

This project has been funded with support from the European Commission.
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how to webcast



Trainer's manual

ver. 1.0

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The Trainer's manual was prepared in the frames of **How to webcast – new media use in the efficient learning processes** project, co-financed by the Lifelong Learning Programme – Leonardo da Vinci.

It provides preparation, promotion and valorisation of the on-line teaching methodology with the use of webcast software. These programmes allow one to conduct training with the use of presentations, video and sound (VOIP).

The Trainer's manual exemplifies an extension of the practical knowledge contained in the methodology and it is designed to facilitate the work of trainers. The main aim is to support them in the organisational process of the webcast training and provide an efficiency in the use of all accessible tools.

Project is being implemented by the consortium consisting of:

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- *Adam Smith College (ASC)*
- *Czech Efficient Learning Node (CELN)*
- *Institute of Mobile Technologies for Education and Culture (IMOTEC)*

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Spis treści

- Introduction 4**
 - Communication..... 4
 - Interaction 4
 - The impact of technology on the learning process 4
- Before the training 6**
- During the training 10**
 - Training team 10
 - Sound 12
 - Video..... 12
- After the training..... 13**
- Summary 14**
- Glossary 15**

Introduction

Webcast training is supposed to simulate a traditional classroom training situation as closely as is possible.

The software used for the training allows for an experience that is very similar to a face-to-face meeting with a trainer.

Thanks to that, a common virtual space for interaction (accessible in different locations simultaneously) is being created. Trainees and trainers taking part in the session can be in different, often distant places, and still interact face-to-face.

Trainer's and trainees' virtual meeting

Professional software

Virtual space for interaction and trainees' dispersion

Communication

Regardless of the similarities they share, there are significant differences between traditional and webcasting training. They are noticeable especially when building and developing relationships between the two participating sides.

Different characteristics of group processes

Nonverbal communication in webcasting is considerably poorer than during a traditional training session. The trainer usually cannot see the participants and, therefore, he cannot "read" their unarticulated reactions to the presented material.

Trainees' body language unseen

However, webcasting makes it possible to control the trainees' participation, which cannot be done during a traditional training session. This is crucial especially when carrying out training for large and open groups of people. Such supervision by a trainer is possible due to their ability to manage communication channels, allowing them to give the right to speak to participants, moderating and approving their input before it is published.

Webcast lets you not only moderate and manage privileges but also control the methods of interaction

Interaction

A webcast training session is also characterized by the different types of interaction available for use with the trainees through the vast Internet resources as well as professional software which can be used, e. g. chats, questionnaires, quizzes, videoconferences.

More openness in communication

The impact of technology on the learning process

An online webcast training session generates a number of interesting educational effects which significantly influence the course and efficiency of the training.

Dispersion and virtualization of the trainees raises their sense of anonymity. Webcasting training participants are often more eager to

Higher level of criticism

ask questions and express their critical opinions than during a traditional training.

Webcast software allows for the archiving of participants' input by recording the chat and audio-video discussion in the case of a videoconference. Therefore, the training might be replayed enabling an asynchronous participation in the session. Also a multimedia database can be established by creating educational resources (e-learning content) from the webcasts.

The questions/comments are recorded and visible on the screen, therefore, the trainer has to refer to them sooner or later. Taking the trainees' satisfaction into consideration, no question should be left unanswered.

Recording of the trainees' input also has a psychological effect, because the trainer/organiser feels more obliged to answer a trainee's question or react to their remarks/comments/suggestions. The questions that could not be answered during the training are usually answered after the session (using the electronic methods of communication).

The use of tools for the training assessment, such as automatically recorded statistics or electronic questionnaires, determine the speed of its evaluation (which is considerably faster than in case of the traditional training).

Asynchronous e-learning: creating multimedia educational resources and knowledge databases

A greater necessity to answer trainees' questions (due to the systematic discourse)

The speed of training evaluation

Before the training

When planning a webcast training session one has to remember that it should be prepared according to the general rules of training design.

It has to be preceded by an analysis of the target group and its training needs. At the same time, one has to take into consideration the characteristics of webcast software and their impact on achieving the desired educational results.

When preparing a webcast training session, a trainer has to follow a sequence of tasks specified in the schedule. Particular tasks or their order may vary depending on the client, subject or the training group etc., however, usually the order is as follows:

Webcast training should be like any other kind of training

The participants' characteristics determine the used methods and teaching tools

Task 1: Analyze the group – Who are they? :

- Inside/outside trainees- people from the organization/people from the outside of the organization
- Familiarity with new technologies - proficiency in using web applications; an ability to adapt quickly to new software and new situations
- Motivation and expectations – determined on the basis of needs analysis and target group's characteristics
- Level of discipline – predicted on the basis of the target group's analysis

The less the trainees are known to each other and the trainer, the greater the limitations of the interaction will be

The worse the skills, the more simple methods should be used

The lower the motivation, the shorter the webcast

The lower the discipline level, the more restrictive the training methods and the less interaction involved

Task 2: Formulate the objectives for the training session:

- Set the objectives for the training – the main objective and the more specific ones. Additional questions:
 - can the objectives be achieved through the webcast training?
 - how can the training be constructed to ensure the achievement of the objectives?
- Define the indicative criteria of achieved objectives for measuring the accomplished goals

The objectives must be SMART: Specific, Measurable, Available, Realistic, Time framed

- what will indicate that the training session achieved its objectives?

Task 3: Prepare the content:

- Establishing the scope of the training – summary of the content and key topics
- Formulating the topic of the training – detailed information about the content of the session
- Curriculum – a detailed plan showing the order and estimated duration of every point of discussion
- Presentation – which usually serves as the basic information and education tool used during a webcasting session. A simple form with minimum graphics is recommended. An overly complicated form might cause technical problems and confuse the trainees.
- Additional materials: exercises, articles, knowledge bases.

What subject area will help to achieve the set objective

Webcast training session should contain concentrated and very interesting information

Establishing the number of participants must take under consideration the objectives and technical limitations

Task 4: Establish the form of the training session

- Establishing the number of participants (the size of the group)
 - 2-6 people – training have the shape of a workshop, good communication between participants
 - 7-19 people – problems with communication may occur
 - 20-50 people – oral communication is limited, participants use additional tools, e.g. chat
 - 51 or more – limited communication, training should be well planned and organised
- Location of the training session
 - will training be in a classroom or transmitted on-line
 - only virtual trainees on-line
- Dispersion of the participants:
 - a group of trainees in front of one computer

The more participants – the greater interaction

- every trainee at their own computer
- Suggested time and number of modules:
 - 1 module up to 45 minutes
 - 2 modules, 45 minutes each
 - longer than 90 minutes
- Choosing the methods of interaction
 - chat / Instant Messaging - This allows trainees to communicate with each other and the lecturer giving input and feedback without disturbing the class
 - questionnaires / Quizzes - These can be used to conduct formative assessment and give students instant feedback.
 - WebQuests – This allows students to become engaged with the webcasts training session and provide input with solutions found by the trainees potentially leading to different final conclusions.
 - Simulated Interactive Whiteboards – These can be used by trainees as a platform to work collaboratively in the virtual environment.
 - videoconference – This allows real time audiovisual transmission between the participants and the trainer, simulating further the face to face environment of a traditional training session.
 - file sharing – the trainer prepares a file and enables the trainees to download and edit it
 - screen sharing – display of trainer’s desktop allowing real time editing of documents and presentation of the changes to the trainees

Optimum time for webcast session is 45-90 min.

We advise against webcasts longer than 90 minutes

From the most safe and popular ones to least popular ones which are most difficult to carry out

Task 5: Inform the trainees about the technical capabilities of the equipment

- Software technical requirements
- Hardware requirements
- Available functionalities

- Instructions concerning the use of equipment
- Most frequent mistakes

Task 6: Prepare the training scenario. The scenario contains the key information about the training session and constitutes its functional framework. It is a concise text containing:

The larger group, the scenario should be more detailed

- Organizational information concerning the webcast training:
 - date and time of the training
 - time frame – time and form of questions
 - form of training session
 - training team – duties of team members
 - number of trainees
 - tools for interaction
- Technical information
 - software used during the training
 - technical (hardware) requirements of the software
 - hardware (equipment) requirements
- Information concerning the content of the training:
 - topic
 - scope
 - programme
 - timetable

The scenario is characterised by the presentation

During the training

A webcast training session has to be preceded by relevant preparation in terms of its organization, content and technical requirements. Organizational and technical aspects of a session are extremely important and key to the success of the training.

It is crucial to introduce the trainees to the form of the training and the software used during the webcasting session. Usually the trainees are asked to connect to the platform, for their first session at least, 30 minutes before the session in order to test their computer and its Internet connection.

Any additional technical requirements and instructions are published on the website or sent to the participants before the start of the sessions. Contact details for technical support are also provided.

Training team

Effective webcast training depends on a couple of key roles that the training team has to fulfil.

The team usually consists of a trainer and a moderator. It can be reinforced by a co-trainer and technical support.

A trainer who is familiar with the webcasting technology can successfully conduct a session for a small group of participants (up to 6 people). During a webcasting session for a group larger than 50 participants, the moderator's help is necessary in order to manage the trainees' participation.

Key tasks of a trainer include:

- To give a presentation using methods that would engage the trainees
- To answer trainees' questions – during and after the session
- To represent and help the organiser – welcoming/saying goodbye to the participants on behalf of the organiser, organising of the session
- To support the didactic process - to maintain a positive and stimulating atmosphere which would reinforce the learning process; to check the trainees' involvement

Only good preparation of all participants will let the training to be efficient

The roles of the training team should match the knowledge, skills and number of its members

The trainer and moderator's scope of work may differ according to their knowledge and abilities

Key tasks of a moderator include:

- To represent and help the organiser – welcoming/saying goodbye to the participants on behalf of the organiser, organising of the session
- To animate and moderate the discussion
- To report the progress of the session and to stress the most important information
- To provide technical support – to introduce the participants to the applications and to help them use them effectively; to solve any technical problems
- To manage the communication between the trainer and the trainees, to pass on the questions and feedback
- To create the educational and marketing materials and to publish them (together with comments) on social networking websites

Moderator may answer simple questions

Moderator operates the chat and other tools of communication

The nature of a webcast in relation to the dispersion of the trainees makes the use of tools enabling interaction necessary. The most commonly used are as follows:

- Chat – used in 99% of training sessions allows the trainer and/or moderator:
 - § to effectively introduce the trainees into the session
 - § to stress the most important points of the training
 - § to ask questions during the session
 - § to inform about technical problems
- Quizzes and questionnaires in real time allows the trainer and/or moderator:
 - § to assess trainees' progress
 - § to assess trainees' involvement and opinions
 - § to increase concentration levels
- Whiteboard allows the trainer and/or moderator:

Chat a tool enabling an exchange of text messages in real time

Quizzes and questionnaires contain exercises for trainees prepared in advanced or ad hoc. It enables automatic aggregation of answers and presentation of the statistics

- § to highlight the key contents of the training
- § to facilitate collaboration between the trainees (in small teams)
- Screen sharing allows the trainer and/or moderator:
 - § to edit a document in real time
 - § to facilitate team work in small groups
 - § to check the trainees' progress
- Knowledge bases allows the trainer and/or moderator:
 - § to solve the tasks
 - § to broaden the subject of the training
 - § to show examples of the application of knowledge
- WebQuests – a constructivist approach in teaching which uses online resources to solve problems given by the trainer. It involves role playing and searching for the solutions on the Internet.
- Online games – simple educational games which help to memorize the presented didactic materials.

Whiteboard it highlights certain areas of presentations and documents

Screen sharing - a tool, which enables you to transmit the contents of your computer screen to one or more other computers

Sound

Sound is crucial for the webcast training and together with "ppt" presentations they form main channel for transmission of the session content. That is why its quality and reliability are important. Three major factors influencing the audio transmission are:

- Efficient software
- Fast Internet connection
- The use of headphones with a microphone (to avoid echo)

Use of headphones with microphone is essential – it helps to avoid rustle, echo, etc.

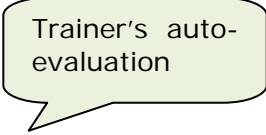
Video

If the webcast training participants are provided by live webcam video, an awareness of the lighting is important (there should be two sources of light directed at the trainer to avoid casting strong shadows; no light behind him to avoid flooding the camera with light). A banner with the organizer's logo could be placed behind the trainer, provided its colours are subtle.

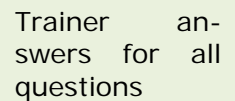
After the training

Many available webcast software packages allow us to record the training session. Utilizing this function lets us use the recording for a few purposes.

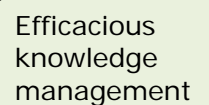
- Preparation and presentation of post-training materials:
 - promotion and marketing through the knowledge
 - expanding the knowledge bases
- The training evaluation:
 - review of the recorded training session;
 - internal assessment of the trainer and didactic methods
 - analysis of chat messages
 - statistics: trainees' activity and its duration
 - evaluating questionnaires
- Follow up after the training:
 - post-training evaluation
 - answers to the questions asked during the training (via chat)
 - sending links, presentations, additional materials
- Using the recorded session:
 - building and expanding the knowledge bases
 - distribution of e-learning content
 - integration with existing systems



Trainer's auto-evaluation



Trainer answers for all questions



Efficacious knowledge management

Summary

Webcast training gives the participants a great opportunity to meet the experts who otherwise would be unavailable. It also significantly lowers the costs spent on training by eliminating the need for travel and day release from the workplace. Webcast training uses the Internet resources and teaches flexibility in utilising on-line tools. With the use of webcasting it is possible for trainers to conduct sessions for participants from all over the country or even around the world.

However, it is crucial to have some practice using the webcasting tools before the first training session, for example, in smaller groups and during teleconferences. It will help you to get used to the software and an unnatural necessity to “talk to the screen”.

A trainer conducting his first webcasting session often gets the impression that he is talking to himself and is not sure that there are actually any people “on the other side” who are listening to him. Problems with confirming their presence and lack of feedback might undermine trainer’s confidence. That is why it is recommended to have an experienced moderator during the first training sessions. He can help the trainer by taking care of the organizational side and technical support.

With every webcasting session the trainer will feel more comfortable and a moderator’s support will be less necessary. More advanced methods of trainees’ involvement and greater flexibility in the training are then possible.

Glossary

Chat – a tool enabling an exchange of text messages in real time. The conversation may be both public (accessible for everyone) or individual (accessible only for selected participants).

Electronic questionnaires – on-line form with set of deliberately prepared questions. It gives the possibility to express an opinion by answering on closed-, half-opened- and opened questions. The answers are being aggregated and published as a statistics

Evaluation – an analysis of the values/features of a particular programme or action (e. g. curriculum, project) which use criteria against set of standards in order of development, improvement and efficiency. It consist of the systematically collected and analysed information about the goals established criteria.

Interactive whiteboard – a toll allowing to underline key parts of the presentations and documents. It is particularly important during collaboration in small groups of trainees.

Knowledge bases – libraries of educational materials with documents, presentations, e-learning courses, audio and video files, which may be used to broaden the knowledge gained during the webcast session (e. g. videolectures.net, docstoc.com, slideshare.net)

On-line games – on-line applications which help to memorise training material and improve the concentration on the training.

Quiz – exercise prepared by the trainer in advance or ad hoc. It consists of a questions based on the information collected during the training. Its complex form requires high level of concentration and involvement

Screen sharing – a tool which enables the transmission of computer's screen contents to one or more viewers. Participants may see all changes in the real time. It facilitates the technical support and work in groups on documents.

Videoconference – interactive communication, which allows to interact using video and audio transmissions simultaneously. People using specific equipment may talk and see each other on the same time. Although it is used for a video and audio transmissions, it can be also helpful in sharing documents, information and remarks.

Webcast – an audio and video transmission on the web (World Wide Web) from one specific source to large group of participants. Transmission may be conducted 'on-line' or 'on-demand'.

Webcast software – it is all computer programmes that give the possibility to communicate via the Internet. It helps to transmit the view of a presentation, sound, video and chat. It may be additionally equipped with interactive whiteboard, questionnaires, screen sharing. Exemplary software programmes: Adobe Acrobat Connect Pro, YUGMA, Dim dim, ONIF.

Webcast training scenario – plan of a training which involves key information (like goals, topics, tools ect.) and has its own framework. It is particularly important during webcasts with large groups of people, where effective time planning is crucial for training completion

Webcast training session – is a single online training. Optimum time for a webcast session should be 45-90 min. It affirms best effectiveness and assures concentration on the subject.

WebQuest – according to the Dodge's publication it is "an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing, <http://webquest.org>). We may distinguish two types of WebQuest – long-term and short-term. In the short-term WebQuest students have to pick up large portion of information in short period of time (1-3 days). During the long-term WebQuest they have a lot of time (1 week- 1 month) to get acquainted with the topic. Main thing is to analyse possessed knowledge and transform it while making specific exercises.

