

# LESSON D11\_EN. HOW TO USE ELEARNING TOOLS AND TECHNOLOGIES. Media and other Tools

Project: eEmployment

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*After having learned this lesson you will be more familiar with the following topics:*

- ☐ Different types of media editors
- ☐ Examples for Communication tools
- ☐ The differences between Communication and Collaboration tools
- ☐ Basic eLearning Technologies
- ☐ Typical eLearning Systems and Platforms

## **CONTENT OF LESSON**

1. Media Editors
2. Communication Tools
3. Collaboration Tools
4. eLearning Technologies: Basics
5. eLearning Systems and Platforms

## **LEARNING OBJECTIVES:**

- ☐ Which media editors can be used for the development of an eLearning module?
- ☐ What communication and collaboration tools can be used for eLearning?
- ☐ What kind of technological foundations do you have to know to create an eLearning scenario?
- ☐ Typical and often used eLearning systems and platforms.

## 1. Media Editors

Media editors are tools to create and edit different types of media:

- Pictures
- Sounds
- Animations
- Video
- Others

### 1.1. File formats for different types of media:

Here you get an overview of different media file formats.

#### **Text and web documents**

- HTML, XML
- PDF, Word, Excel, ...

#### **Graphics**

- GIF, JPEG, PNG
- SVG
- VML

#### **Sound**

- WMF
- MP3, WAV

### Animation

- GIF
- SWF

### Video

- MPEG
- Quicktime
- Real Media Format

## 1.2. Examples for Media editors

### Macromedia Fireworks

For the work with images or vector graphics we can use Macromedia Fireworks (Figure 1).

You can create and modify nearly every type of image and save it in many different file types for print and web.

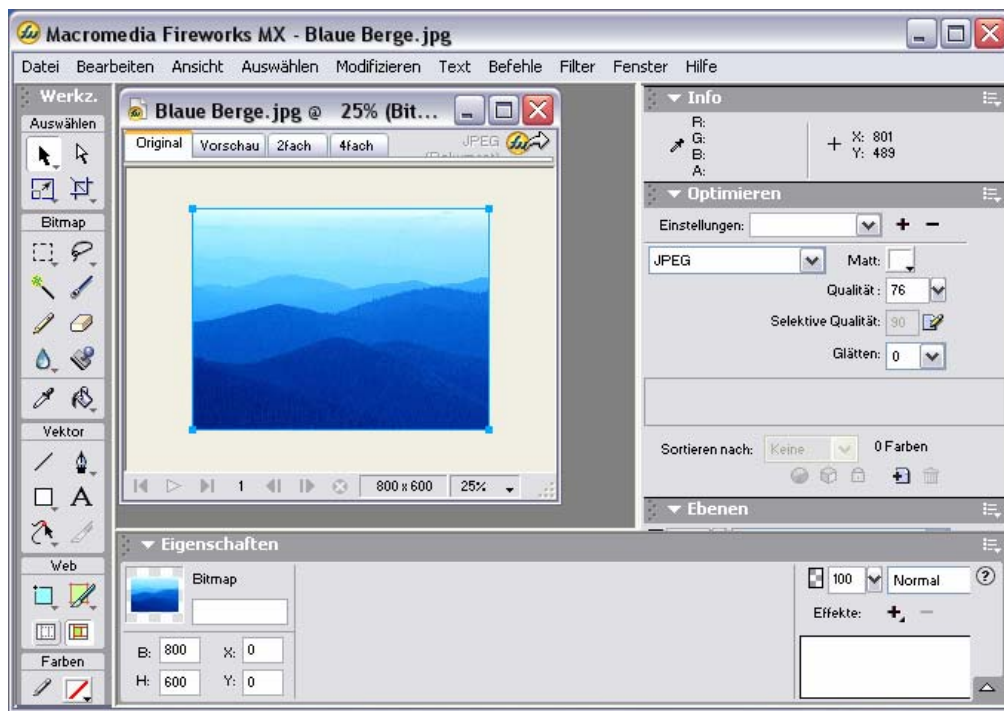


Figure 1: Macromedia Fireworks is a powerful image creation and modification tool

For more information about Fireworks visit the link:

<http://www.macromedia.com/software/fireworks/>

### Audacity

Audacity is a freeware sound editor.

It is easy to understand, but more powerful than it looks.

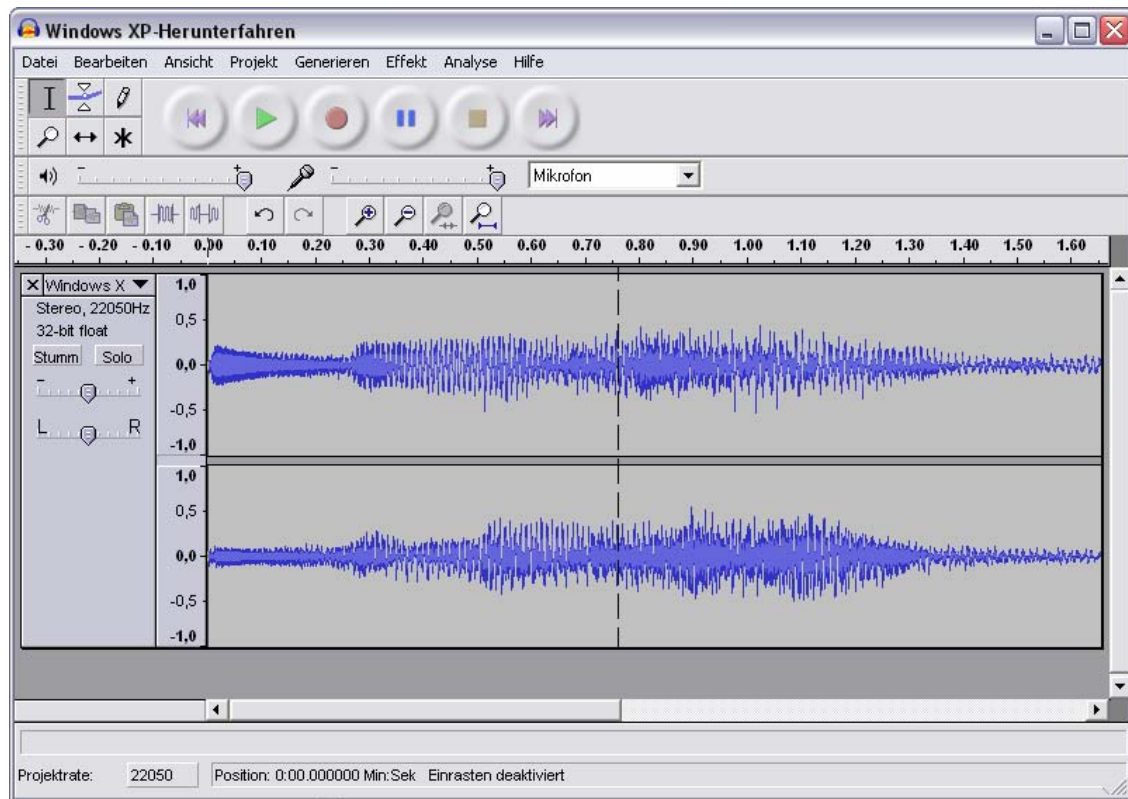


Figure 2: The user interface of audacity  
 For more information you can follow the link:  
<http://audacity.sourceforge.net/>

## 2. Communication Tools

Communication tools enable the technical aspects for a communication over distance.  
 Well known communication tools are:

### Microsoft Outlook Express

Features of Outlook Express (examples):

- E-Mail transfer
- Organization of Mails
- Organization of addresses

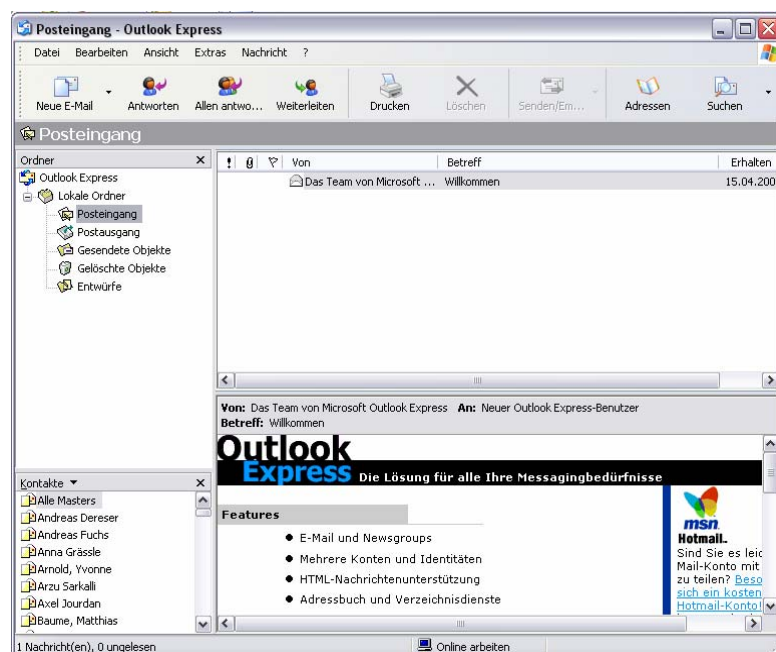


Figure 3: Microsoft Outlook Express is a very well known Communication Tool

Here you find more information about Outlook Express:  
<http://www.microsoft.com/windows/ie/enthusiast/videos/email.mspix>  
<http://www.insideoutlookexpress.com/>

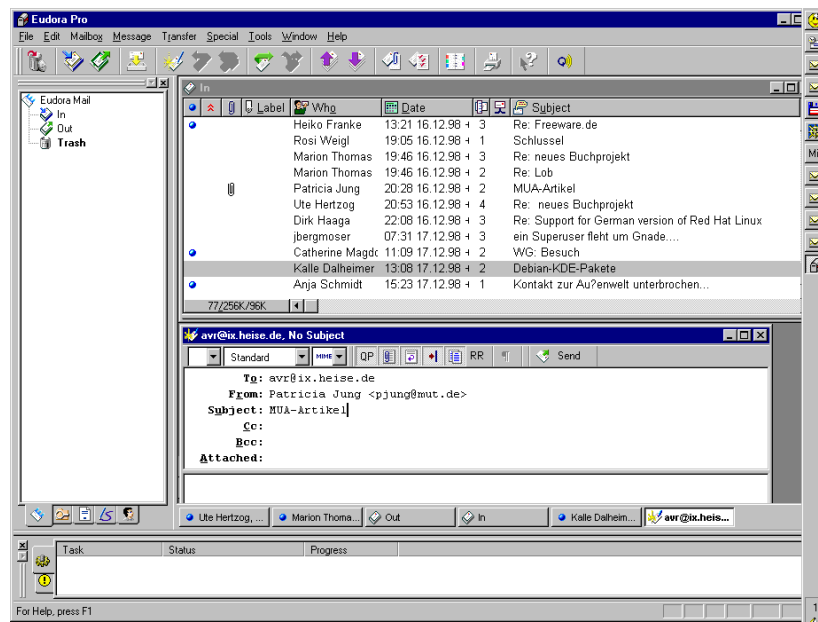


Figure 4: Eudora mail client  
(Image from <http://www.heise.de/ix/artikel/1999/02/070/04.shtml>)

### 3. Collaboration Tools

Compared to communication tools the main aspect of collaboration tools is the possibility to work together with others.

Examples for collaboration tools are:

#### Lotus Notes

Lotus Notes has the following features:

- E-Mail
- Calendar
- Database Connection
- Internet browser
- Organizer

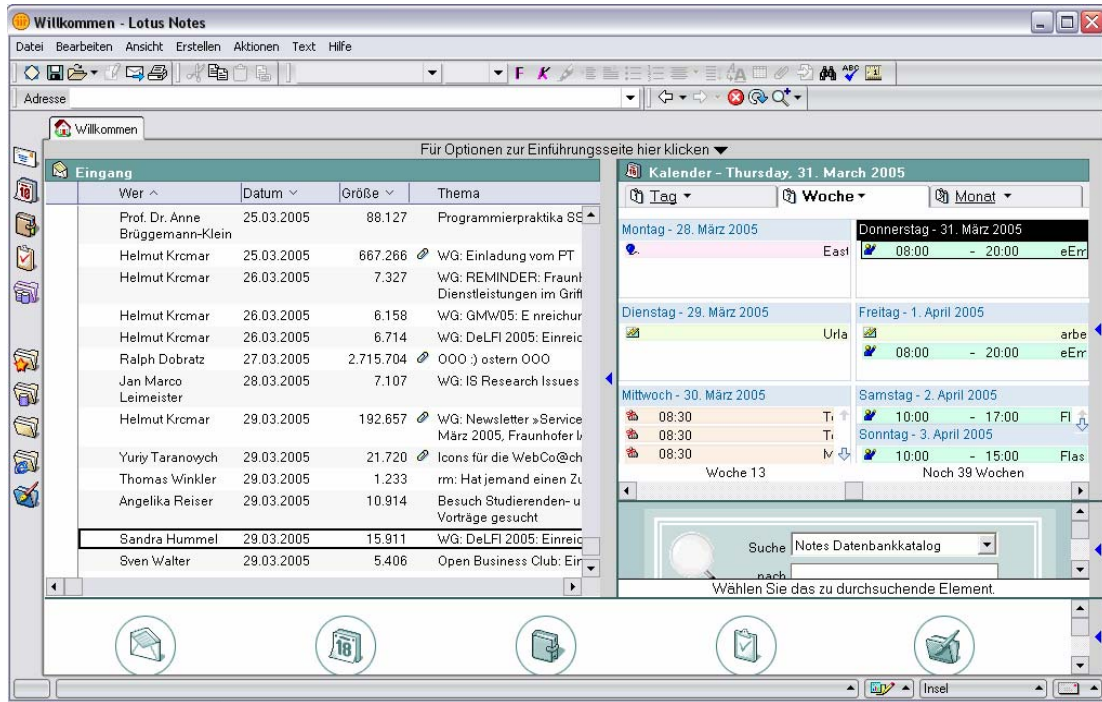


Figure 5: the user interface of Lotus Notes

For more information about Lotus Notes please follow the link:

<http://www-306.ibm.com/software/lotus/>

<http://domino.tipjunction.com/>

## 4. eLearning Technologies: Basics

eLearning Technology means the basic components of the technological environment a learner needs to undertake any eLearning initiative.

eLearning technologies can be

- organization's information technology (IT)
- eLearning infrastructure or
- collection of hardware, software and communication technology

The IT of an organization connects the whole enterprise and links with other infrastructures as well as the public internet. The basic eLearning technologies are – as you can see - technologies which enable eLearning scenarios from its technical basis.

Basic technologies are for example:

- Connection to the internet
- Server technologies
- Basic knowledge about the main parts of a computer

## 5. eLearning Systems and Platforms

The public internet allows sharing of information across organizations and the internet.

For the management of users and content different platforms are in use, e.g.:

- Learning Management System (LMS),
- Learning Content Management System (LCMS),
- Virtual Learning Environments (VLE),
- Managed Learning Environments (MLE)
- Other

### 5.1. Learning Management System (LMS)

A learning management system (LMS) is a software application or Web-based technology where you can plan, implement, and assess a specific learning process.

In the normal case, a learning management system consists of an instructor with a possibility to create and deliver content, monitor student participation, and assess student performance.

Moreover a learning management system often offers interactive features such as threaded discussions, video conferencing, and discussion forums. The Advanced Distance Learning group, sponsored by the United States Department of Defense, has created a set of specifications called Shareable Content Object Reference Model (SCORM) to encourage the standardization of learning management systems.

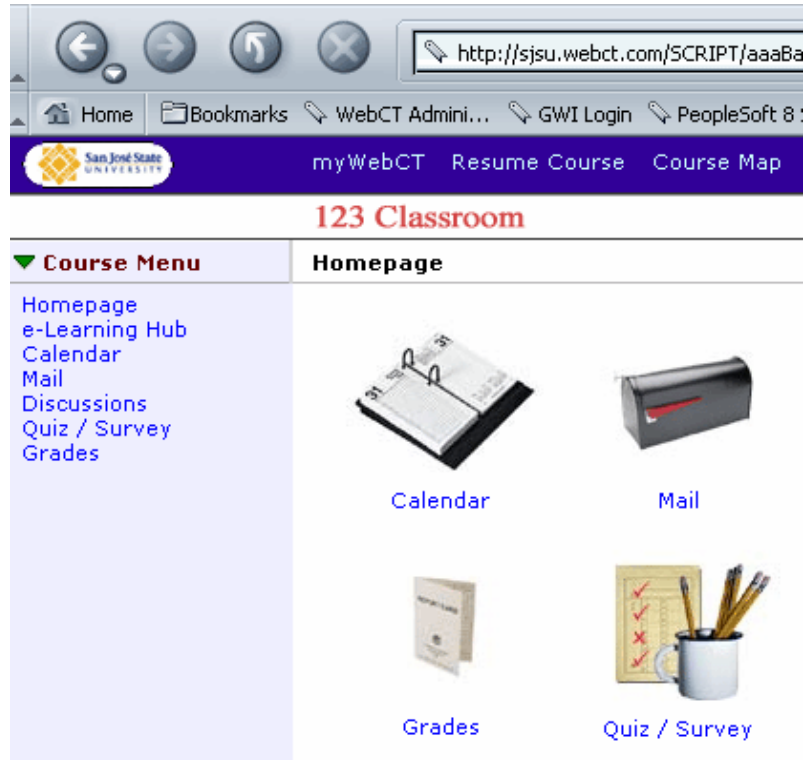


Figure 6: The Learning Management System WebCT with different navigations  
(Screenshot from <http://en.wikipedia.org/wiki/Image:Webct-screenshot.png>)



Figure 7: Moodle Learning Management System with a navigation system and online community building tools  
(Image from: [http://en.wikipedia.org/wiki/Image:Moodle\\_1.3\\_sample\\_course\\_screengrab.png](http://en.wikipedia.org/wiki/Image:Moodle_1.3_sample_course_screengrab.png))

More information about LMS:

[http://en.wikipedia.org/wiki/Managed\\_learning\\_environment](http://en.wikipedia.org/wiki/Managed_learning_environment)

## 5.2. Learning Content Management System (LCMS)

A Learning Content Management System can be defined as a system that is used to create, store, assemble, and deliver personalized eLearning content in the form of learning objects.

To achieve all these functions some LCMSs have unique features and functions e.g.:

- they integrate with other enterprise systems
- Customization of offerings for an enterprise's needs.

Every LCMS has a learning object repository, a central database, in which learning content is stored and managed.

An Automated Authoring Application can be used to create reusable learning objects that are accessible in the repository.



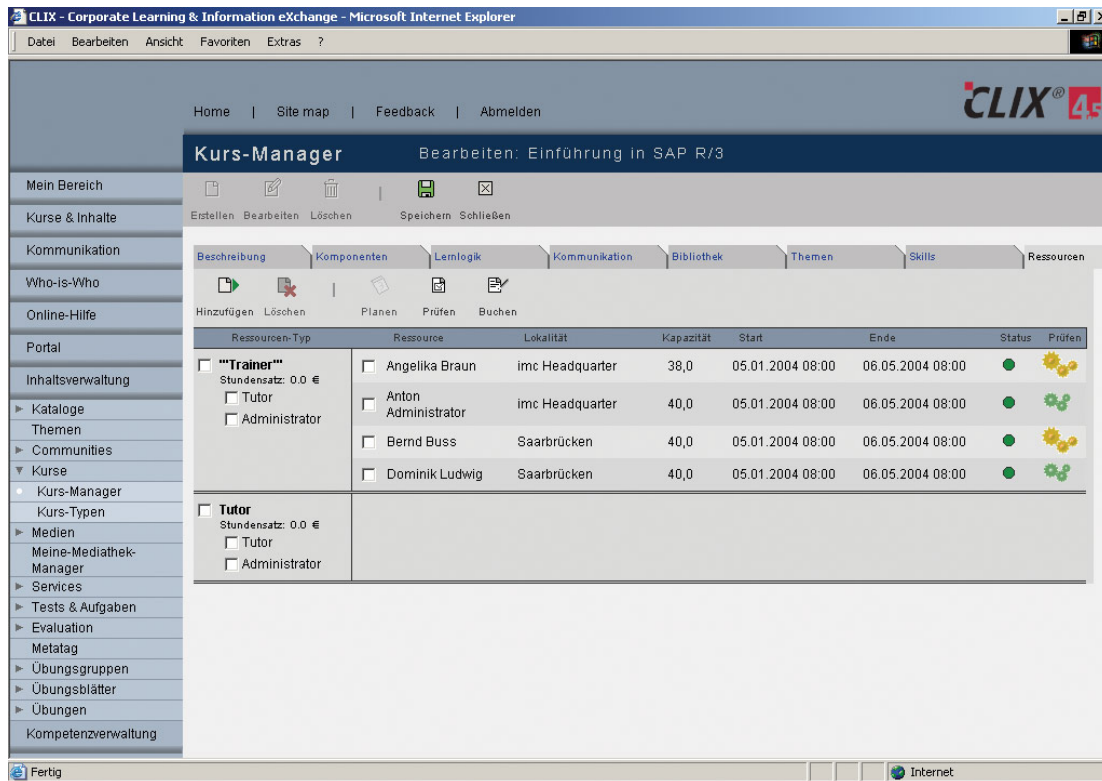


Figure 8: The eLearning Content Management System „Clix“ from IMC  
(Image from: <http://www.clix.de/>)

For more information about LCMS visit the link:

<http://www.trainingfoundation.com/tfimages/ftp/IDCLCMSWhitePaper.pdf>

### 5.5. Other systems for eLearning are e.g.:

- chat forums,
- expert-lead discussions,
- web seminars and
- virtual classrooms

Well known examples for eLearning platforms are:

- Docent
- Saba
- Ingenium (Click2learn)
- THINQ TrainingServer
- LearningSpace (Lotus)
- LEAP (Intellinex)
- LearnFrame

## Key Point Summary Conclusions and Recommendations

1. Media editors are tools to create and edit different types of media.
2. Typical types of media for eLearning are:
  - Text Documents
  - Graphics
  - Sound
  - Animation
  - Video
3. Communication tools enable the technical aspects for a communication over distance.
4. In comparison to communication tools the main aspect of collaboration tools is the possibility of working together with others.
5. eLearning Technology consists of the basic components of the technological environment a learner needs in order to undertake any eLearning initiative.
6. Well known examples for eLearning platforms are:
  - Docent



- Saba
- Ingenium (Click2learn)
- THINQ TrainingServer
- LearningSpace (Lotus)
- LEAP (Intellinex)
- LearnFrame

## Study Guide

### ESSENTIAL QUESTIONS FOR THE VERIFICATION OF THE ACCOMPLISHED KNOWLEDGE

1. Please name a few different types of media editors?
2. What are examples for Communication tools?
3. What are the differences between Communication and Collaboration tools?
4. Which basic eLearning technologies do you know?
5. What are typical eLearning Systems and Platforms?

### BIBLIOGRAPHY. REFERENCES.

- [1] **Paulsen, M. (2002):** Online Education Systems: Discussion and Definition of Terms.  
<http://www.nettskolen.com/forskning/Definition%20of%20Terms.pdf>
- [2] **Brennan, M., Funke S., Anderson, C.:** The Learning Content Management System  
<http://www.trainingfoundation.com/tfimages/ftp/IDCLCMSWhitePaper.pdf>
- [3] **Horton, W.; Horton, K. (2003):** ELearning tools and technologies : a consumer's guide for trainers, teachers, educators, and instructional designers, John Wiley & Sons, Hoboken, New Jersey 2003
- [4] **Horton, W.K. (2000):** Designing Web-based training: how to teach anyone anything anywhere anytime, Wiley, New York [u.a.] 2000
- [5] **Martin G., Jennings A. (2002):** eLearning Technology Evaluation Report,  
<http://www.elearningalliance.org/uploads/attachments/eLearning%20Technology%20Evaluation%20Report.pdf>

### SUPPLEMENTARY IMPORTANT BIBLIOGRAPHY. REFERENCES.

- [6] **Macromedia Fireworks:** <http://www.macromedia.com/software/fireworks/>
- [7] **Audacity:** <http://audacity.sourceforge.net/>
- [8] **Outlook Express:** <http://www.microsoft.com/windows/ie/enthusiast/videos/email.msp>
- [9] **Inside Outlook Express:** <http://www.insideoutlookexpress.com/>
- [10] **Eudora:** <http://www.heise.de/ix/artikel/1999/02/076/04.shtml>
- [11] **Lotus Notes:** <http://www-306.ibm.com/software/lotus/>
- [12] **Tipjunction:** <http://domino.tipjunction.com/>
- [13] **WebCT:** <http://en.wikipedia.org/wiki/Image:Webct-screenshot.png>
- [14] **Moodle:** [http://www.en.wikipedia.org/wiki/Image:Moodle\\_1.3\\_sample\\_course\\_screenshot.png](http://www.en.wikipedia.org/wiki/Image:Moodle_1.3_sample_course_screenshot.png)
- [15] **Learning Mangement Systems:** [http://en.wikipedia.org/wiki/Managed\\_learning\\_environment](http://en.wikipedia.org/wiki/Managed_learning_environment)
- [16] **Clix:** [www.clix.de](http://www.clix.de)
- [17] **Learning Content Management Systems:** <http://www.trainingfoundation.com/tfimages/ftp/IDCLCMSWhitePaper.pdf>

### RESPONSES TO THE QUESTIONS

1. Different types of media editors are e.g.:
  - Text editors
  - Graphic editors
  - Sound editors
2. Typical communication tools in the web are mail clients like:
  - Microsoft Outlook Express
  - Eudora
3. Communication tools enable the technical aspects for a communication over distance.  
The main aspect of collaboration tools is the possibility of working together with others.
4. eLearning technologies can be
  - organization's information technology (IT)
  - eLearning infrastructure or
  - collection of hardware, software and communications technology
5. Typical eLearning Systems:
  - Learning Management System (LMS)
  - Learning Content Management System (LCMS)
  - Virtual Learning Environments (VLE)
  - Managed Learning Environments (MLE)

Well known examples for eLearning platforms are:

  - Docent
  - Saba
  - Ingenium (Click2learn)
  - THINQ TrainingServer
  - LearningSpace (Lotus)
  - LEAP (Intellinex)
  - LearnFrame

