DESIGN DOCUMENT
Guide on developing and updating e-learning modules

WCO E-Learning Team
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Summary

This document is intended to give guidelines and references to all those wishing to develop an e-learning course on their field of expertise. The document aims to create a standard and consistent design across the CLiKC! platform. The document formally outlines the design decisions recommended by the E-Learning Team to guide the design of modules.

Background

The CLiKC! platform is a customized version of the Learning Management System (LMS) Moodle with various plugins to serve the needs of an international organization like WCO. Currently more than 300 hours of content is available on CLiKC! in up to nine different languages. But besides this, CLiKC! offers even more e.g. running virtual meetings and forums. CLiKC! offers a broad variety of tools to support blended learning and capacity building.

Developing a new e-learning course: Questions to be answered

Content related aspects:

It is important to define beforehand the learning outcomes and to map out what the course will talk about. Content development can be a long phase of an e-learning project. It is therefore important to think about the following questions:

- What kind of content/material is available, in which format? Is it structured content? (i.e. training manual, publication, etc.)?
- How long will it take to develop the content if it is not available?
- Usually, the course content will be provided by the WCO Subject Matter Experts (SME). For your course, who will these experts be?

Content can be provided in the following formats:

- A detailed course plan, including a comprehensive outline of the course content and structure
- Links to external documents (PDF, word, excel, database access, forms, website links). These will be linked into the E-Learning module.
- Assessments – drafted questions and answers for quizzes, exams and course evaluations
Content duration:

- Minimal to maximal length guidelines (we suggest that each module is around 30 minutes long but no more than 45 minutes. This corresponds to around 30 to 45 PowerPoint slides)
- Content should be structured in manageable chunks to avoid cognitive overload

Learning outcomes (for more information see the chapter on our didactical approach):

- What does the content claim to do for the learners? The learning outcome must be clear and specific
- Does the content serve the learning outcomes?
- The whole course, as well as each individual module should have structured and specific learning outcomes
- The learning outcomes should be measurable through the course assessments and within the teaching timeframe
- The learning outcomes should reflect the needs and expectations of the target audience

Who are the learners?

In order to choose the right solution and enhance the learning experience, it is important to define the target audience, answering the questions below:

- Is it for Customs officials only (i.e. restricted content)?
- For which level of Customs officers (frontline, management, etc.)?
- Are specific countries targeted?
- Can the course be accessed by other government officials?
- Could it be interesting for the private sector? Should it be customized for them and made available on the WCO Academy?
- Are the users learning with mobile devices or with a desktop PC?
- The Subject Matter Expert should choose one or more target audience members that the course is aimed at. Please bear in mind the following aspects of your target audience:
  - Computer skill level
o Language or literacy barriers
o Job experience
o Study experience
o Secondary audience who will participate in the training

How is the course going to be used?

Self-paced: Is the course intended to be used stand-alone, as a personal development tool?

Blended learning: Will the course be part of a series of activities (e.g. workshops, further sessions)?

Tools: Is the course intended to be used as an operational tool?

Uses can be combined but it is important to keep them in mind when defining the appropriate e-learning solution.

Which languages?

The target languages for the course should be defined from the beginning as it will have an impact on the budget and schedule of the project. Usually, WCO e-learning courses are released at least in the two official WCO languages.

At the final stage of course development the English script will be proofread by professional translators.

If translations are requested, the English script will be translated by a professional translator and then integrated into the e-learning course by the service provider.

What types of e-learning?

Interactive modules — These are the most common modules on CLiKC!. It requires the intervention of a contracted development company to have them ready. They offer various features and attractive look and feel to the learners.

Tutorial modules — Generally provide instructions about using a program or navigating within the course.

Overview modules — Typically present an introduction to the content to be covered within the course, including course objectives and a brief description of the roles or responsibilities of the people being trained.
Wrap-up modules — Summarize key information presented in the course and provides concluding thoughts. Often, the wrap-up module will include additional resources or an action plan.

Assessment or user evaluations — Assessment and evaluation details are spelled out later in the Testing and Evaluation Strategy section of the design document, but the inclusion of these pieces is introduced here as a course component.

CLiKC! course — CLiKC! offers built-in features to create a course from existing materials, or adding contents such as quizzes, exercises, links, etc. This is easier and cheaper to develop and can be done in-house.

Others — Various other options can be considered based on the learning objectives (mobile app, videos, online game or other means). The WCO e-learning team has also organized webinars. The available tools that could be utilized by the WCO staff in order to deliver real-time training online are described in Annex 1.

**Didactical Approach**

When developing and designing the E-Learning course, the following components should be considered as inter-related and reliant on one another:

**Situational Factors:**
The course design should take into account the background information of the target learner audience (e.g. who exactly is our target group? What kind of experiences do the learners have?). Annex 2 shows some examples of potential learners.

**Learning Outcomes:**
After gathering information about the situational factors the learning outcomes should be formulated.

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What should the learners retain in a few years?
What thinking or application abilities should they develop?

These learning outcomes should be more elaborate than simply “understanding” and “remembering”. Learning outcomes should use verbs which describe an action that can be observed and that is measurable within the teaching time frame and through an assessment. Usually, learning objectives are written from the learner perspective and follow a structure like this:

- Step 1: Learning objectives begin with the phrase: “At the conclusion of this activity, participants will be able to…”
- Step 2: Connect step 1 with an action verb which communicates the performance by the learner. Use verbs which describe an action that can be observed and that is measurable within the teaching time frame (e.g., via a post-test).
- Step 3: Conclude with the specifics of what the learner will be doing when demonstrating achievement or mastery of the objectives. Stress what the participant will walk away from the activity with.

The following example might illustrate the idea:
“At the conclusion of this activity, participants will be able to identify the most important Customs procedures in the 21st Century building blocks and evaluate how their National Administrations apply them.”

Feedback & Assessment:
The next step is about planning how to evaluate these intended learning outcomes. What should the students do to show that they achieved?

When it comes to feedback and assessment our courses are limited to tools which are graded automatically. Since feedback should be used as a support mechanism, it is important to provide them explanatory feedback with answers so that learners understand why an answer is correct or incorrect.

Teaching & Learning Activities:
Different kinds of interactive teaching and learning activities should reflect the intended learning outcomes and facilitate good performance.

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2 Image nr. 1 illustrates different dimensions of learning.

3 Boston University : Writing clear learning objectives, https://www.bu.edu/cme/forms/RSS_forms/tips_for_writing_objectives.pdf, 31.03.2021
When all these elements are aligned to each other and integrated, this will facilitate significant learning, as outlined visually below⁴:

![A Taxonomy of Significant Learning Diagram]

**Testing and Evaluation Strategy**

To evaluate the learning progress, we strongly recommend to have short assessment activities within the courses and at the end of each module. The whole course will be completed by a final assessment. It is recommended as well to use different kinds of activities not to bore the learner.

The “Quiz” part of a module is structured as follows:
- An introductory screen
- A screen where the quiz questions are displayed one after the other
- A final screen displaying the trainee’s score and a comment appropriate to that score

**Introductory screen** — This consists solely of a text specifying the objectives of the quiz.

**Questions screen** — The “Quiz” kinematics are as follows:

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⁴ See L. Dee Fink (2003):9
When the user enters the Questions screen, the first question and clear instructions are displayed. The user must answer the question by clicking on a “Validate” button. Until this has been done, the user can change his/her answer. When the "Validate" button is clicked, it changes to “Next question”. At the same time, a graphic shows the trainee whether he/she gave the correct answer or not. A comment is also displayed – its content depends on the answer given by the user. Clicking on the "Next question" button allows the user to continue with the quiz. After the final validation (last question), the "Validate" button changes to “Result”.

The questions should be displayed in random order. The total number of questions available should exceed the number of questions posed.

Results screen — This screen displays the user’s score, as a percentage. This score is sent to the LMS in compliance with the SCORM standard when the user exits the screen. Usually, 70% are needed to pass the course successfully.

Structure of the "Lesson" and "Case study" parts

The structure of these parts is as follows:

- An introductory screen (numbered as 1 on the chapter-by-chapter bar) in the form of a text setting out the objectives to be attained and outlining the content of the module.
- Content screens, of which there may be any number (numbered as 2 to XX on the chapter-by-chapter bar).
- A conclusion screen (numbered as XX+1 on the chapter-by-chapter bar) which summarizes the knowledge acquired and invites the trainee to continue along his training path.

Design Specifications

The following section recommends to follow specific design suggestions to have more consistency between the different courses and to make the navigation easier for the learners.

The WCO should be able to edit and maintain the modules after delivery, this is why the developing company shall use one of the following authoring tools that are already licensed to the WCO Secretariat:

- Articulate 360 (including Storyline 360 and Rise 360)
- Evolve

Since our courses are used around the globe by more than 45,000 learners, they are a powerful communication tool. Therefore, it is important that they comply with
the various detailed provisions of the WCO Corporate identity Guidelines and the Style Guide in terms of the use of logos, fonts, colours, pads, icons as well as on how web banners should look like etc.

**Interface and navigation controls**

Other global course elements to consider include the interface and navigation controls that will appear on each screen of the program. It describes the informational sections the interface will incorporate, which may include course title, module title, progress indicator or location within the module, or a text prompt that provides instructions for what to do next.

If you plan to use submenus or other means to allow users to jump directly to specific topics or points within a module, provide a description of those here too.

For example, you may choose to have a topic menu running down one side of the screen that is visible at all times and which links to subsections within the module. Alternatively, such a menu could be a pop-up from a button in the interface.

The course should also include basic navigational controls that allow users to progress through the program. This typically includes Next, Back, Help, and Exit, along with any other features the design team may choose to add. For instance, you might want to include buttons that let the user replay a screen, toggle audio on and off, or launch a course glossary or other resources.

This will be left up to the Subject matter expert and the instructional designer to discuss the best solution.

**Example WCO course layouts and designs**

The following images show example images of WCO E-Learning courses. It is important to note that the selection of the authoring tool will influence the layout of the course interface and navigation controls. In terms of design, WCO generally employs two main types: A photographic style and an animated style, examples of which can be found below.
Example WireFrame —

- Title of current course
- Document and external information buttons/icons
- WCO logo
- Misc. buttons
  - Audio on/off
  - Instructional links
- Course Navigation control buttons
Course with photographic style —  
E.g Rules of Origin

Course with animated style —  
E.g Air Passenger Controls