

Creating content

FEET: Fit for European E-Training is an Erasmus + project No.2015-1-DE02-KA104-002248
Learning Mobility of Individuals/Adult Education

The aim of this course is the acquisition of new knowledge and skills for becoming effective online trainers (e-trainers) by the training professionals collaborating with E@W. They will study and practice the fundamentals and learn how online training is designed, implemented and evaluated. They will be trained to become e-trainers so they can provide online and blended learning to their learners in Germany and worldwide.

The training course is developed based on the contract between the FEET project coordinator **English at Work GmbH, DE:** E@W www.englishatwork.com and **Global Knowledge Development Ltd, UK:** GKD - www.gkd-online.com

A. Theoretical part

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1. Introduction

The first prerequisite for successful E-learning is the existence of an optimal strategy. So how do we start? Let's take an advice from the Harvard Business School professor Michael Porter:

"sound strategy starts with having the right goal"

There are many different and sometimes opposing approaches on defining and managing a strategy. You should pick the one that best fits you and your organization needs and stick to it.

You may ask - why do I need an E-learning strategy?
Can't I just draw a plan, define tasks and follow it? This

could work if you are planning relatively short-term - let's say 3, 6, 12 months ahead. However, knowing how fast technology evolves, solutions being trendy 5 years ago becoming obsolete and how new trends emerge each day it is most likely that any planning made for 3, 4, 5 years ahead will be struggling to accommodate the new technology advances or the newly arisen needs of the learners. A strategy, on the other hand, focuses not on details but on the overall goal. Because "if you don't know where you're going, you won't know when you've got there". A well designed strategy offers flexibility and is easy to adapt to changes on organizational, technological and even personal level.

To start designing the strategy you should review the available capacity and resources and how you can use them to your advantage.

You have to make sure that your strategy covers all relevant areas and takes into account the following E-learning steps:

- 1. Identifying and analyzing needs.**
- 2. Planning and designing the E-learning process**
- 3. Delivering E-learning**
- 4. Evaluating E-learning**

2. Content design for online training - storyboarding

The purpose of this module is to introduce you to the second step: Planning and designing storyboards for E-learning.

Storyboards serve as pathways to designing lessons. They are developed by the instructional designer. During this phase the content is reviewed and an optimal instructional approach to presenting it is selected. The sequence of the information “chunks” is chosen. Elements to be included in the text are selected and distributed across the screens. A typical e-lesson script includes:

Opening part: learning targets to be achieved;
introduction

Main part: the content and/or practical activities;
exercises

Concluding part: evaluation tests; summary

Content distribution

The next task is to divide the lesson into screens. The bulk of the screens should be reserved for the main part with a few assigned to the opening and closing parts. It is important to keep the screens from “overcrowding” making sure the presented information is easy to read and comprehend. It is also important to preserve a visual

“weight” balance avoiding strong contrast between the screens unless such contrast is required by the content.

Content presentation

The way content is presented can vary depending on the topic, content, target group and the creativity of the instructional designer. Due to all these variables many different approaches exist. Let’s have a look at those that are most popular.

Scenario-based content presentation – the content delivery follows a pre-defined scenario, often the learners are facing situations requiring answering questions and making choices.

Storytelling content presentation – puts the information in certain environment and uses a narrative to gradually present the learning topics. There might be real or fictitious character(s) taking the role of a narrator and leading the students through the lesson.

Demonstration and practice content presentation – very suitable for practical tasks. The lesson demonstrates selected simple or more complex procedures and steps then the learners are asked to repeat the learned using the available interactive tools.

Toolkit content presentation – as the name suggests the learners are presented with content divided into specific chunks forming a set of resources that can be studied independently of each other and without following a pre-defined path.

3. Authoring tools

The authoring tools are applications that allow users with no programming skills to develop E-learning resources without the need of involving programmers and other specialists. Most VLEs include authoring tools and more options provided by separate vendors are also available.

There are 4 major types of authoring tools:

1. VLE add-ons.

These tools are incorporated into the VLE and offer seamless integration with the VLE functionality which is their primary strength. As a drawback these tools tend to be rather limited in features.

2. Desktop installed apps.

This tool category is extremely varied since it includes practically every application that can export files that can be published on VLEs or on other online platforms, which in turn can be integrated into a virtual learning environment. These tools are extremely diverse and in the right hands can produce professional-quality product. A main disadvantage is the steep learning curve that is associated with most of the desktop programs.

3. PowerPoint add-ons.

These tools are extremely easy to use since they are basically adapting a presentation for online publishing. The ease of use is their main plus, but the fact that they rely on the presentation linear structure and limited interactivity is their main minus.

4. Cloud-based.

Cloud-based tools are SaaS (Software as a Service) and do not require any installation by the user in order to run. They are accessible from anywhere anytime. Most require subscription, however some are free.

When selecting an authoring tool it's important to check if the output it generates is in HTML5. If so, it can be rendered on modern web browsers the way it has been planned. If the output is responsive this ensures that it can be viewed on different devices.

4. Multimedia

What is multimedia? According to the most recent edit of Wikipedia multimedia is:

"content that uses a combination of different content forms such as text, audio, images, animations, video and interactive content."

Let's have a look at these individual parts and see how you can include each one in your materials.

Text

Usually the text is the main carrier of information. All text parts should be easy to read. In order to achieve

optimal readability the fonts and colours should be carefully selected. It is advisable to do some research on the most readable typefaces and font-background colour combinations. Other properties that should be checked are the font size and the line spacing – too tight or too loose lines would be difficult to read. The length of the text line is also important for good readability – most studies suggest optimal numbers of characters varying from 36 to 92. If the screen is too wide you can split the text into columns. Make sure the text is divided into paragraphs – long continuous text is difficult to read. Break monotonous text with other elements – illustrations, graphs, tables, videos.

Graphics

You know the saying – “A picture is worth a thousand words”. And indeed complex ideas requiring lots of text can be easily and conveniently explained through visualization. There are many different graphic elements: graphs, charts, tables, diagrams, pictograms, illustrations, photographs.

The graphic elements can serve different purposes. They can provide retrieval cues; represent the supplied information; explain information presented in the text; help with additional information, not shown in the text; bring in humour; contribute visually and aesthetically to the graphical layout.

Remember that the learning resources you are producing are non-fiction. Avoid adding graphical elements purely

on aesthetic grounds. Each element should contain usable information. When dealing with large complex illustrations not fitting in the screen it’s a good idea to prepare easy to zoom versions.

Animations

The use of animations can save space and time – a simple 2 minute animation may replace several pages of text and a sequence of illustrations. Make sure to provide user controls so students can stop and replay what they are viewing.

Carefully select the size and resolution of the video window. Too small and it will be difficult to see. Too large and it may take ages to download and the wait will disrupt the learning process.

Never animate text. Never animate graphical elements just to make them more appealing. Remember – each element has to carry information, if it doesn't – delete it.

Add sound whenever it helps to explain the presented idea(s) better. As with animations avoid sounds that do not contribute to the learning process. They can be distracting, irritating and add up to the download times.

Audio

Audio can decrease the load on the learners' visual perception. For example, audio can replace text in the text-animation combinations. A voice narrative will save the students the trouble of reading text and watching animation at the same time.

Carefully selected sound(s) and voice(s) can add up to the overall quality of the lesson by bringing more realistic experience. As with the visual elements – avoid any audio which is not carrying information e.g. distracting background sounds and music. Make sure that the quality of the audio allows for easy listening and understanding. Keep the quality just enough to be good for the job – multi-channel hi-fi is definitely an overkill.

Remember – keep audio short if it's not combined with animations or video.

Video

Video excels when there is a need for realistic rendering of an ongoing process. In some cases a video does better job than an animation due to its realism. However, in

cases of abstract notions animation may be the better choice.

A recorded video introduction or lesson parts may also bring the teacher closer to the students, removing the anonymous faceless lecturer and replacing him with a living and breathing person with whom they can connect.

Still, don't be tempted to present long static videos of a teacher speaking behind a desk. Such videos will not be much more interesting than a plain page of text. Check on some entertaining documentaries and borrow ideas. Put your subject in a topic-related environment, add movement, edit the video scenes to avoid boring sequences.

As with animations, carefully calculate the size and the resolution of the video to avoid long download times and bandwidth restrictions.

Interactive elements

Interactivity is the factor that transforms a linear lesson into an interactive one. Instead of pushing the information to the learner, interactivity provides a situation when the learner can pull the information he needs. Start by establishing what is really relevant to the target audience and how they will use the information. Design the lesson around the learner, not around the pre-defined content. The information you provide should help learners think and make decisions the same way they'll do it in a real environment.

There are several types of physical interactions when using a mobile device:

Point/Hover

Click/Press

Drag

Tilt

Gestures

Voice

It is a wise strategy to avoid getting too much into interactive tools that are fashionable at the moment.

Such resources may start to look too outdated in a matter of couple of years if the trends have changed.

Which elements can be considered interactive from the technical point of view?

Active links in the text or in graphics

Buttons – links, user controls, selections

Text input fields

Selectable elements – menu items, drop-down choices, etc.

Non button hot spots – visible or hidden graphic elements

Interaction through spatial movement of the device

Interaction through gesture control

Interaction through camera – such as augmented reality

Voice control

As with all other elements it is important to keep a balance when using interactivity. Cool-looking and up-to-date interactive “tricks” may become obsolete within

a short time, thus undermining the credibility of the whole material.

Good usability principles also dictate that any unnecessary interactive elements should be avoided. For example, if a certain task can be achieved with 2 or 3 clicks the simpler option should be selected. Remember that even the funniest and freshly looking interactivity at the start of a course may become boring and tiresome at the end if it's repeated many times throughout the whole course.

Less is more – if in doubt between several options – choose the simpler one. The chances are that it will work better. Even if not – it will be easier to fix.

This principle applies to all elements – avoid using more than two typefaces, mixing several illustration styles, using different styles and formatting for tables and charts, also avoid multi-colour combinations. Try to get a professional designer's advice – even a short consultation can make a big difference.

5. Additional Resources and References

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3. E-learning 2.0 : proven practices and emerging technologies to achieve results / Anita Rosen / AMACOM / 2009
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6. E-learning Strategies: How to get implementation and delivery right first time / Don Morrison / Wiley / 2003
7. Enhancing E-Learning with Media-Rich Content and Interactions / Richard Caladine / Information Science Publishing / 2008
8. Learning Path Construction in e-Learning / Fan Yang, Zhenghong Dong / Springer / 2017

9. C4LPT - Centre for Learning & Performance

Technologies / E-Learning Authoring Tools

<http://c4lpt.co.uk/directory-of-learning-performance-tools/instructional-tools/>

10. E-Learning Industry / 3 Different Types Of eLearning Authoring Tools

<https://elearningindustry.com/3-different-types-elearning-authoring-tools>

B. Practical part

Presentation:

- Graphic design software
- Video editing software

Presenter: GKD User Experience (UI) design expert

Informal discussions with the presenter, Q&As.

Practical tasks to be completed:

Referring to the Theoretical part and the Presentation, and using the additional self-directed resources in this section, please complete the following practical tasks:

1. **List the key aspects** how e-learning can benefit your organization. Share the list with other trainers, compare the differences.
2. In your view **what specific learning tasks** would be better met by e-learning? Why?
3. **What steps** are needed to ensure that the learners are **engaged to the fullest possible extent?**
4. Choose a **lesson** that you teach and try to **create a storyboard.**

5. Using the same **lesson** you had selected, now **divide** it into screens. Remember that the screens should carry similar amount of information.

6. Now think of **additional multimedia elements** you can add. What would be your first and second choices. Did your colleagues select similar or different types of media? Discuss your choices.

7. Working in pairs use a smartphone to **record a video** presentation of a small portion of your lesson. Research online what is the optimal length of an instructional video. Compare it with the duration of the videos you have recorded. What would you have done differently?

8. Try to **visualize** a training session. What interactive elements would fit into your learning materials?