16.07.2018

CORA Training Concept

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1 CORA Training

This note describes the CORA training concept, which is based on blended learning: A mix between virtual learning elements and physical learning activities (workshops). The physical learning activities are supported by trainers for whom we have designed a special set of training materials. This ensures not only that the trainers are enabled to carry out the training, but also that the virtual and physical elements of training are coordinated and coherent.

The training material is meant for trainers and general audience and not as part of formal education. We therefore cannot expect the participants to go through several hours of formal education, but need to be short and concise, and enable the participants to help facilitate digital transformation in their areas: A role that requires a basic yet broad overview of topics within infrastructure, skills and services. Moreover, the audience group is broad and no specific knowledge of any of the fields can be assumed – and the participants will also have very diverse educational backgrounds. Moreover, we would like the training materials to support also the formation and organization of communities, which is known to be a crucial factor to drive digital transformation.

In short this means that the training materials:

- Should provide adequate inputs for the trainer
- Should be in shorter blocks that can be studied by people in their limited spare time.
- Should be in an easily accessible and attractive format, rather than traditional course teaching.
- Should be provided in multiple languages.
- Should mix virtual and physical learning spaces and enable community building.

These requirements fit well with the ambitions of the European Commission to promote more use of blended learning.

1.1 Overview of the materials to be produced

In total, 20 training materials are promised in CORA application. Each of these can be categorized as virtual material or physical material. CORA has defined 9 areas of training, covering Digital Skills, Digital Infrastructure and Digital Services. For each of these areas of training, two materials will be created (18 in total):

(1) Online materials, which are targeting both citizens and authorities. This will be a web-doc format consisting of text, pictures, infographics and (optionally) videos/audios. Each of the materials is expected to require an effort of around one hour per participant[1]. This material will be created first in English, and then (as needed) translated into other languages.

(2) Workshop material, which is used to facilitating a workshop on each topic of a duration of

[1] to be further evaluated

1-2 hours. This component also includes online preparation materials for trainers in the form of a PDF document with background information and optional readings. This material will be available in English only as it is targeted for the trainers.

In addition, two additional materials will be created:

(1) General introduction for trainers (webdoc format – English)

(2) Digital Skills and Opportunities: An introduction for businesses (webdoc format – English, and translated as needed).

Figure 1. CORA- dimensions for the e-learning

1.2 CORA e-Learning

The development of CORA's e-learning training material is being based on both cognitive as well as constructivist learning theory.

The **cognitive learning model** promotes using thinking to learn. The underlying assumption is that learners process information autonomously and at their own pace. Therefore it is the e-learning material's responsibility to initiate learning through creating an environment that encourages the development of problem-solving skills. When learners face a problem, the material provides all the information needed for them to solve it. The choice of learning envi-

ronment and media is based on the individual patterns of perception, understanding and processing of the target group as well as their assumed previous knowledge.

The **constructivist learning model** supports active, self-organised learning in a problem-oriented, practical, situational context. As opposed to the cognitive model knowledge is not transported but learners construct the knowledge themselves. Additionally the approach demands the ability to create and apply new knowledge in multiple contexts and from diverse perspectives. The concept is based on the assumption that learning is an individual process in which learners build an individual knowledge network.[2] This form of self-organized knowledge acquisition transfers control of the learning process to the learners and enables them to accumulate applicable knowledge. While the work mode of the cognitive model is developmental, the constructivist mode can be described as explorative.

In its realisation the e-learning material is going to be a mix of both models with one model being more dominant depending on target group, topic and needs. Since CORA's target group consists of individuals that use the training material voluntarily, e-learning produces learning motivation through creating intrinsic conviction rather than through outside persuasion.

Methods include:

- The communication of clear learning objectives
- The creation of a sense of relevance and relation between learners and learning objectives
- The creation of non-linear learning paths with options and choices and the ability to skip or focus on content depending on the learners individual needs and interests
- The possibility of repetition
- The implementing of interactivity, regular instant feedback, open questions
- A course structure that alternates between providing information to be first explored and secondly applied in realistic complex storytelling scenarios
- Inclusion of examples with a practical orientation
- Creating opportunities for learners for discovery and surprise
- Providing links, resources and further reading

1.2.1 E-learning software

The software for creating CORA's online training material is Articulate 360 with their applications Storyline 360 and Rise. Both applications enable the media author to create interactive online learning experiences that correspond to the didactical concept. Using the software makes an additional application development unnecessary since the use of the project's Visual Identity within the program is possible and the html-output can be embed onto websides.

[2] Heinz Mandl/Gabi Reinmann-Rothmeier/Cornelia Gräsel, Gutachten zur Vorbereitung des Programms ‚Systematische Einbeziehung von Medien, Informations- und Kommunikationstechnologien in Lehr- und Lernprozesse, Bonn 1998, p. 106.

Support and maintenance of the content is low to non-existant. Other benefits of the Articulate 360 package is simple handling, quick results and the access to the software's product support.

1.2.2 Pre-evaluation of e-learning[3]

To evaluate the material before publishing the media author provides an e-learning standards checklist that covers the areas learning outcomes, ease of communication, pedagogical and organizational design, visual design, engaged learning, assessment, feedback and ease of access.

1.2.3 Target group(s)

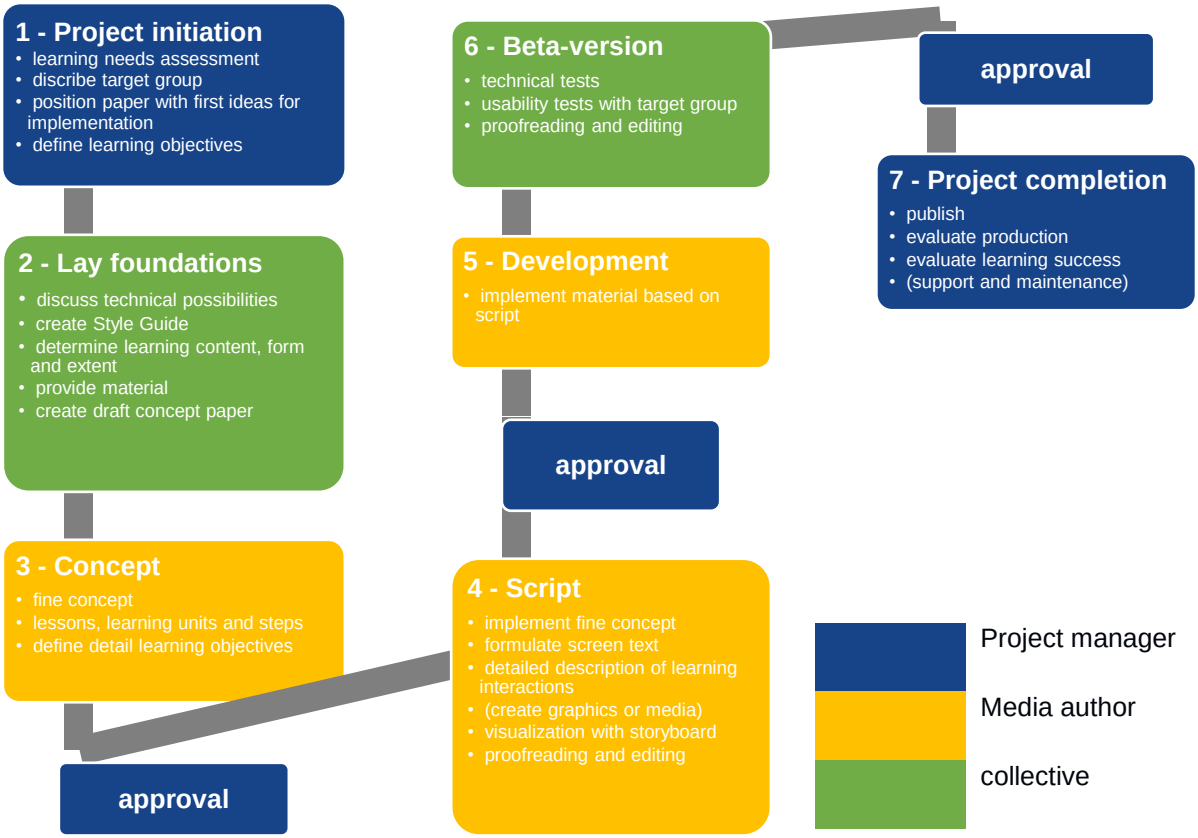
The target groups for each e-learning material is either the local trainers or the general public. The target group of trainers can be described as a relatively homogenous group with a comparable level of previous knowledge, while the public is a much bigger and very heterogenous group of individuals with all different kinds of previous knowledge and digital skill sets. Both targets groups come with assets and drawbacks regarding the development of e-learning content and it must be clarified which before developing the individual material.

Table 1. e-learning target groups

	Trainer	**Public**
+	Sustainability: The „Train the trainer"-idea helps regions to help themselves long-term	Digitisation: Training material as open access content
-	Coverage: Material only reaches a chosen circle of people	Maintenance: Support for big target groups is a big effort to provide long-term Ineffectiveness: The barriers for interacting with the material for individuals with low digital skills might be to high

[3] Please see annex 2

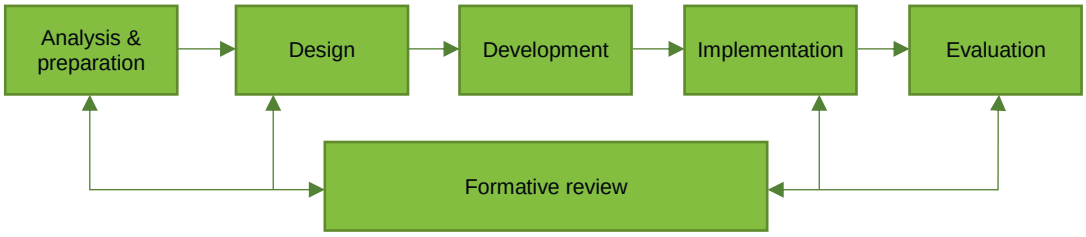
Figure 2. Typical Workflow for creating E-Learning content[4]



[4] Daniela Stoecker, eLearning – Konzept und Drehbuch. Handbuch für Medienautoren und Projektleiter, Berlin/Heidelberg 2013.

Annnex 1. Training/e-learning development process

The main steps for developing and implemeneting e-learning services are presented below:



Roles & responsibilities

- Content related project manager ➔ (PM)
- Systems Designer and Administrator ➔ (SD)
- Graphic Designer (incl. Audio/Video) ➔ (GD)
- E-Learning Developer/Programmer ➔ (ED)
- CORA communication officer ➔ (CO)

Analysis and preparation

1. Planning for the e-learning (PM, ED)

- What problem or challenge is this e-Learning going to overcome?
- What do we hope to achieve with e-learning?
- What outcomes do we expect?
- How will it help the organizations/individuals meet their goals?

2. Target groups (PM, CO)

Create target audience profile (inc. technical capability, accessibility needs, learning environment, etc.)

- Local authorities
- Local communitie
- Local enterprises

Design and development of e-learning

1. Choice of platform & technology (PM, ED, SD)

- Link to CORA platform

- Which platform? (How many people will be accessing the program at one time? The average? The max?, Is the hardware, including servers, database, and computers, up to implementing the technology?, Are there required applications to be installed?, Does the company/organization have enough bandwidth to run the courses?, The plan for backing up information and security?, Maintaining the server?, What kind of technical support will be offered to end users?)

2. Choice of learning topics and content (PM, CO, ED)

Identify training needs, conducting analysis if necessary

- Results from the regional surveys

3. Choice of medium (PM, CO, ED)

- Text
- Image
- Animation
- Level of interactivity

4. Choice of language (PM, CO, ED)

- Which languages? English or local languages?
- This might be the task of local partners to translate the courses in their local languages if they wish.

Implementation

1. Platform and learning material design (PM, CO, ED, GD)

- Learning materials (incl. images, videos etc.)
- Platform design elements

2. Running the e-learning (PM, ED, SD)

- Roll out training to the learning management system
- Test internally and with specific learner groups
- Revise as necessary

3. Managing the platform (PM, ED, SD)

- Durability and use after the project life time
- Automated performance?
- Registration process

- Opportunities for interactions and problem-solving
- Technical support

4. Promotion of the platform (PM, CO)

- Tool for the mainstreaming and poromotion of the platform

Assesment (PM, CO, ED)

- Conduct summative assessment to gauge training effectiveness (Was the training a positive experience? Can the learners do what you want them to do? Are the learners using the new knowledge? Did the training solve your problem or address the training needs?)
- Consider levels of evaluation: reaction, learning, behavior, results
- Decide on revisions to training design, content, or delivery
- Maintain product via updates or retire when obsolete

Annex 2. E-Learning Standards Checklist Project/Online Course[5]:

Date _____

E-Learning Standards Checklist

Project/Online Course: _____

Learning Outcomes

- ☐ Learning outcomes for an online course are identical to those of the on-site version.
- ☐ Learning outcomes are measurable and specific.
- ☐ Course material is sufficient and directly related to learning outcomes.
- ☐ Resources and activities support learning outcomes.
- ☐ Assessments determine the degree to which the learners have achieved the required learning outcomes.

Ease of Communication

- ☐ The writing style is clear, concise, and direct.
- ☐ Sentences and paragraphs are brief and to the point.
- ☐ Familiar or common words are used when possible.
- ☐ Jargon, clichés, and colloquial and idiomatic expressions are avoided.
- ☐ The meaning of special terms, abbreviations, and acronyms is easy to access.
- ☐ Labeling in all presentation materials is accurate, readable, and clear.
- ☐ The wording used to define learning outcomes is clear and definite.
- ☐ Instructions and requirements are stated simply, clearly, and logically.

[5] Reference: Marjorie Vai u. Kristen Sosulski, *Essentials of Online Course Design. A Standards-Based Guide*, Abingdon 2015.

- [ ] A supportive second-person conversational tone is used throughout the course.
- [ ] The course material has been edited for language and grammar.
- [ ] The pacing of spoken language is natural sounding yet slow enough to be understood by a variety of learners.
- [ ] The sound quality of audio and video is good enough to be clearly understood.
- [ ] Avoid combining spoken and written narrative in presentations.
- [ ] Videos should be no longer than 10 minutes in length.

Pedagogical and Organizational Design

- [ ] A syllabus including contact information, a course outline, requirements, and guidelines is accessible from the start of the course and throughout.
- [ ] Introductions and summaries are provided at the beginning and end of units.
- [ ] Blocks of information are broken up or “chunked” into incremental learning sections, segments, or steps as is appropriate to the subject matter.
- [ ] Pedagogical steps build progressively, one upon the other, as is appropriate to the subject matter.

Visual Design

- [ ] Page layout is uncluttered and open, and includes a significant amount of white space.
- [ ] There is sufficient space between lines, paragraphs, and to the right and left of text so that it stands out and is easy to read.
- [ ] Text is left-justified and right margins are ragged.
- [ ] Headings and subheadings are used consistently to logically organize content.
- [ ] A universal sans serif Web typeface (e.g. Verdana) assures access across platforms and enhances screen readability.
- [ ] Type size should be large enough to be easily readable by all students.
- [ ] Bold and italic typefaces are used sparingly only to emphasize important items.
- [ ] Underlining is used only for links.
- [ ] Words in all caps are avoided.
- [ ] Color is used with purpose.
- [ ] There is good contrast between text and background.

- [ ] Visual elements (e.g. icons, shading, and color) are used consistently to distinguish between different types of course elements (e.g. lessons, assignments, audio, and video).
- [ ] Use bullets or numbers to set apart items that can be listed.
- [ ] Numbers are used to identify sequential steps in a task or process. They are also used for rankings and setting priorities.
- [ ] Bullets are used to highlight a series of items that are not prioritized or sequential.
- [ ] Details in images, graphs, charts, and diagrams are designed and organized so that they are easy to read and understand.
- [ ] Content is designed simply and clearly to avoid information overload (e.g. avoid narrating while written text is visible, using distracting images for decoration, presenting too much information at once, etc.).

Engaged Learning

- [ ] Course content is designed to encourage interactions between learners.
- [ ] Presentations, activities, and assessments address a variety of learning abilities and preferences.
- [ ] Presentations include examples, models, case studies, illustrations, etc. for clarification.
- [ ] Materials are authentic or relate to real-life applications.
- [ ] The manner of presenting new knowledge and skills is varied, including text, lists, organizational activities, reflective quizzes, readings, images, graphs, charts, etc.
- [ ] Courses include a variety of relevant multimedia to support learning (e.g. audio, video, recommended podcasts, illustrations, photographs, charts, and graphs).
- [ ] Presentations include media and are varied.
- [ ] Activities are frequent and varied. Students may respond to questions, select options, provide information, or interact with others.
- [ ] Activities engage students in higher-level thinking skills, including critical and creative thinking, analysis, and problem-solving.
- [ ] Activities lead to active interactions that involve course content and personal communication.
- [ ] Topics and materials are up to date and relevant.
- [ ] Reflection and reflective activities come up throughout the course.

- [ ] Bibliographies and reference lists include a variety of resources, including Web links, books, journals, video, and downloadable text and audio files as is appropriate.

Learning Interactions and Community

- [ ] There are sufficient opportunities for learners to work collaboratively.
- [ ] Online spaces (e.g. discussion boards, social networks) are in place for students to participate in and meet outside the class.
- [ ] Learners take responsibility for their learning and, at times, the learning of others.
- [ ] The teacher is a participant in the learning process.
- [ ] Learners are encouraged to interact with others (fellow classmates, course guests, etc.) and benefit from their experience and expertise.
- [ ] Class participation activities (e.g. discussion boards, wikis, social networks) are used to build community.
- [ ] Procedures for group activities are specified so that students are aware of their role and responsibility in collaborative activities.
- [ ] Collaborative activities are designed to facilitate a safe learning environment.
- [ ] Students work in a variety of independent and collaborative configurations that reflect real-world situations.

Assessment

- [ ] The relationship between learning outcomes and assessments is evident.
- [ ] Course includes ongoing and frequent assessment.
- [ ] Students are given clear expectations and criteria for assignments. Examples are included for clarification when needed.
- [ ] Criteria/rubrics clearly inform learners as to how they will be assessed on specific assignments, such as online class participation.
- [ ] Grading criteria are outlined in the course syllabus and within the assignment or assessment itself.
- [ ] Criteria and procedures for peer review and evaluation are clear.

Feedback

- [ ] Teacher, peer-to-peer, guest, and automated feedback clarifies, amplifies, and extends the topic.
- [ ] Teacher feedback is provided in a timely fashion.

- [ ] Students can work through a practice exercise until they reach a correct or acceptable result.
- [ ] Students know when and how they will receive feedback from instructors.
- [ ] Self-correcting and/or self-assessment activities are used throughout the course to enable learners to vary the pace of their learning as is appropriate to the subject matter.

Evaluation and Grading

- [ ] All graded activities are listed upfront in the syllabus.
- [ ] The manner of submission for graded assignments is clear.
- [ ] Due dates for submissions are clear.
- [ ] The relationship between graded elements and the final grade is clear.
- [ ] Consequences of missed deadlines and insufficient class participation are clearly stated and fair.
- [ ] Class participation/discussion should account for 10–30 percent of the final grade.
- [ ] Students can easily track their progress.
- [ ] The consequences of plagiarism, cheating, and failure to properly cite copyrighted material are emphasized.
- [ ] Graded elements are clearly distinguished from those that are ungraded.
- [ ] Graded assignments are varied (e.g. special projects, reflective assignments, research papers, case studies, presentations, group work, etc.).

Ease of Access

- [ ] Correct, working links are provided to course materials and resources.
- [ ] Resource material is accessible to all students in commonly used formats.
- [ ] The format of media should be specified.
- [ ] Audio and video material appearing within a lesson should be brief.
- [ ] Course material is portable (e.g. text can be downloaded or printed out, material is well designed for handheld devices).
- [ ] Contact information to advisors and technical help is provided in the syllabus.
- [ ] Cross-referencing and links to items in other parts of the course are provided.