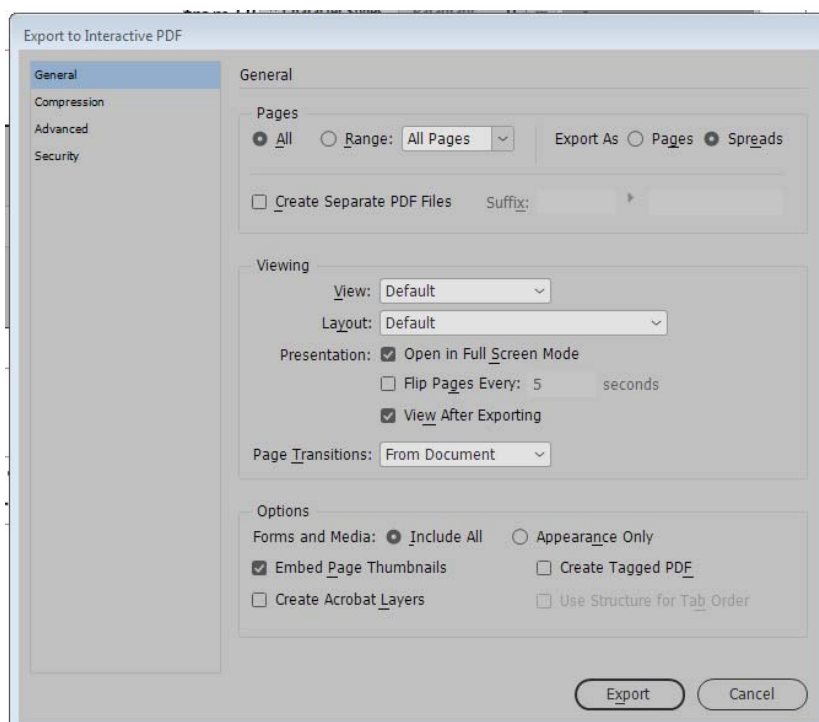


Fig. 4.35 – The Export to Interactive PDF dialogue offers a number of settings you may want pay attention to. Here from InDesign CC 2018 (Windows).

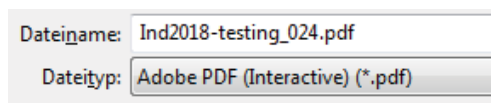
- A short video introduction of good quality about working with form elements:

[https://www.youtube.com/watch?v=TtCpu\\_XUJFo](https://www.youtube.com/watch?v=TtCpu_XUJFo)

## 7) Exporting your work to PDF

So far you have created various interactive elements, but you have not seen them in action. To do so, you have to create the actual PDF document. This is called “exporting”. You will do this repeatedly during your work on this document, because there is no other really working way to check if the interactive elements do exactly what you want. So it is a process of export, test, redo, export, test, redo...

Luckily, exporting is simple. Click *File > Export > Adobe PDF (Interactive) > Save*, and you are done. Mind that “interactive PDF” must be selected. Otherwise you get a normal PDF document without interactive features.



(Fig. 4.34 – Setting “Adobe PDF (Interactive)” during export is crucial.)

You may also want to pay attention to the various settings in the export dialogue that will pop up:

(See Fig. 4.35, previous page)

Note that in earlier versions of Adobe InDesign (which you may still use), the export procedure was a bit different. There, you had to explicitly tick a set of options in the *Export* dialogue to include interactive behaviour. Just check your version of InDesign.

### Teaching Benefits

PDF is a very popular format of documents used across the web, especially in professional publishing. Its large advantage is that it can be used across platforms with documents remaining consistent in design and functionality. For teachers or learning facilitators, being able to create PDFs is therefore an important skill.

Here are some more benefits of interactive PDFs:

- When using interactive PDFs as teaching aids, your learners do not need additional resources (except a computer, obviously). Your learners can respond

and interact, as everything is processed within the document.

- Creating interactive PDFs is simple in so far as it does not require additional skills such as writing programme code for websites. (It requires, however, some training in using InDesign, ideally supported by good self-directed learning skills.)
- You can turn your already existing PDFs into interactive material. (The typical way to do this would be: adding interactive elements in Adobe Acrobat Professional).
- Teaching aids delivered as PDF look more professional than such provided in text processing formats (DOCX, ODT). Your learners will be impressed by the range of capabilities included in a PDF.
- PDFs are easy to distribute.
- Interactive PDFs help your target group become more engaged. Learners are given the possibility to respond without even using a permanent internet connection.
- Presentations are no more one-way.
- Interactive PDFs can help you create content that leads to an action. They allow you better incorporate actions, such as submitting details, respond to mini quizzes or watching a video. This can make you more compelling and competitive among other educators.

### Common Mistakes to Avoid

- It is quite common for educators to get excited with interactivity. However, too much of it can make the content tiring for the audience.
- When you have a wide variety of options, it is difficult to keep consistency throughout the content.
- Monitor the size of the file that is created when adding interactivity. Especially included videos can lead to undesired increase of file size.
- Here is another drawback of the entire idea of interactive PDFs: The concept works well as long as your learners use something like a classical computer (PC, MAC). If they try to use your PDFs on their smartphones or other mobile devices, it may well happen that the PDFs lose their functionality just because the PDF reading software on these devices may not

be able to deal with it. Reading will work. Interactivity may be impeded.

### *Online or Offline?*

Interactive PDFs can be published both online and offline. Readers use them offline.<sup>1</sup>

---

<sup>1</sup> With „Publish Online“, Adobe offers users of InDesign also a free hosting server for interactive PDFs. If you use this, your students work with your PDFs online.

## 4.4.2 Creating accessible PDF

“Accessibility” of documents means: the document can be “accessed” (read, used) by all people, including those with some disabilities, especially with visual impairment up to blindness, but also other problems e.g. of the musculoskeletal system. Depending on where you work, “accessibility” may be required by law or by company policies. Documents, especially those in education, are created to be readable and intelligible. So why not create them in a way everybody can use them, including people with special needs?

In everyday practice this means that the document should be “readable” not only for the ordinary human eye. Rather, it should be possible that “assistive technologies” can process them. This includes screen magnifiers, special colour settings, and most naturally screen readers (robotic voices reading a written document).

To achieve accessibility in this sense, two things are to be done.

To begin with, the document should be well-structured for the human eye. Rules to be followed coincide largely with what professional journalists and publishers have been doing for centuries. (For example: write an article always in a self-sufficient form. Don’t expect the reader to have read the headline first.)

Second, the document should be well-structured for robotic readers. The structure for robotic readers will usually be included in the page without being visible to the human eye. For example, if on a page there are several areas of text (columns, boxes, or what ever), the document should include information (hidden to the eye, but readable for machines) about the order in which to read. That’s because a robotic reader cannot do what the human brain and eye can do: scan the entirety of a page and instantaneously decide along certain hermeneutic criteria what to read next. The robotic reader needs information about the structure of a text that is interpretable for it. For example, it needs indicators what are the headlines, what is contiguous text, what are navigation elements, and what is just a letter head or logo that appears on each page but should not be read as it occurs each time.

A document that is technically well-structured can be processed by software to assist people with disabilities. You may have learners with such special needs.

In this chapter we will have a look how we can improve our PDF documents so that they fulfil accessibility criteria.

Adobe Acrobat Pro is the industry standard programme for editing and processing (rather than authoring) PDF documents. It provides various tools to check documents for accessibility, and to fix problems. We will use Adobe Acrobat Pro here, but of course, the same thing can be done with other PDF editing tools as well.

Main PDF accessibility features that can be provided via Acrobat are features to make documents readable for screen readers (robotic readers) and screen magnifiers – programmes to selectively enlarge parts of a screen so that people with weak sight can read them. It includes also document colours to be swapped with high contrast colours. Individual steps are

### For blind people (using screen readers)

- set the language of a document so that a screen reader knows what to do
- set the reading order (“tagging”) for text elements on each page
- set alternate texts for images so that the robotic reader would read aloud “Picture of a house in green meadows” when a picture of a house in green meadows is on the screen; the robotic reader does not recognize the picture; it simply reads a line of text that the author of the text assigned to the picture for that purpose.
- re-open documents to the last viewed page. This helps blind people to get back to where they were with reading when they closed the document.
- adjust document zoom; generally a good setting is “fit page on screen”, that way screen readers and screen magnifiers can work optimally.

### For people who can read but need special visibility aids

- highlighting form fields
- disable text smoothing, which increases contrast
- display the document in other colours for better contrast

There are various standards for accessibility of internet documents, for example the *Web Content Accessibility*

*Guidelines* (WCAG) and the *PDF Universal Access* (ISO 14289). If you are generally interested in the topic, a source for quick oversight information is <http://www.section508.gov> by the government of the United States. (There is no special prevalence here to standards set by that country; it just happens that they have a good website on the topic in English.)

## What do I need?

- Computer or laptop
- Adobe Acrobat Pro. – Note that this is not the Adobe Reader. Adobe Acrobat Pro is a full-sized PDF manipulating tool, wide-spread in professional publishing, both print and screen. It is not cheap.
- A word processor (such as Microsoft Word or OpenOffice Writer) that allows you to output a document as PDF. – If you have Adobe Acrobat Pro installed, the respective plug-ins should be available in your MS Office applications automatically.

## How do I prepare?

Here are some rules for “accessible” PDFs. They are basic things that are good to know in advance before diving further into the topic.

- The visible (and invisible) structure of your original document should be clear and easy to follow. Headings, table of contents, links and bookmarks are elements to help structure a document. – That’s of course a thing everybody writing any documents should heed anyway.
- Visual content (pictures) should have text alternatives. That’s text to be displayed or to be read aloud instead of the picture. – We will show you how to create these.
- PDFs must be properly tagged. Tags are (invisible) mark-ups in the document that provide structure, especially for robotic readers. – We will show you how to check for these tags and set or improve them.
- The language of the texts should be specified explicitly so that robotic readers know what to do. – We will show you below how to do this.
- The security settings of the document should be operable also for users of assistive technologies. – Security settings include rules on what can be printed, and whether a password is needed to read (or manipulate) the document. – If you have never used these settings in PDFs, don’t worry as you will most likely not be affected.

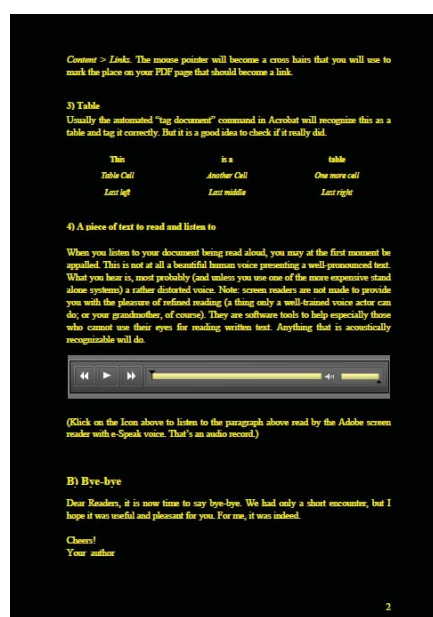
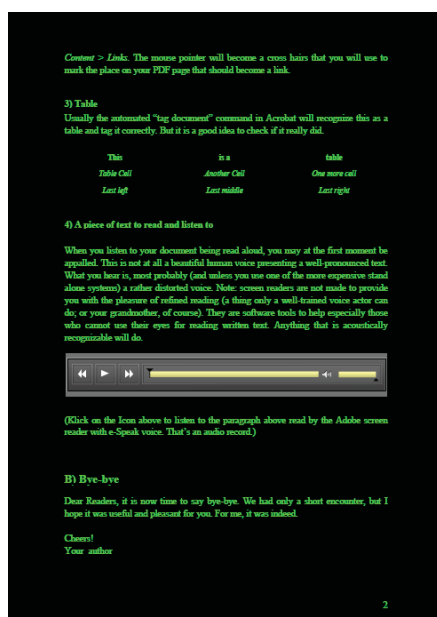


Fig. 4.36 – Two of the high-contrast colour settings available in Adobe Acrobat via *Edit > Preferences > General > Accessibility*. This can be helpful for people with certain forms of visual impairment. (If you are old enough, you may like the sight because it remembers you of your first steps with computers, in the 1980s and 1990s.)

## Know how to make Acrobat read documents out loud to you

One feature of Acrobat (Reader and Pro) not many people know about is the ability to read out text aloud. You can test this very easily by switching the function on: *View > Read Out Loud > Activate*. In any open PDF document click on something with your mouse pointer, and it should be read aloud (with some artificial voice and an ugly mechanic but intelligible pronunciation).

Note: by default your computer system might provide only one single “voice” to use for reading, and that voice will most probably speak English only. Although you indeed can make it read also your German, Spanish, Greek or Italian texts, and have fun with that for five minutes, that’s just a nonsensical game. So, if a “voice” for your language is not already available, you have to install additional languages. That’s surprisingly simple. We show you how, below.

## View your documents in high contrast mode

Also, you can make a quick experiment to get acquainted with “high contrast screen” views. You simply have to tell Acrobat to display documents that way. In Acrobat Pro or Reader: *Edit > Preferences > General > Accessibility > Document Colours Options*. Try out the various options. You may end up with screens like those below (Two of the high-contrast colour settings available in Adobe Acrobat. This can be helpful for people with certain forms of visual impairment):

(See Fig. 4.36, previous page)

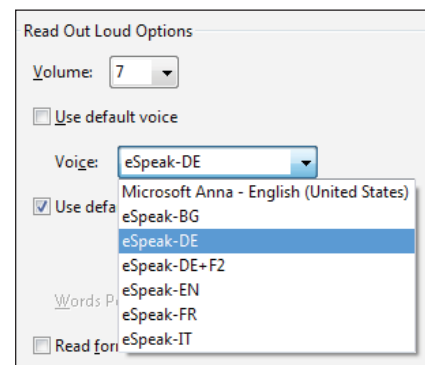
## Letting a screen reader read your document aloud

There are various assistive tools available, e.g. high contrast screens as seen above. However, the most outstanding tools are screen readers, that’s robotic voices reading aloud what your document says. There are specialty software programmes to do that, both open source and commercial.<sup>1</sup> Also, modern operating systems (Windows, Apple OS, Android) usually have some form of a screen reader built in.

A basic screen reader is built in in Adobe Acrobat Pro and Adobe Acrobat Reader. Start it with *View > Read Out Loud > Activate Read Out Loud*.

You will probably find that this reads only English texts. Not good for you if you are living in some other country. The solution is: you have to install additional screen reading elements to your operating system. For Windows the current solution (2019) can be found at <http://espeak.sourceforge.net/download.html>. You have to follow the instructions given there. instructions by Microsoft on the same topic are available here: <https://support.office.com/en-us/article/download-voices-for-immersive-reader-read-mode-and-read-aloud-4c83a8d8-7486-42f7-8e46-2b0fdf753130?ui=en-US&rs=en-US&ad=US>.<sup>2</sup>

This let’s you add one or several of the most common languages in use . Once installed in your operating system, you have to tell Adobe Acrobat (Pro or Reader) to use this in the screen reader. You do this via *Edit > Preference > Reading > Voice* (dropdown field where the newly installed languages should be visible now.) This will look something like:



When you listen to your document being read aloud, you may at the first moment be surprised as it is not a beautiful human voice presenting a text in good pronunciation and prosody. What you will hear is most probably (and unless you use one of the more expensive stand alone systems) a rather distorted voice like of a caricature robot. Screen readers are not made to provide you with the pleasure of a refined reading experience (a thing only a well-trained voice actor can do). They are software tools to help especially those who cannot use their eyes for reading; aesthetics is not considered.

1 For more on that: [https://en.wikipedia.org/wiki/Screen\\_reader](https://en.wikipedia.org/wiki/Screen_reader). A list of currently available screen readers, with comparison of their features is at [https://en.wikipedia.org/wiki/List\\_of\\_screen\\_readers](https://en.wikipedia.org/wiki/List_of_screen_readers).

2 All links mentioned here were tested in April 2019.

## Where to look for help?

The Adobe Help Centre (in the internet) has useful tips on how to get started. There are tutorials and step-by-step instructions. You can also join the community forum to ask for specific issues.

[https://helpx.adobe.com/gr\\_en/support.html](https://helpx.adobe.com/gr_en/support.html)

Especially for accessibility:

<https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html>

If you are interested in the topic of “accessibility” of documents more generally: the US government has a website on the topic that is very good. It also offers checklists for accessibility of various document formats.

<http://www.section508.gov>

A basic video tutorial for using Adobe Acrobat for creating interactive PDFs can be found here:

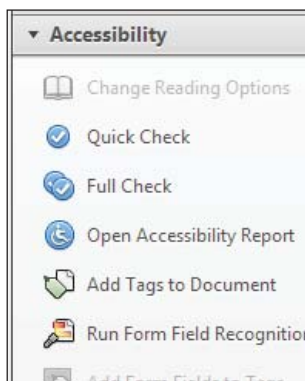
<https://www.youtube.com/watch?v=kWCCiN7y64M>

## What do I do?

### 1) Checking the accessibility of an existing PDF

For checking accessibility of PDFs, Adobe Acrobat has an automated way, called **Full Check**. This feature checks a PDF for many of the characteristics that accessible PDFs should have.

- Choose **Tools > Accessibility**. Then the respective toolset will be displayed in the toolbar.<sup>1</sup>



- Click on the **Full Check** button. You get displayed a large dialogue with plenty of settings.
- In the **Report Options** area, choose options for how the results shall be displayed. Basically you can choose between a report to be saved somewhere on your computer, and “Create comments in document”.
- In case you want to check only specific pages in the document, select a page range.
- Choose one or more of the **Checking Options**. You can also select from various standards to be used in the **Checking Options - Name** dropdown field. There you find e.g. the “Section 508” standard used by US authorities to ensure accessibility of their documents; but also other standards. If you choose “Adobe PDF” as the standard to check against, the check will use the following criteria:

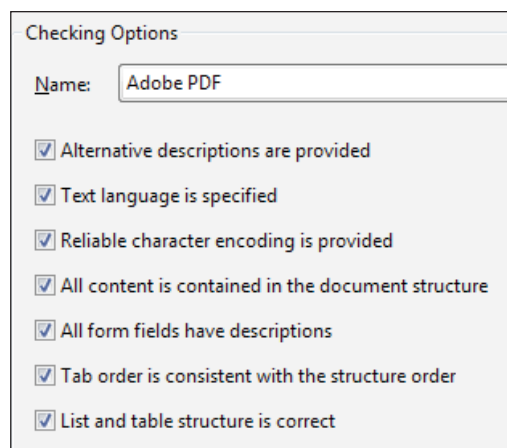


Fig. 4.38 – The “Adobe PDF” criteria set for checking for accessibility issues. This is a relatively concise set of criteria. Some of the other standards available have considerably more detailed lists of criteria.

- Click **Start Checking**.
- The results will be displayed in the **AccessibilityChecker** column on the left of your screen. (What you see there is actually the report that has also been saved to some place on your computer.)

(See Fig. 4.39 on next page)

If you selected **Create comments in document** your document will show highlighting like this:

<sup>1</sup> If your Acrobat has a different screen language, you might need to look out for something fitting the idea. In German the tool is called Ein-/Ausgabehilfe. If a tool like that is not visible at all, use **View > Tools** to select the tool you need. It will henceforth be visible in the Tools column right hand side of your Acrobat window.



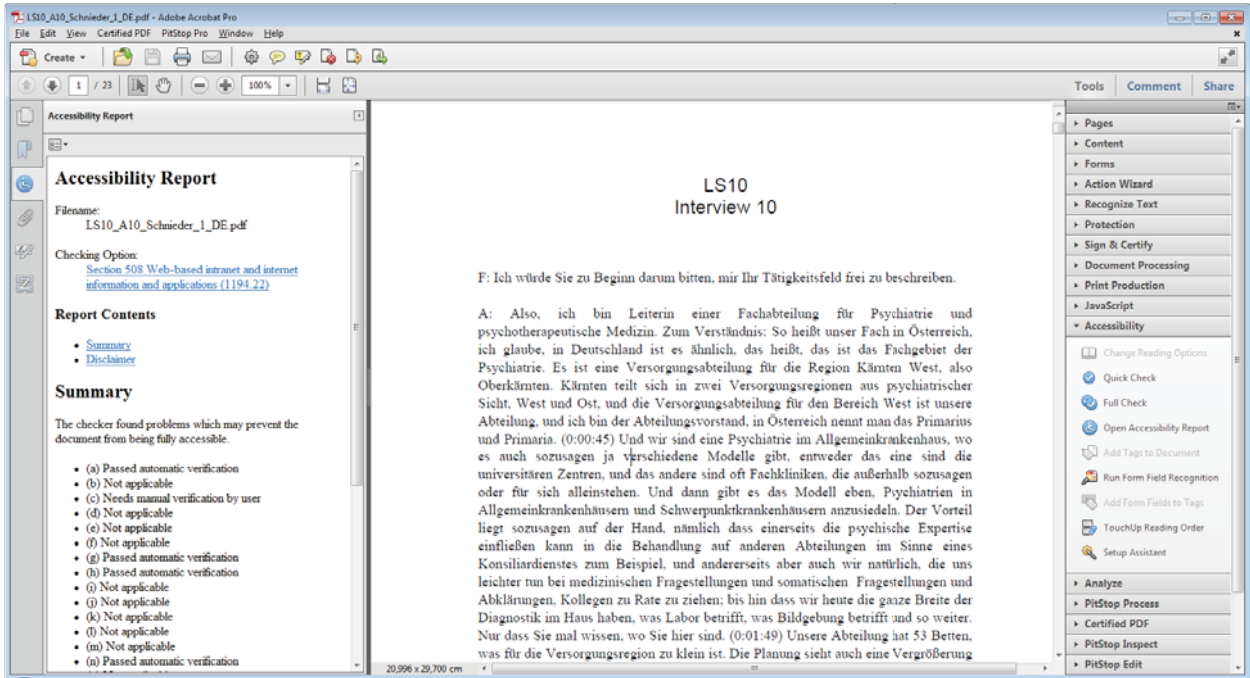


Fig. 4.39 – Window of Adobe Acrobat Pro (here version X) with a document opened in the middle, the tools column to the right, and the report in the column to the left.

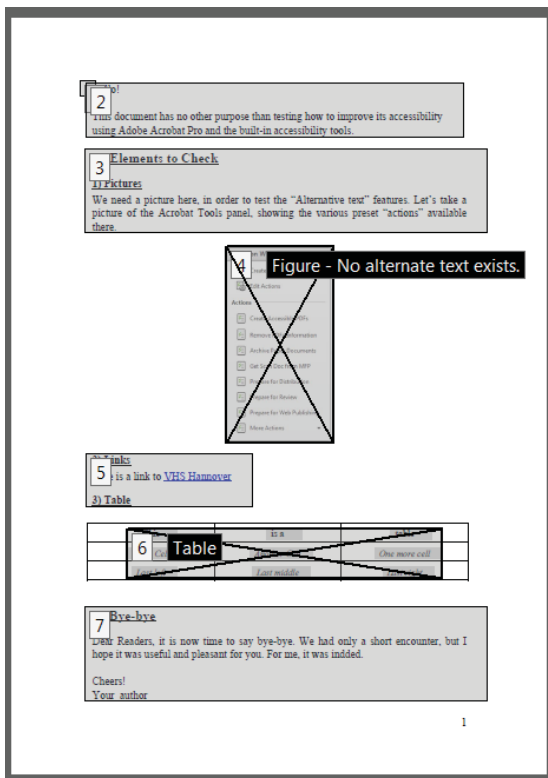


Fig 4.40 – Reading order view of a page. On this document the Add Tags to Document command was used. The tags are more or less okay, but could be improved by assigning individuals tags to the headlines (as they are currently included in tags 3, 5, and 7 together with text).

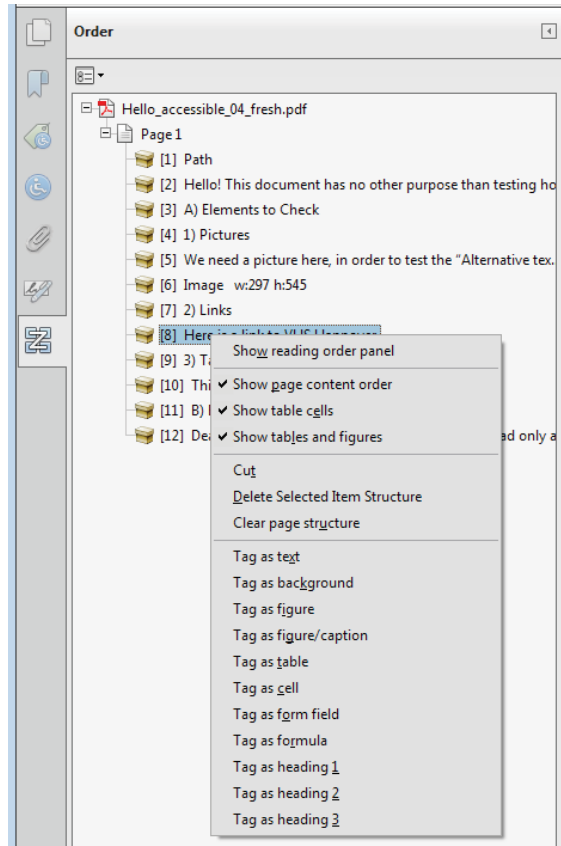


Fig. 4.41 – Left column of your Acrobat window. The Order pane is open. We right-clicked on one of the elements on Page 1 and got a dialogue displayed to adjust the properties of the element.

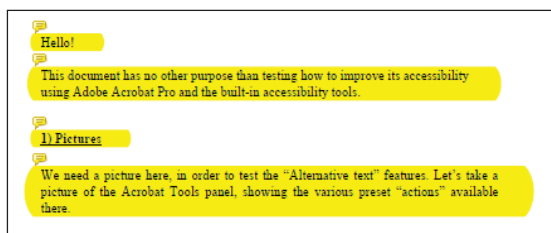
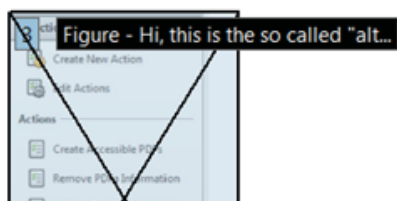


Fig. 4.42 – Document with highlighted sections where problems were identified.

- According to what the report says, and of course according to what accessibility features your document is set to have, you can now start fixing the issues. Here are some typical issues, and quick advice how to solve them:

- **Language not defined:** This means that screen readers will not be able to read your document correctly. It might happen that your French text will be read by a voice trying to read it as if it was English (if you want to have fun, try). – For correctly setting the language use *File > Properties > Advanced > Language*
- **Image does not have alternate text:** Select, in the left column, the *Order* pane. Pictures that do not have alternate texts should be marked like so:



- You can now right-click on the black note and select *Edit Alternate Text*.
- **Document not tagged.** This means that the various elements on the pages (headers, text blocks, pictures, etc.) are not marked explicitly as such. You can use the *Add Tags to Document* command (in the tools column, section *Accessibility*) which will do the tagging automatically, as good as possible. This works usually well in documents that are not too complex. If you are not happy with the result, you can fix everything manually by using the *Touch up Reading Order* tool (same place). Or

you can use the *Touch up Reading Order* tool right away without a detour through the *Add Tags* tool.

- To check your document structure visually: open the *Order* pane (left column, where the bookmarks are) by clicking this icon:



- You now will get your pages displayed in “reading order view” like this:

(Fig. 4.40 on previous page)

You can now use the *Touch up Reading Order* tool. Basically you mark with the mouse a rectangle around any element on the page, then press one of the buttons available to identify the marked section as headline, text, picture, table, or whatever it is.

Alternatively, you can access all individual elements in the left column, *Order* pane (right-click on the items listed there), and assign new values.

(See Fig. 4.41 on previous page)

## 2) Use the Make Accessible action

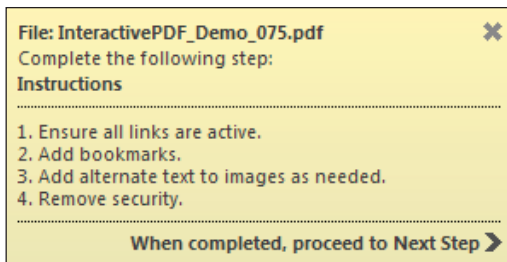
As an alternative way to do it, Acrobat Pro has the *Make Accessible* action that provides you with step-by-step guidance on how to make a PDF accessible.<sup>1</sup>

“Actions” in Acrobat are tiny programmes to carry out a series of tasks that otherwise would need to be done manually one by one. The *Make Accessible* action leads you through a number of checks and shows you what needs to be fixed.

- First, open the PDF that you want to check and improve.
- Choose *Tools > Action Wizard*. Then, the Action Wizard toolset is displayed in the toolbar.  
(See Fig. 4.45)
- From the Action list, choose *Make Accessible* (in Acrobat Version X it is *Create Accessible PDFs*)
- The panel appearing displays each task that needs to be done in order to make the document accessible, as well as instructions of how to execute.  
(See Fig. 4.46)

<sup>1</sup> May be called completely differently in your localized Acrobat version. In German this is called „Barrierefreie PDF-Dokumente erstellen“.

In the process you will repeatedly get advice on what to do, for example:



Advice given during the "action". Obviously it is expected that you know how e.g. to add alternate texts to images.

- Follow the advice given. For example when it says "Add alternate text to images as needed", do so. – From notes such as this it becomes clear that Adobe expects you to know how to do this. (That's why we showed you the manual way first. Old Chinese proverb: *There is no knowledge without knowing.*)

## Teaching Benefits

You will use accessibility features for your PDF documents especially when you have learners with special needs. Whilst in general adult education it will not happen so often, it might. Often blind and visually impaired people will already be equipped with assistive technologies (special screen readers etc.), and in this case by preparing your documents accordingly you are really assisting them and making their life easier.

Admittedly, doing this for only one learner, with documents that are one-off for a one-semester course, is perhaps a bit unrealistic with regard to the work required. However, if you have documents that are expected to be used over years and are directed to a wider public, checking them for accessibility features is definitely a good idea.

## Common Mistakes to Avoid

- Be careful with colours. Good contrast for reading is important not only to visually impaired, but actually for everybody.

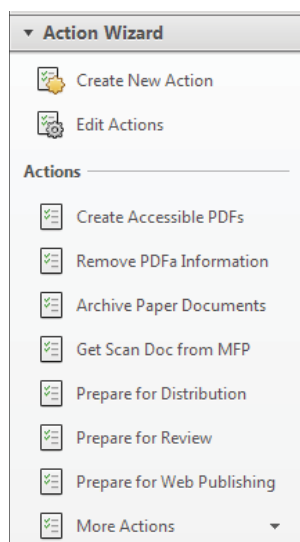


Fig. 4.45 – Adobe Acrobat Action Wizard (here from Acrobat X, other versions may appear slightly different.)

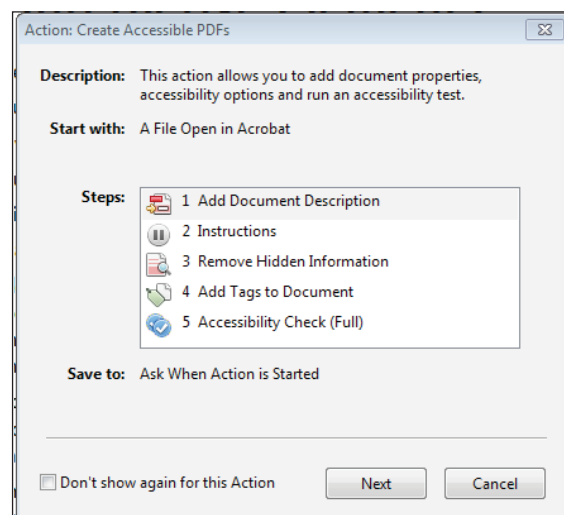


Fig. 4.46 – The "action" starts with showing you the steps you will be going through.

- Do not use images just to decorate your content. All material included in your document should convey useful information.
- Pay attention that repeating headers and footers should be exempt from the reading order for screen readers.
- It is better not to try make your *interactive PDFs* (see previous chapter) “accessible”. Making PDFs accessible may remove crucial elements of their interactivity such as links or included files.

### *Online or Offline?*

For making your PDF “accessible”, use the Adobe Acrobat Pro, which is by its nature an offline application. The resulting PDF file can of course be published both offline and online.

## 4.5 Games

Games and gamification are becoming a very important tool in the blended educators' skillset. Games allow

learners to enjoy their learning, and look at topics from a new direction.

### 4.5.1 Creating and Using Interactive Games

The internet allows you to both play and create a wide range of games that can be very helpful for learners. This activity is focussed on the creation of quizzes and word games. We introduce you to two of them in detail. For more examples, see Chapter 7 where more tools are presented briefly.

#### *What do you need?*

- A mobile phone, desktop, laptop or tablet
- Internet access
- Game generator tools – We will introduce you to three of them. The idea is simply to give you some idea what is available. You can take this as a point to start to search for others. New gaming opportunities in the internet with an educative agenda appear constantly.

#### *Where to look for help?*

Generally on the topic of games in education:

- A good collection of short, introductory articles and resources on the topic of game-based learning is provided by [www.edutopia.org](http://www.edutopia.org) (run by George Lucas Educational Foundation). This is predominantly school-oriented, but it is not bad for a first glance.

<https://www.edutopia.org/game-based-learning-resources>

More tools:

- On [word-grabber.com](http://word-grabber.com) you can find various word generator tools to make words from letters for different word games like Scrabble Word Finder, the Words with Friends Cheat and Anagram Solver. The site is one of several run by a small company based in Bavaria, Germany, that specialises in crowd-based information portals.

- Free crossword generators, for example:

<https://crosswordhobbyist.com> (we present this below)

<http://www.crauswords.com>

<http://www.eclipsecrossword.com> How do I prepare?

Reading this book will be helpful but the most useful thing for you to do is to actually go and try play the various games.

In this chapter we will introduce you to two tools: Kahoot, a platform to create and play quizzes and surveys, and Crosswordhobbyist, a tool to create crosswords.

- For the **Kahoot** quiz, go to <https://kahoot.com> and register an account filling in your role (educator). You will create your username and a password.
- For **Crosswords**, except from registering an account at <https://crosswordhobbyist.com>, you may, in preparation, think about a list of words relevant to the topic of your classes, plus "clue" for each of them. The clues can be used in the crossword, as well as for hints in Hangman, and as questions in the quiz activity.

#### *What do I do?*

### 1) Create Quizzes and Surveys with Kahoot

Kahoot is an internet platform offering user-created quizzes and surveys that can be used for spicing up events starting from normal classrooms up to very large auditoriums. Kahoot quizzes and other online tools are used by schools, universities, and in other educational environments.

The platform is run by a company in Oslo, Norway. It was started in 2013 by a number of students and academics of the Norwegian University of Technology of Science. In 2019 it announced that it had registered 2

billion players with 60 million games created by users.<sup>1</sup> The company name uses an English expression “cahoot” meaning to be in company or partnership.

The main product are user-generated multiple-choice quizzes that can be accessed via a web browser, smartphone apps, etc.

The most typical way to use Kahoot-quizzes is, first, to create a quiz for a certain lecture you are giving. In the classroom you then can display the quiz on your whiteboard. Questions will be displayed on that screen. Students use the Kahoot! app on their smartphone: after entering the code number of the current quiz, they can use their smartphones as voting devices to answer the multiple choice questions displayed on the white board. A typical quiz could for example have 10 questions. Participants get scores for correct answers, with the speed of answering also factored in. Between the individual questions, the current scores of the participants are displayed on the white board, which adds a spirit of competitiveness.

This can be fun for students while offering an entertaining way of repeating the core things learned in that lesson. Obviously this approach will work best with learners who are what today is called “digital natives”, i.e.

people who operate their mobile phones all day long and are familiar with using all sorts of apps. It will not work so well with learners who are not familiar with using smart phones that way.

No user account is needed for simple participating in quizzes. For creating quizzes, however a user account is needed. Basic user accounts are free. More advanced accounts are available for 12 and 36 Euros annually (prices as in April 2019).

## Test our sample quizzes

Enough theory. Just try it! We created a mini quiz about the fascinating topic of Blended Learning for you:

<https://create.kahoot.it/share/blended-learning/0093de63-d390-4d88-bd1b-0a992fd2087d>

This one is quite similar, created by somebody else:

<https://create.kahoot.it/share/blended-learning/189beb65-d0c2-40bb-a40d-0ba83a84caa4>

This one is about current issues of sustainability on planet earth. It was one of the most-used quizzes in April 2019:

<sup>1</sup> Data from their website: <https://kahoot.com/company>, accessed April 2019. Note: „2 billion players“ is not to be misunderstood as „2 billion registered users“. It means 2 billion counts of somebody participating in a quiz etc.

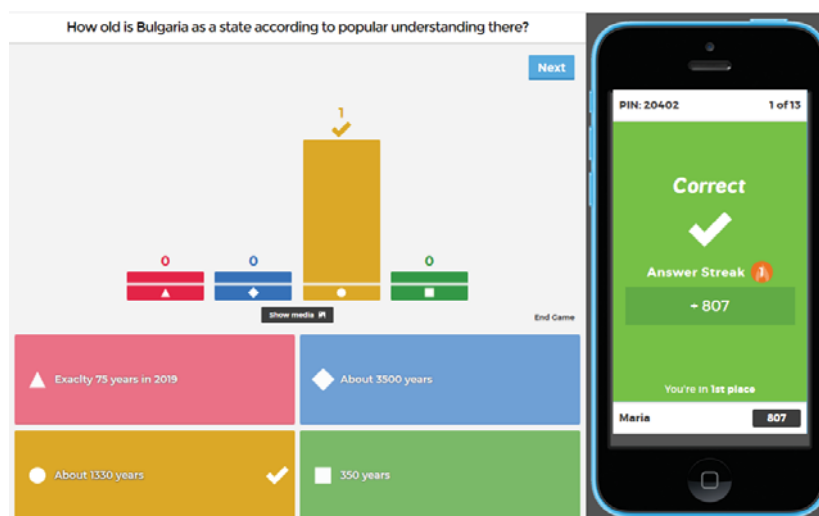


Fig. 4.50 – A typical screen of a simple quiz. The question is displayed on top. The four answers have buttons with different symbols and colours. These buttons are displayed also in the smartphone app (right).

<https://create.kahoot.it/details/1ec244d9-87fa-45fa-81b6-c3fe63e-fafd0>

These are quizzes with multiple-choice questions with 2-4 answers.

Currently Kahoot allows users to create three types of online games:

- Quizzes with multiple-choice questions
- Quizzes where four answers have to be put in correct order
- Surveys, a classical voting tool: participants can vote on up to four options (without there being wrong and correct answers).

Kahoot can be used to review students' knowledge, for formative assessment, or as a break from traditional classroom activities.

## Create a quiz yourself

For creating your own quiz in Kahoot, log in to the platform and choose an activity you want to create: a quiz, a jumble, or survey.



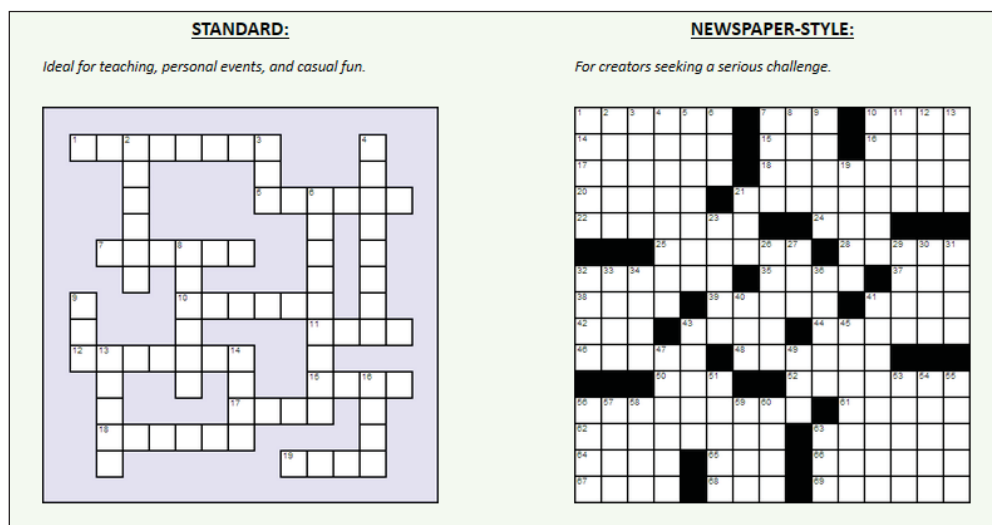
The website will lead you through the process of creating your quiz. Here are some tips to keep in mind:

- Questions have a 95 characters limit.
- There can be 2-4 answers, each with a 60 characters limit. At least one of them must be marked as "correct"
- You can set a time limit to answer the question. The default is 20 seconds, but you can set it between 5 and 120, depending, chiefly, on how thoroughly the question and the answers need to be read.
- You can embed an image or a YouTube video into the question. Thus, for example, you can show some object and ask something about it.
- Select whether you want to make your game public or private. Public games can be used by everybody, private ones only by people who know the link.

## Play the game – or let your students play

- When you want to launch a game, select it from "MyKahoots", or via the link identifier, and press the Play button. You will get a game PIN (a number consisting of 6 figures).
- To participate, learners start the Kahoot app on their smart phones or computers, enter the game PIN,

Fig. 4.51 – Two types of crosswords available on the Crosswordhobbyist website: "Standard" and "Newspaper Style".



and also some make-shift username (pseudonym) that will be displayed on the central screen.

(See Fig. 4.50)

## 2) Create Crosswords with Crosswordhobbyist

The Crosswordhobbyist offers assistance for quickly creating crosswords.

<https://crosswordhobbyist.com>

Here you can create two types of crosswords, "Standard" and "Newspaper":

(See Fig. 4.51)

The "Newspaper" type is extremely complex to create. Even experienced crossword creators need 3-4 hours to create one such (with 15 x 15 squares), and beginners may need 6-8. All the placement of words must be done manually, or better: by the human brain. Clearly not an option for the average adult educator. Not due to lack of brain, of course, but due to lack of time.

Much easier is the "Standard" type. Here, the task is simply: collect a number of words (ten perhaps) that belong to your teaching topic. On pressing a button, the software behind the website will arrange them in the best way possible, i.e. with as many cross sections as possible.

For each word you also enter a "clue", that's the description of the word to find, for example, the famous "male

sheep" when "mutton" is the solution. Or, of course, something more in the form of a riddle: "What we do when we are not passive", as a clue for "activity".

Here are some tips for using the Standard crosswords mechanism of the Crosswordhobbyist website:

- Enter all your words in the 'Auto-Arrange' section at left.
- You can arrange your words manually, automatically, or any combination of the two.
- You can add all your words at once or a few at a time, as you think of them. If you are adding words a few at a time, try to start with at least 6 words to increase the likelihood that they all intersect.
- You can also add words directly to the grid, if that's your style. Type across or down, and use the spacebar to switch directions.
- When you are ready, click the *Make Printable* button to save your puzzle. That's the moment when you need to pay. Subscription plans cost 4,25 - 6,80 USD per month, payable via credit card (Paypal was not accepted when we tested in April 2019). Conveniently you can also pay for individual puzzles (6 dollars).
- Your puzzles are saved to your account. They are accessible from any computer with connection to the internet. They can be solved online, or you can download them as PDF.

(See Fig. 4.57)

The screenshot displays the Crosswordhobbyist website interface. At the top, there is a title input field containing "Blended Learning", followed by "Undo", "Redo", and "Save Now" buttons. Below the title is a crossword grid with the following words filled in:

- Across: ACTIVITY, LEARNER, MULTILOCALITY, GROUP
- Down: M, U, L, T, I, O, C, A, L, I, T, Y

To the right of the grid is a "CLUES:" section with two columns: "Across" and "Down". The clues are:

Across	Down
1 What we do when we are not passive.	2 What students should do together
5 He who is most active. Or should be.	3 Speaking to the eye, and listening to nose.
6 We are not fixed to a certain place. We enjoy...	4 The facilitator, not anymore.
7 Working in this form - joy for the one, horror for the other	8 Everybody at his own...

Fig. 4.57 – For testing the tool we quickly created a „Blended Learning“ crosswords. That's how it looks on the computer screen at the time of creating.



## Teaching Benefits

- Using games, an educator can organise teamwork and competition which is motivating for some types of learners.
- Games bring interaction to the classroom. Some types of learners enjoy the competitive nature of the game and comment that it helps them retain concepts.
- Some games are good for making people cooperate in groups.
- Word games can be used to introduce key words/terms of a topic; quizzes help to check learners' performance, and to consolidate the understanding of key concepts.
- Some games can be used in the online part of a Blended Learning environment.

## Common Mistakes to Avoid

### In Kahoot:

- Remember that there is a character limit of 95 for questions and 60 for answers.
- Be sure to extend question time limit in a proper way as images don't show before answer options do.
- There is no limit for the number of questions in quizzes and surveys, but it is recommended to keep them between 10-20 questions.
- If you're a Kahoot admin or educator of a team, you can edit and host other educators' quizzes or surveys, but at a time only one person can edit a Kahoot.
- Be sure your audience (your students) are familiar with using smartphones and apps. If there are people without smartphones in your audience, they cannot participate and might feel excluded.

### In Crosswords:

- Sometimes it's not possible to connect all the words from your list into an intersecting group because the combination of letters doesn't line up. To solve this you can try adding word, or you can set the number

of groups you are willing to accept at more than 1. Bigger numbers make larger puzzles.

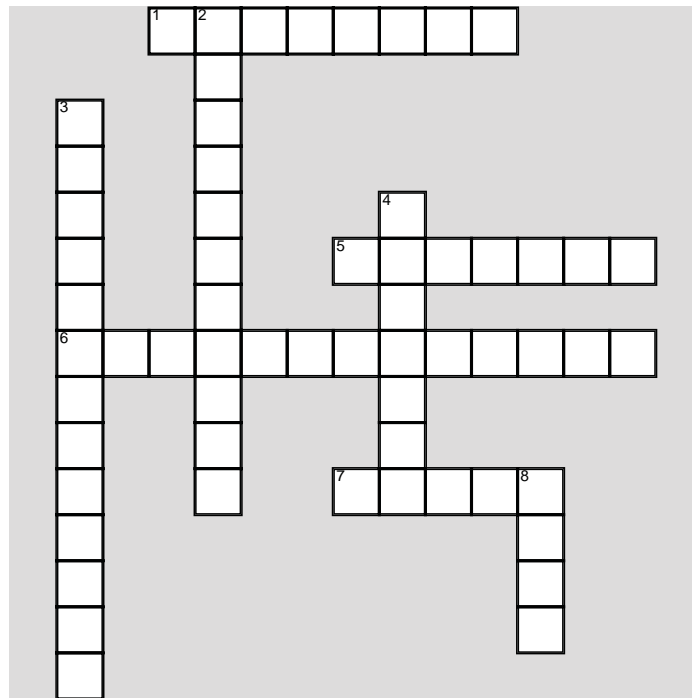
- In Newspaper style crosswords (which however are time-consuming to build), if you use grey (instead of black) squares to fill the gaps, you will need less ink for printing

## Online or Offline?

Online games are, obviously, played online.

- Kahoot can be played online (with users sitting at their devices at home or elsewhere), but this still requires a synchronicity (everybody participating at the same time). Unless a person fills in a quiz just for herself, without competing others. The more typical case is however to use Kahoot quizzes and surveys in a classroom or an even larger auditorium.
- Crosswords can be played online one by one. Or they can be used in classroom setups, for example to be solved in groups. In this case you will have to print your crosswords out.

## Blended Learning



### Across

- 1 What we do when we are not passive.
- 5 He who is most active. Or should be.
- 6 We are not fixed to a certain place. We enjoy...
- 7 Working in this form - joy for the one, horror for the other

### Down

- 2 What students should do together
- 3 Speaking to the eye, and listening to the nose.
- 4 The facilitator, not anymore.
- 8 Everybody at his own...

---

Words used:

Activity - Cooperation - Group - Learner - Multilocality - Multimodality - Pace - Teacher

Fig. 5.58 – The crosswords created on previous pages how it looks when output to PDF, ready for use.

## 4.5.2 Using Digital Badges

Digital badges are a form of recognition of educational achievements. They are a bit like the textile badges that for example youth scouts organisations hand out to girls and boys when they have proven to be able to do certain things: light a fire, erect a tent, and so on. Digital badges are similar, just in the internet. In this section, we present the topic in more detail. There will also be two or three practical things for you to do in order to get a feeling for what digital badges are. Don't, however, expect a full introduction into issuing digital badges to your learners. This would require an entire book.

### What do I need?

- Internet access
- Typically (but not necessarily) an LMS (Learning Management System) for e-learning.
- Learners who are susceptible to symbolic recognition of achievements. Typically younger learners are more interested than older ones. But adults who love collecting will enjoy the digital badges experience.
- If you take it very seriously, you have to make sure that the badges you issue are aligned with the educational standards of your country. (See below the example how Technical University Dublin uses digital badges.)

### Where to look for help?

- A good, comprehensive introduction into digital badges is on the OpenBadges website.

<https://openbadges.org>

- History and background are explained, along with technical details, on the [elearningindustry.com](https://elearningindustry.com) website in form of a 15 pages e-book (for free, but you have to leave them your e-mail address). Despite its brevity, it is of high quality as it manages to see things from a certain distance not usual for this industry:

<https://elearningindustry.com/guide-to-digital-badges-how-used>

- Also have a look at the Wikipedia pages for "Digital Badges" and "Open Badges"



Fig. 4.60 – A veteran participant of the "Great Patriotic War" of the Soviet Union with many (non-digital) badges.

### How do I prepare?

Read this section of the book

### What do I do?

One topic you will come across at some point as a teacher or educator facilitating Blended Learning is *digital badges*.

*Digital badges* are a form of recognizing a learner's efforts and achievements. To understand the concept, think about the badges – physical signs of metal and textile – stuck to the breast of high ranking or well-performing military persons, most prominently in the Soviet Union. Or if you are familiar with the traditions of some youth scouts organisations: some of them hand

out textile badges that boys and girls can sew onto their shirts for achievements like lighting a fire or erecting a tent.

This concept has, beginning with about 2010, been introduced into online learning. It started from online games, where a user – identified through his or her user account – got awarded certain “badges” usually in form of images shaped like medals.

From there, the concept was transferred into online learning environments. Various systems were developed, both commercial and free, that should allow assigning “badges” for achievements to individuals across platforms. This means that these badges are not fixed to a certain environment, for example the Learning Management System (LMS - think of Moodle, Canvas, etc.) of a certain adult education organisation. Rather they are fixed to the individual user (i.e. his/her e-mail account), and different online learning environments (or education providers) are able to process these badges: they can create such badges fitting their courses, and assign them to their learners.

If you are working in an adult education organisation that provides online teaching (or Blended Learning) it is possible – but not obligatory – that your organisation uses such badges already. For example, Moodle has badges built in since 2012. Other such platforms such as Canvas also have them. It is, however, well possible that your organisation simply does not use them although it uses an LMS. (See below the section about problematic aspects of digital badges.)

(See Fig. 4.61)

You can also use the services of a number of companies and organisations who provide badges implementation either for free (in smaller quantities) or for paid subscription. Such organisations include Badgr ([www.badgr.com](http://www.badgr.com))<sup>1</sup>, Accredible ([www.accreditable.com](http://www.accreditable.com)) and RedCrittter ([www.redcrittter.com](http://www.redcrittter.com)). These offer various services sometimes including an online application that helps do create nice looking images for the badges.

(See Fig. 4.62)

“Open Badges” is the name of a group of specifications and open technical standards originally developed by

<sup>1</sup> Badgr is an open source project started in 2014 to serve as a reference implementation for Open Badges.



Fig. 4.61 – Using the services of the Accredible company ([www.accreditable.com](http://www.accreditable.com)) we quickly created this badge for potential use by the Blended Learning project. The idea is to assign it to people who in some way prove that they have read the book. But so far we only created the visual badge; we have not yet done all the other steps necessary. There is also a special technology (called “baking”) to include certain invisible data into the image.



Fig. 4.62 – If you find one of these logos on a website of an educational organisation, you know that they issue digital badges based on the Open Badges standards.

the Mozilla Foundation<sup>1</sup> since 2011.<sup>2</sup> The Open Badges standard describes a method for packaging information about accomplishments, embedding it into image files as a digital badge, and establishing an infrastructure for badge validation.

As you see from the above paragraph, we are here already deeply into technology relevant predominantly for IT personnel who has the task to integrate a badge system into some organisation's online learning environment. Most probably you are not such a person, and we will not dive deeper into these technological aspects. However, it is good to have an idea of the "ecosystem" (the network of stakeholders) that makes a badge system work. There are "issuers" (schools, adult education organisations, etc.) "recipients" (the learner), "displayers" (various websites and online environments where the badge can be shown, and "consumers"; that's in this case people to whom the recipient (learner) will eventually show the badge to prove how skilled she is. This could for example be an employer.

(See Fig. 4.63

Back to practice:

Below you see a badge one of the authors of this book received while writing this book and testing various things:



- 1 Mozilla Foundation is a foundation in the USA. It was created to support free software products such as the Firefox Browser and the Thunderbird e-mail application. Income is generated chiefly through contracts with Google (and other search engine providers) who pay for their search engines being set as default search engine in the Firefox browser. For these contracts, Mozilla Foundation runs a 100 per cent subsidiary commercial company, Mozilla Corporation, with revenues of about 60 million dollars per year (data as of April 2019).
- 2 A paper titled An Open Badge System Framework published in 2011 by Peer2Peer University and Mozilla Foundation is commonly seen as a cornerstone of the development. See this article under <http://bit.ly/badgепaper4>.

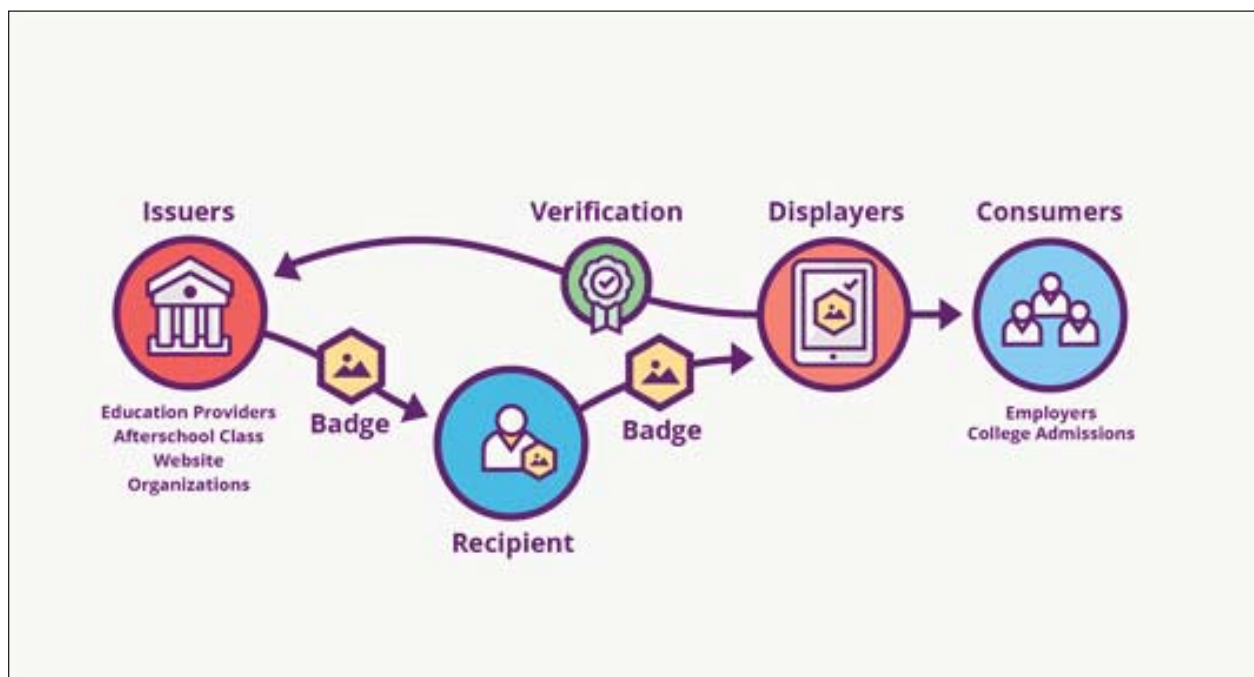


Fig. 4.63 – The Open Badges Ecosystem with the various types of stakeholders involved. (Diagram by Erik Knutson, Concentric Sky, licensed CC-BY)

This is a badge by the name of “Navigator”. The author of this article got it awarded after he fulfilled a number of tasks related to using an internet browser: tasks like typing an URL into the address field, re-sizing a resizable form field, and so on.

You can try this yourself. It will cost you 5-10 minutes:

- Go to <https://backpack.openbadges.org>
- and create yourself an account. This “Backpack” is used to store your badges. You identify yourself via your e-mail account.<sup>1</sup>
- Go to <http://toolness.github.io/hackasaurus-parable/navigator-badge/#>
- This is a website giving you a quick task to fulfil, on completion of which you will get awarded with the “Navigator” badge proving that you have demonstrated to be able to use an internet browser skilfully. – This badge was created to give a simple example how such badges work. The badge you get will be sent to the “Backpack” mentioned above.

One important feature of digital badges is that their various claims must be verifiable. Therefore, each badge has a set of information fixed to it. For the “Navigator” badge this looks as follow:

(See Fig. 4.64)

This includes information about the issuer (who awarded the badge), the awardee (who received the badge; here blurred out by the book editors for privacy), and what are the criteria for awarding the badge. To see these details, one can follow the links. (In this case, the “criteria” are simply the website where one can fulfil the tasks.)

Some or all of this information will be shown wherever the badge is displayed, but it is also stored within the digital badge’s meta-data (i.e. information hidden in the image) so it can be verified any time – even if you only have the image.

## Problems

### A dose of scepticism

Back to the general context. When you read information on digital badges published by organisations (companies included) who provide them, you will usually find an enthusiastic sermon on how useful badges are, especially how motivating they are for learners.

But it is important to look also at the other side. First, although there are many education providers who use digital badges, there are also many who don’t. Some out of inertia, some for good reasons.

<sup>1</sup> Note however that this service is planned to be retired, and all accounts are going to be moved to the “partner” project Badgr ([www.badgr.com](http://www.badgr.com)). When we checked in Mai 2019, Backpacker worked still fine.

Web Navigator	
<a href="#">Remove this Badge</a>	
Issuer Details	
Name	Hackasaurus
URL	<a href="https://navigator-badge.hackasaurus.org/">https://navigator-badge.hackasaurus.org/</a>
Organization	Experimental Badge Authority
Badge Details	
Name	Web Navigator
Description	Can operate a Web browser with celerity.
Awardee	[blurred]@web.de
Assertion	<a href="http://poof.hksr.us/elwjihxl">http://poof.hksr.us/elwjihxl</a>
Criteria	<a href="http://toolness.github.io/hackasaurus-parable/navigator-badge/">http://toolness.github.io/hackasaurus-parable/navigator-badge/</a>

Fig. 4.64 – Information given on the issuer of a badge, and other details. These data are stored in the badge itself and can be read at any time.

Criticism of digital badges points out that digital badges come with significant problems or question marks.

- Given the long history of physical badges in military context, some critics say that the proximity to military culture is unbecoming for the humanistic idea of education. Education should be a means of autonomy and emancipation of the human being, not of discipline and subordination.
- Badges have been criticized for rewarding tasks that are not inherently interesting to badge recipients. The argument is that badges are created to promote behaviour that aligns with the goals of the badge issuer, and not necessarily the badge recipient.
- Some critics have observed that badges are a type of extrinsic motivator that could compete with an individual's intrinsic motivation for accomplishment and mastery.
- A permanent problem of badges is their validity: can they be viewed as "trusted credentials"? For example, in fact the badge earner's performance is often not directly observed, so there could be some difficulty in making sure that the badge is awarded to the person who completed the assignment or met the specific criteria. Is an e-mail address sufficient to prove the identity of a badge earner?
- Some sceptics see the "gamification" of education critically. They feel that students would be driven to be concerned with earning the most badges rather than focusing on the material presented.
- There is also the danger of a slew of badges that do not mean anything at all, like earning a badge because your name starts with the letter A. Issuers may feel compelled to issue such badges just in order to keep learners (who might be paying customers) in good mood. The creation of these meaningless badges reinforces the issue of validity because now the badge earner needs to decipher which badges are valuable, and various institutions need to do the same.

## Benefits

### A positive perspective

After so much criticism, should we at all consider the use of digital badges in (non-military) adult education? There is at least one aspect that can be used for a strong argument in favour of digital badges in adult education:

For many years now the countries in the European Union have been trying to develop their education systems further in order to get away from acknowledgement of time spent in the education system ("she has passed a 5 years higher education course in xyz") to acknowledgement of concrete skills and competencies ("she has proven to be able to write a book that complies with scientific standards"), ideally independent of time spent in the system. This long-term goal, labelled "competence orientation", has proven to be difficult to achieve, especially as the idea is to create a uniform system of recognition of skills and competencies across all sectors of education (school, vocational, higher, non-formal, etc.) and to include also skills and competencies that have been achieved by the individual completely on herself, without the involvement of an educational institution. This overarching (dreamed of) system is called the *European Qualification Framework (EQF)*, which breaks down into country sub-systems called *National Qualification Frameworks (NQF)*.

One attempt to realize such a method of recognition of skills and competencies of the individual is the so-called *Europass* initiative to provide individuals with standardized documentation of their skills and competencies including CV, documentation of experience abroad, and various credentials about educational achievements and competencies, made comparable between countries. However, getting this system broadly accepted seems to be a very long process.

All the more it strikes the eye that digital badges actually deliver many of the things the EU countries try to achieve with these policies: they provide recognition of skills and competencies on the individual level; they are international; and they are independent of sectors of the education system.

Therefore, perhaps can digital badges become a step towards a common competence-oriented education system in European countries?

## And in Reality?

### What are we really doing?

So far for theory. Looking at practice can bring further insights. While writing this book, we quickly asked around at organisations involved in the project (and also one external) to see what role digital badges actually are playing in their everyday educational work. Here is what we found:

**TU Dublin** is clearly a champion in using digital badges: they use digital badges in a number of educational programmes implemented through both the Moodle and Blackboard systems. The programmes range from IT to Education/Pedagogy; and to more learner-focussed content such as Induction and Volunteerism. Badges are both pre-existing badges, and badges created for specific modules. Some badges have accreditation (or recognition) from discipline-specific professional bodies. Often the learners are awarded a number of badges per module, so for example if a learner has to do one activity (or milestone) for each week in a module, the learner may be awarded a badge per completed task. Students extol the virtues of digital badges, specifically mentioning that they aid in the pacing of a module, as well as giving a clear roadmap to the content associated."

**VHS Hannover** has a proprietary Moodle platform used basically for computer courses (computer literacy, IT) and as an add-on for some language courses. As digital badges are a built-in feature of Moodle, they

are available, however, they are not used systematically but perhaps by individual teachers who on a course-by-course basis decide to use them. Overall, the use of badges is currently a marginal thing at VHS Hannover. This has clearly also to do with the type of learners VHS Hannover has: they are interested in the actual topic they learn, and in the social experience with co-learners. Most of them would see digital badges as something from primary school where teachers gratified them with stars written into their notebooks for well-done homework.

**Ljudska universa Žalec** does not use badges so far.

**Västerås folkhögskola** is a Swedish adult education organisation providing many online and distance courses in a professional way, partly to enable people living in remote places to partake in their courses. Asked if they used digital badges, they answered us, displaying their typical humanistic Scandinavian understanding of education: *"Sorry, we do not make use of badges or other outside rewards, just the participants' inner pride and deep personal satisfaction."*

## Online or Offline?

- Using digital badges somehow seems to be requiring an internet connection. Badges themselves (the images including the data hidden in them) can be stored on non-connected computers.
- Sewing textile badges for your classes can be a fun project, too.



## 4.6 Searching

Searching in the internet is sometimes an under-estimated activity. Many of us are so used to it in everyday life that we take it for granted and do not think about it very much. However, there are things to consider when internet search is used in a context of education and learning.

In this chapter we will focus on two different topics regarding internet search:

One is related to you as a teacher who wants to prepare e-learning materials for Blended Learning contexts. We introduce you to techniques of searching especially for multimedia content that you may not be fully aware of even if Google is your daily companion for quickly looking up something. Of course there would be much more to say. Take the section on multimedia search simply as an appetizer.

The second part of this chapter focusses on using the internet as a source of information for students, and thus as a method of learning through self-directed work. This is largely based on constructivist and connectivist concepts of learning: the claim that learning works best when a topic is not presented to students as a ready-made unit; rather students should explore things themselves step by step, in their own way and pace, and thus construct their own understanding related to experience they already have as the individuals they are; and that learning should make use of networks where people mutually recognize and apply their different pre-existing knowledge and competences. One form of leading students into such self-directed learning activities are Web Quests. You will learn about them in the second part of this chapter.

### 4.6.1 Searching for Multimedia Content

Multimedia is a frequently used word today. But what does it actually mean? Here is a short definition: "Multimedia is content that combines different forms such as text, audio, images, animations, video, and interactivity." In contrast, traditional media concentrates on one form of content delivery. (Hence one could call them "monomedia"). For example, newspaper publishers once concentrated on information printed with ink on paper. Music cassette producers sold magnetized plastic ribbons that could be used to reproduce sound. With the advent of computers in everyday life, the separate media started to merge, giving rise to "multimedia": a form of delivery that uses virtually all possible channels simultaneously. One day, sensory and olfactory channels will be used, too.

So, in a strict sense, multimedia is a word for media that use multiple channels (or "modes", as communication and education academics call it) to address multiple human senses: show a text, include a movie, let the user do something (interactivity), and so on. That's the narrower meaning of the word. In a broader sense, the term "multimedia" is also used as a short word for "pictures, videos, audio etc." without these modes being necessarily combined. "I use multimedia in my lessons" often means simply "I hand out written material, I draw pictures, and I show movies."

In this section we will look at two different approaches to retrieving specific multimedia content from the internet. First we will look at searching for images using the TinEye Multicolr (<https://labs.tineye.com/multicolr/>) search tool. Second we will look at a search tool for multimedia content (<https://search.creativecommons.org/>) licensed for free use.

#### *What do I need?*

- A computer
- Internet access
- The TinEye Multicolr site:  
<https://labs.tineye.com/multicolr>
- Creative Commons search:  
<https://search.creativecommons.org>

#### *Where to look for help?*

Helpful websites

- The TinEye help page:

<https://tineye.com/how>

- The TinEye API:

<https://services.tineye.com/TinEyeAPI>

Useful books

- Simone Aliprandi (2011): *Creative Commons: A User Guide*. Ledizioni Publishers.
- Sarah Pearson, Paul Stacey, and Sarah Hinchliff (2017): *Made With Creative Commons*. Ctrl-Alt-Delete Books.

## How do I prepare?

- The first thing to do is decide what type of content you are looking for. Be as specific as possible. If you are looking for an image, sketch on paper what you would like to find; if audio or a movie, note down a sentence or two about what you want it to contain. (These are simple techniques to become aware of your ideas and intentions. Some people do not need this, for others it is helpful.)
- Next decide what impact you want the multimedia to have on your learners, and well as what mood you wish to set by using it.
- Determine how much storage space you have available to store this content.

## What do I do?

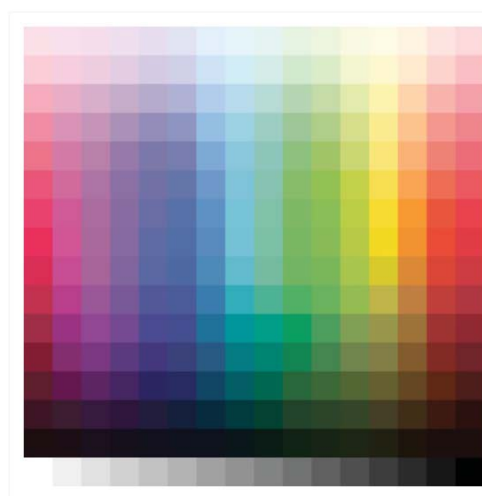
### 1) Image Search by Colour

- Go to the TinEye Multicolr page.

<https://labs.tineye.com/multicolr>

This site allows you to search images by colour. The site uses the picture database of Flickr (a large pictures and videos sharing website).<sup>1</sup>

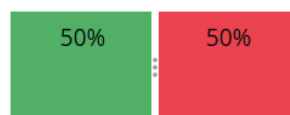
- Click on one colour on the colour palette:



Each colour you add will appear in the “Slide Dividers” beneath the colour palette:

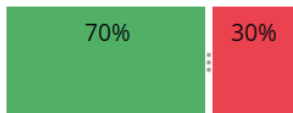


- Also images of that colour will appear in the main window
- Click on another colour on the palette and it will appear in the “Slide Dividers”

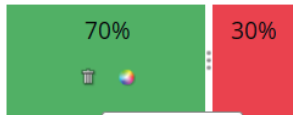


- The main window will have images with 50% green and 50% red content
- If you wish more green than red, slide the bar in between the two colours to the right:

<sup>1</sup> In June 2019 it was not possible to find this service via the [www.tineye.com](http://www.tineye.com) start page, but the direct link as stated above was working.



- The main window will now have images with 70% green and 30% red content
- If you wish to remove the green, and just leave red, place your mouse pointer over the green block, and two small icons will appear:



- The first icon, the dustbin, will allow you to delete that colour.
- The second icon will let you change the brightness or darkness of the colour:

(See Fig. 4.76)

- You can add up to five colours in each search.
- Underneath the "Slide dividers" is a text box that you can type in a word to further refine your search.
- The result you get may look like the image below; results of a TinyEye Multicolr search where we asked for pictures with 50 % yellow and 50 % blue.

(See Fig. 4.77)

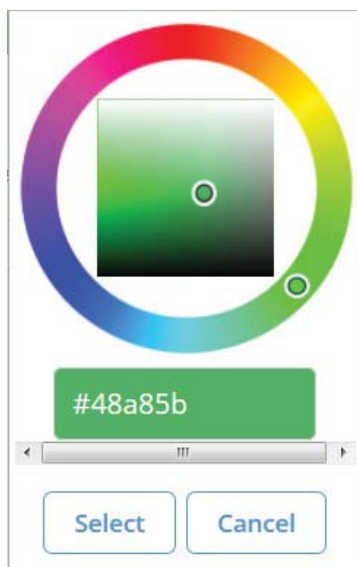


Fig. 4.76 – TinEye colour selector wheel.

## 2) Search for Creative Commons Licensed Content

When searching for pictures, videos and audio on the internet you cannot always use what you find in your classes or your Blended Learning materials because authors may not grant you the right to use it (or only when you have a contract with them). That's where Creative Commons licensing comes in again. (For details on this see Section 3.4.) There is a website that offers search for visual and other material with special preference on material that can be used under a CC licence.

- Go to the Creative Commons search page:

<https://search.creativecommons.org>

- Using this site, you will be able to search for a range of multimedia content. The clue is: this search engine looks especially for content that is (likely to be) CC licenced, i.e. it is legally available to you to be used for developing educational content. (For details on CC see Section 3.4.) Content that isn't legally licensed won't appear. Or at least that's the idea. The Creative Commons organisation that runs the website recommends its users to individually check the licence status of material retrieved, to be on the safe side.
- The site does not present you the result directly. Rather, you will be redirected to one of the site's source sites (see list below), on which a search is ex-



Fig. 4.77 – Result of a picture search by colour, with settings 50 per cent blue and 50 per cent yellow.

ecuted with special parameters to possibly restrict results to such with Creative Commons licence. Such a search string can for example look like this (here we searched for European cultural heritage pictures of hamsters): *Hamster AND RIGHTS:\*creative\* AND NOT RIGHTS:\*nd\**

- Search will be based on a range of websites with media repositories including:<sup>1</sup>
  - Europeana.eu – the EU site for cultural heritage, including images, audio, documents, and video.
  - Flickr – video and image hosting site.
  - Google – text search.
  - Google Images – Google image search.
  - Jamendo – a music hosting site.
  - Open Clip Art Library – an image library (openclipart.org)
  - SpinXpress – an image and audio hosting site
  - Wikimedia Commons – has text, images, audio and video
  - YouTube – a video hosting site you may have heard of
  - Pixabay – an image and video hosting site
  - ccMixter – a music hosting site.
  - SoundCloud – a music hosting site.

To summarize: the Creative Commons Search website gives you quick access to various online databases with multimedia content, with a good chance to pick material you are allowed to use in your lessons and for your blended teaching material to to Creative Commons licensing.

### Teaching Benefits

For certain learners, there can be great novelty and thus motivation in using multimedia content. For others, it may be confusing do deal with so much new things at once. You are the teacher or learning facilitator. You should know what is good for your learners.

- When explaining intangible concepts, like magnetic fields, animation can help learners to get the idea.
- Multimedia content can appeal to a wide range of learners, including those with a range of language abilities
- Multimedia content can encourage discussion and feedback
- Multimedia can help make learning personalised.

### Common Mistakes to Avoid

When using multimedia content, always ask yourself, what is the educational value of each element? It is very easy to add a wide range of multimedia content to teaching materials, but they must have a purpose to help the learners learn, so don't add content unnecessarily.

- There is no need to clutter all the multimedia content in one place. You should spread the multimedia content over the lessons.
- Make sure you have the hardware resources (memory, and processor power) to store and display the multimedia content.
- Make sure you have the correct viewers and players available for the learners to interact with the multimedia content.
- Read one of Edward Tufte's books.

### Online or Offline?

- If you want to distribute multimedia content offline, you can copy the content onto a USB memory stick and hand it out in class.
- If you and your learners have access to the internet, you have a lot of options to distribute your multimedia content to your learners. You can share it with them using cloud storage (e.g. Dropbox, Google Drive, AWS, etc.), you can email it to them, if you have a website you can upload it there, or to a Virtual Learning Environment (e.g. Moodle, Blackboard, and Edmodo).

<sup>1</sup> Information as in autumn 2018. In the meantime (May 2019) the website has developed further. The „old style search“ that included buttons to select these sources, is available only as a secondary option.

## 4.6.2 Developing a Webquest

If you have been in contact with pedagogical studies in the past decade, you'll be familiar with notions such as critical thinking, co-operative learning, digitalisation and authentic assessment. You have heard of the learning theories of cognitivism, constructivism, and recently also connectivism. If you are like many educators, you feel positive about new ideas for helping learners learn; but then you ask yourself how you could implement these abstract ideas in your everyday practice? Being motivation-rich but time-poor, how can we add these concepts in our adult education activities? Here is a suggestion: try webquests.

Webquest – that's a name for a method to facilitate learning processes in groups by bringing together the most effective instructional practices into one integrated learner activity based on self-directed exploration of a topic. Wow. That sounds complicated. So what is it, actually?

In a more everyday type of language you could say: a webquest is research done in groups of learners using all possible sources of information, most prominently the internet (simply for practical reasons: the internet provides vast amounts of information instantly). Some call webquests a learning facilitation strategy. As the word "web" suggests, the internet is part of it; but so is also cooperation and exchange with others. These two things together make webquest a natural candidate for Blended Learning activities.

Webquests as a form of learning activity were developed starting from 1995 by a number of educators including Bernie Dodge and Tom March around San Diego State University, California. Since then thousands of teachers have embraced webquests as a way to make use of the internet while engaging their students in the kinds of thinking that the 21<sup>st</sup> century requires. The model has spread around the world, so far especially to Brazil, Spain, China, Australia and the Netherlands.

In what follows we approach the topic in three ways:

First, we outline a bit more of theory why webquests are a good learning tool aligned to the ideas of constructivism and connectivism.

Second, we present a simple form of a webquest (so simple that it almost does not deserve the name) for a short Blended Learning activity. This can be implemented as part of an ordinary classroom teaching lesson, or

as Blended Learning homework plus subsequent presentation and discussion in the classroom.

Third, we relate you to some databases where you can find more elaborate webquests so see real-world examples beyond the superficial insight we can give you in this book. These are descriptions of blended learning activities that can take up to a week.

### The Theory Behind Webquests

Webquests are good learning tools because they use and promote learners' intrinsic motivation, learners' cognitive competences, and learners' ability to co-operate with others.

#### a) Motivation

Motivation is key to learning. WebQuests use several strategies to increase student motivation.

First, good webquests use a central question (task) that honestly needs answering. Students are asked to understand, hypothesize or problem-solve an issue that confronts the real world, not something that only carries meaning in a classroom.

Second, when doing webquests, learners use real-world resources of information, not dated textbooks. Students can directly access individual experts, databases, current reporting, and even fringe groups to gather their insights. Seen under this angle, doing a webquest with learners is like making them act as investigative journalists.

Third, when students take on roles within a cooperative group, they must develop expertise on a particular aspect or perspective of the topic. Their teammates count on them to bring back real expertise, and this boost motivation.

#### b) Thinking skills

Built into the webquest process are strategies of cognitive psychology and constructivism. The question posed to students can not be answered simply by collecting information and spitting it back. A good webquest forces students to transform information into something else: a comparison, a hypothesis, a solution, etc.

However, learners should not be left completely alone with the task. You, the facilitator, should help them by breaking the task into meaningful chunks. You can advise them to undertake specific sub-tasks, to help them step through the kind of thinking processes that more experienced people would use. This form of support is called scaffolding. The challenge for you as an adult educator is to know your learners and their abilities very well so that you can provide suitable scaffolding to them.

Constructivism claims that learning is a process in which the individual extends her existing knowledge by actively dealing with new situations. What students need are many examples with lots of information and opinions on the topic through which they will sift until they have constructed an understanding that connects to their individual prior knowledge. Webquests offer exactly such as rich playing field related to real-world tasks.

### c) Co-operative learning

In good webquests, students cooperate in small groups to solve tasks with distributed responsibilities. This allows webquests to tackle large, complex and controversial topics. (Think of climate change, abortion, or the social responsibility that comes with wealth.) Nobody can be an expert in all relevant aspects of such a topic, but everybody can concentrate on one aspect, and contribute expertise. This teaches also a lesson about how knowledge is organised in society in general. Moreover, if you run several webquest groups in the same class, students will also see that teams come up with different solutions.

### Summary

Putting the fancy word “webquest” aside, if you had to describe a webquest to your colleagues in standard terms, you could say:

*“I am doing with my students a form of project based learning. They get tasks they have to solve, ideally in groups. A larger part of the task is related to finding and assessing information; we mostly use the internet for this, but they can also use other resources, for example the municipal library, or interviewing experts or whatever. Based on their research, they have to produce something, usually a written document like a*

*report or an article. The idea is to work self-directedly, and in teams, and the task they get should be relevant for them, so they do it with intrinsic motivation, not just because I say so. So, these are actually research projects with the purpose of exploring a topic. Depending on the topic, this can be done in one hour, or it can last several days.”*

### Examples

To give you some examples, here is a list of webquests prepared by teachers at colleges and universities in the USA in recent years and published on the Questgarden website for the benefit of everybody who wants to use (or further develop) them.<sup>1</sup> We filtered the database for webquests made for an adult auditory (as opposed to students at school), dealing with the broader subject of economics and business.

#### **Aesthetics and Visual Design in Word Processing**

*You know good design when you see it. Let’s enhance your intuitive ability with a framework of principles on message and communication theory, design theory, and colour theory.*

#### **Macroeconomics**

*The economy is a complex being. In the blink of an eye, a booming economy can be hit with a crippling recession. For centuries, economists have been left wondering what is in charge of the market and how they can modify it. The goal of this webquest is for students to create an in-depth economic analysis of different aspects of global economies and determine what factors are helping and which ones are hurting them.*

#### **Pizza Project – Entrepreneurship Training**

*The purpose of this webquest is to teach students about some of the challenges that face entrepreneurs starting a new business including ways to identify a market, reach the market, and keep the market. The webquest follows many of the National Business Standards. Work is done in teams.*

#### **Build Your Budget! – Financial Skills Training**

*Building Your Budget! is designed for students to learn, understand and practice the basics of building a realistic budget, and sticking to it. Students will learn*

<sup>1</sup> <http://questgarden.com>

to evaluate all aspects of their spending, and create reasonable spending boundaries based off of their predicted income.

Our recommendation is: visit the website, filter the webquests for a topic of your interest and read through four of five of them (Intro, Tasks, Process, Evaluation...). This will considerably improve your understanding of the idea of webquests.

Here are now some more practice-oriented tips:

### What do you need?

- Your learners should have computers and internet access.
- Good webquests are complex and need time. Although it is possible to create very simply webquests that can be solved in an hour, the idea is rather to explore a topic more deeply, so 2-3 days of work for the learners would be a good orientation

### Where to look for help?

#### Internet resources:

- The article *Why WebQuests* by Bernie Dodge and Tom March (the fathers of the webquest idea):  
[https://www.internet4classrooms.com/why\\_webquest.htm](https://www.internet4classrooms.com/why_webquest.htm)
- Web quest databases to look up good practice examples:  
<https://www.quickbase.com/articles/the-complete-guide-to-creating-web-quests>  
<http://questgarden.com>
- The Webquest Generator, an online tool to quickly draw a plan for a simple webquest:<sup>1</sup>  
[http://www.teach-nology.com/web\\_tools/web\\_quest](http://www.teach-nology.com/web_tools/web_quest)

<sup>1</sup> Teach-nology is a website with online resources for teachers. Its services are free of charge. The service is financed via advertising and sponsorship. It is run by a small company in New York, USA. The website provides a broad range of materials and tools (in English), for example more than 30 000 ready made lesson plans in various subjects relevant for school teachers. –Just when we checked the WebQuest generator in Mai 2019, they had a programming problem on their site, and we are not sure when they will fix it.

#### Books on the topic:

- Margaret M. Thombs, Maureen M. Gillis, Alan S. Canestrari (2008): *Using WebQuests in the Social Studies Classroom: A Culturally Responsive Approach*. Corwin Publishers.
- Charles Wankel, Patrick Blessinger (2012): *Increasing Student Engagement and Retention using Online Learning Activities: Wikis, Blogs and WebQuests*. Emerald Group Publishing.

### How do you prepare?

- The best thing to do first is developing a better understanding of what webquests are. This description here will definitely not be enough. You will need to see at least three or four real-life examples. Therefore we strongly recommend you to visit one of the various webquest databases. These are websites where people publish their webquests for further use by others (addresses mentioned above). – With that understanding, the following steps become self-evident:
- Choose a topic for your webquest. For example, if your task is to lead a group of young adults through a process of learning how to make a business plan, then “Create a business plan” can be your topic. Depending on circumstances, you would narrow down your topic (“Create a business plan for a new pizza restaurant in your city”), or leave it open to increase complexity.
- Be aware that webquests can be as short as for one hour, or as long as for two weeks. It simply depends on what you are planning.
- Break your topic down into manageable chunks that you can explain to your learners (see below, part “Process”). As part of this you will probably also identify a series of resources (online, or what ever is available) that will help students fulfil the task and thus automatically learn about the topic.

## What do I do?

Without this being a necessity or dogma, it has become a tradition to use the following structure to setup and present a webquest:

- **Introduction:** provides the learners with background information: what is this webquest about, and why are we going to do it; what is the purpose general problem to be addressed.
- **Task:** a summary description of what students are expected to do. – A good webquests offers a task that needs, for solving, thorough investigation of various topics. Moreover, a good webquest makes learners work cooperatively in groups with distributed roles for the individuals. However, there are also many webquests out there made to be solved by single learners, without much interaction with peers. That's not the exact idea of a webquest, but, well, the world is not a perfect place...
- **Process:** This is the breakdown of task in single steps, in detail. Here you provide learners with all information they need for getting started, and for working through the various phases of the task. This can be detailed description of sub-tasks, hints for helpful sources of information, and general requirements for the product students are invited to deliver. Also you would ideally include advice about distribution of work to different people in the team. (For example, in a webquest with the aim of developing a business plan for a new restaurant, teams may consist of a boss, an office manager, a marketer and a finance guy.) You can offer advice on how to manage time, collect data, and provide strategies for working in group situations.
- **Resources:** Links to websites and videos, or clues to tools that will help learners complete the task. (If not already included in the "Process" part). Sometimes it can be necessary to provide materials such as prepared readers with crucial information on a topic, a glossary of core terminology to get acquainted with, mathematical tables or other things for download.
- **Evaluation:** Here you lay out your criteria: what is needed for the webquest to be considered well-solved? For example, if part of the solution is providing a written document (as essay, a business plan, a news article, a CV...), probably correct spelling and grammar are first (but not sufficient) requirements

for a good rating. Criteria really depend on the topic. – It is common practice to organise criteria in form of a table, like "solved excellent if..., solved acceptably if... solved badly if..." (see examples in webquests published on <http://questgarden.com>).

- **Conclusion:** Here you sum up the task.

You find an example for a webquest described in a grid like this on the next pages. But do not take this as mandatory or as too prototypical. You can of course use a completely different system of describing the task to your learners for organising their work.

## Teaching Benefits

- Webquests can be a novelty and thus a source of motivation.
- They encourage learners to develop independent study skills.
- They encourage a structured use of web resources.
- They accommodate a wide range of learner needs.
- They can be done individually or in groups.

Caveat: as a teacher in adult education, you probably have already understood that the concept of webquests was developed initially mostly in traditional school environment. Webquests are certainly not appropriate for all groups of learners in your adult education centre because often your participants prefer other forms of interaction. However, for certain groups of learners and for certain subjects, webquests may anyway be a suitable method.

## Common Mistakes to Avoid

- Try to make sure each of the phases are clearly explained, and the "Process" phase covers enough information to complete the task.
- Ensure all learners have access to computers and sufficient connectivity to complete the WebQuest
- Try to make sure the students don't lose focus and end up wandering around the internet with no purpose



- The first webquest needs to be easy to complete, and a success for all learners, otherwise some will be put off.

### *Online or Offline?*

Learners need internet access to do the research part of a webquest. – If the webquest is part of a Blended Learning arrangement, this is of course anyway a given.

\*\*\*

On the next page you find a template you can use to quickly create WebQuests for your learners.

The form is also included in the collection of supplementary documents to this book:

[BL\\_Sup02\\_WebQuestTemplate.docx](#)


<b>Webquest</b>									
 <p style="color: orange; font-weight: bold;">Quality Blended Learning</p>	<table border="1"> <tr> <td><b>Title</b></td> <td>Blended Learning - What is it?</td> </tr> <tr> <td><b>Subject Area</b></td> <td>Pedagogy / Andragogy</td> </tr> <tr> <td><b>Tutor</b></td> <td>Franziska Maier-Müller</td> </tr> <tr> <td><b>Academic Year</b></td> <td>Spring 2019</td> </tr> </table>	<b>Title</b>	Blended Learning - What is it?	<b>Subject Area</b>	Pedagogy / Andragogy	<b>Tutor</b>	Franziska Maier-Müller	<b>Academic Year</b>	Spring 2019
	<b>Title</b>	Blended Learning - What is it?							
	<b>Subject Area</b>	Pedagogy / Andragogy							
	<b>Tutor</b>	Franziska Maier-Müller							
<b>Academic Year</b>	Spring 2019								
<b>1. Introduction</b>	<p>“Blended Learning” has become something like a buzz word. But not everybody has a clear idea what it actually is, or what people who use it mean by it.</p>								
<b>2. Task</b>	<p>Do research in the internet to find out what Blended Learning is.</p> <p>Then, write a short article of 150-200 words, like for a dictionary, to explain it.</p>								
<b>3. Process</b>	<p>Search in the internet for suitable sources.</p> <p>Read them, and take notes of things that seem important to you.</p> <ul style="list-style-type: none"> <li>- Don't copy-paste. Your article must be your original work.</li> <li>- Write an article (150-200 words) to explain “Blended Learning” to a broader, average public. You have 60 minutes for research and writing.</li> <li>- Print your article</li> </ul>								
<b>4. Resources</b>	<p>You can use whatever internet resources you think are useful.</p> <p>You may start with</p> <ul style="list-style-type: none"> <li>- Wikipedia</li> <li>- A general search engine such as Ecosia or Google</li> <li>- The website <a href="http://www.blenditwell.eu">www.blenditwell.eu</a></li> </ul>								
<b>5. Evaluation</b>	<p>When you are finished, we will gather in the classroom, (anonymously) compare them (method for this will be explained by teacher) and discuss which is best, and why.</p>								
<b>6. Conclusion</b>	<p>Do we have come to a comprehensive and consistent idea of “Blended Learning?” - Let's discuss.</p>								

Fig. 4.78 – Example for a very simple WebQuest concept, using the WebQuest planning form available next page.

<b>WebQuest</b>		
<b>&lt;Picture illustrating the topic &gt;</b>	<b>Title</b>	
	<b>Subject Area</b>	
	<b>Tutor</b>	
	<b>Academic Year</b>	
<b>1. Introduction</b>		
<b>2. Task</b>		
<b>3. Process</b>		
<b>4. Resources</b>		
<b>5. Evaluation</b>		
<b>6. Conclusion</b>		

Fig. 4.79 – You can use this form to create a simple WebQuest activity for your learners. (You can do this of course also without this form; the form is meant only to remind you of the most crucial issues to be thought about.) This form is available also in the collection of forms (supplement to this book) at [www.blenditwell.eu/handbook/templates/BL\\_Sup02\\_WebQuest.docx](http://www.blenditwell.eu/handbook/templates/BL_Sup02_WebQuest.docx)

