

# E-LEARNING IN HIGHER EDUCATION



## 4

### *Moving Towards or Tools and Technologies*

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- 4.1 e-Learning
- 4.2 Participants in e-Learning
- 4.3 Creating Sense of Presence in Virtual Learning Environment
- 4.4 Designing Tasks for e-Learning

# e-Learning in Higher Education

## MOVING TOWARDS OR TOOLS AND TECHNOLOGIES

Think about a face-to-face context.

- Describe teacher roles and explain why a teacher might take up these roles.
- List three considerations that are important when you are planning a course.
- What are the possible ways of building rapport in the classroom? Give reasons.
- What are some ways in which you can deal with a group of passive students?
- List three different ways in which you can get feedback from your students.

The university study expects students who are highly motivated, autonomous and ready to study individually. The issue of the students' abilities as well as their study skills and abilities have been discussed earlier (see e.g. Scharle, Szabó, 2000; Spratt, Humphreys, Chan, 2002; Straková, 2003; Sláviková, Tej, 2013).

Characterising students in higher education we may assume that they

- come from different locations
- might be of different age
- have different personal experience
- have different attitudes
- should be motivated (the decision to study at the university is voluntary)
- should have learning habits
- should know their learning style
- should be aware of learning strategies
- are digital natives.

Prensky (2010) states that "Today's students will not live in a world where things change relatively slowly (as many of us did) but rather in a future where things change extremely rapidly - daily and exponentially. So today's teachers need to be sure that, no matter what subject they are teaching, they are teaching it with that future in mind" (p.23).

Current changes of context, technologies, massification of higher education, globalisation, penetration of technologies into everyday life and education and their availability and accessibility has had an influence on the assumptions about learning.

Benson and Brack (2010) verbalised the transfer from old assumptions (applied in behaviourist approach) to new constructivist assumptions. Learning is from the constructivist viewpoint “conceptualised as an active process in which learners construct new ideas or concepts based upon their own knowledge, both old (from the past) and new. Learning is seen as occurring best when it is situated in authentic contexts. Hence, problem-based and case-based learning are founded on constructivist ideas” (ibid, p. 3).

Old assumptions	New assumptions
<ol style="list-style-type: none"> <li>1. People transfer learning with ease by learning abstract and decontextualised concepts.</li> <li>2. Learners are receivers of knowledge.</li> <li>3. Learning is behaviouristic and involves the strengthening of stimulus and response.</li> <li>4. Learners are blank slates ready to be filled with knowledge.</li> <li>5. Skills and knowledge are best acquired independent of context.</li> </ol>	<ol style="list-style-type: none"> <li>1. People transfer learning with difficulty needing both content and context learning.</li> <li>2. Learners are active constructors of knowledge.</li> <li>3. Learning is cognitive and in a constant state of growth and evolution.</li> <li>4. Learners bring their own needs and experiences to learning situations.</li> <li>5. Skills and knowledge are best acquired within realistic contexts.</li> <li>6. Assessment must take more realistic and holistic forms.</li> </ol>

TABLE 4.1 Old versus new assumptions (Source: Benson, Brack, 2010, p. 2)

Social constructivism emphasizes the collaborative nature of learning. It is a variety of cognitive constructivism. Generally, the philosophy of constructivism highlights and stresses the importance of social interaction in building (constructing) knowledge. Individual learning needs an independent autonomous learner who is ready to apply different learning strategies effectively; and individual learning is essential to develop teamwork skills.

It has been already mentioned that HE learners are digital natives who should be highly motivated, aware of learning strategies and autonomous learners. E-learning technologies and tools enable the designers to create the conditions for team learning as well as to create the realistic authentic conditions.

There is a lot of evidence of the impact of digital worlds on education. Bach, Haynes and Smith summarised them into seven areas in 2007 (see figure below) and these are still valid.

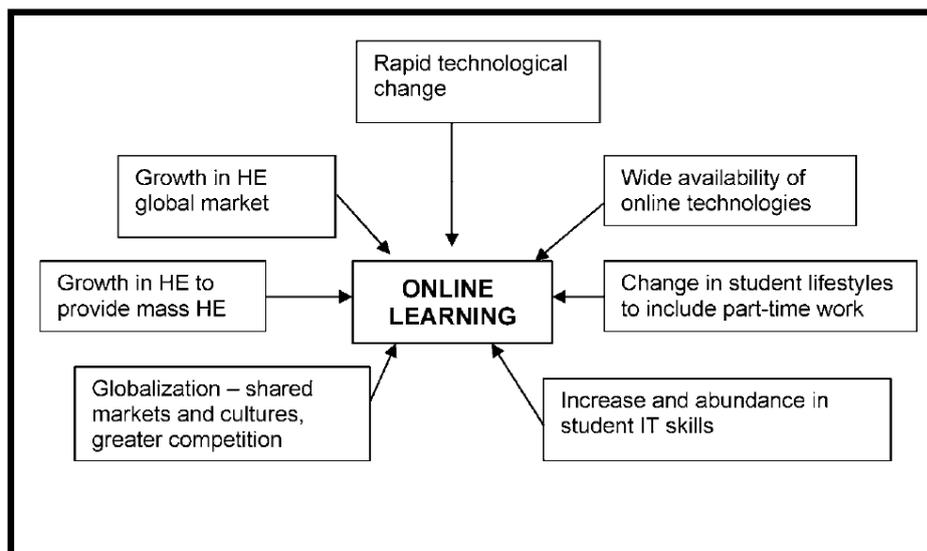


FIGURE 4.1 Drivers to online learning (Source: Bach, Haynes, Smith, 2007, p. 30)

IT (e.g. web apps, mobile apps) is developing at a rapid pace and in this chapter we do not intend to discuss its history. In this chapter we will define e-learning, participants in e-learning, tools that are available and also suggest the tools and methods how to create social interaction in virtual learning environment (VLE).

We will focus on the technologies applied by majority of the universities in Slovakia. Thus, the disk-oriented computer-based training tools are not presented (even though still used by many people) but rather web-oriented tools that are being used more and more frequently. Similarly only the web distribution of content will be described (even though there are still correspondence courses or multimedia distributed materials).

## 4.1 E-LEARNING

Ashburn and Floden (2006, p.28) claim that “new technologies can enhance meaningful learning in ways that are not possible with traditional educational tools. New technologies support interaction, dynamic displays, multiple and linked representations, interactive models and simulations, networked communication, hyperlinked text, multimedia, and the storage and retrieval of multiply categorized information”.

E-learning (electronic learning) is an umbrella term that refers to education mediated via digital medium, nowadays distributed via computers and mobiles over the Internet. E-learning is one type of distance learning where learners and tutors are usually geographically separated and it can occur in synchronous or asynchronous environment. The term online learning is used synonymously to describe type of learning accomplished on a computer and usually via Internet.

CMS – course management system is a software that provides a set of tools for creating a course content (lectures, assignments, tests, quizzes, etc.) in e-learning. What more, it enables the tutor to manage the class. Course management system systematically collects data and provides the statistics about the students’ activities.

When the course management systems and learning management systems started to be used these were most frequently used as a storage where teachers could place materials for the students, to post messages for the whole group, and to send emails to everyone in class or selected group.

Not rarely one can still enter the courses that are presented as e-learning, however it is the “printed” version of a textbook transferred to online text divided into the chapters. Limniou and Smith (2010) published the results of their research focusing on VLE that was realised at the University of Manchester and stated that most teachers/ tutors use VLE as a means for delivering learning material, announcements and assessments to students. They use it also for uploading learning material and they perceive VLE as a tool to overcome the difficulties of limited time.

Accepting the fact we live in dot-com era, that technology is omnipresent and that internet is a social space we should use its strengths and engage the learner in active and self-directed learning and at the same time realizing the power of collaborative work. This article presents several ways how to create a sense of presence in online teaching, and some possibilities how to build social interaction in an e-course.

Education cannot resist the current trends in technology and should introduce effective tools applying adequate techniques and methods. In e-learning we have different tools how to involve the student in learning and make him active (see also the text below, chapter 4.3).

## 4.2 PARTICIPANTS IN E-LEARNING

There are different participants with less or more cumulated roles in e-learning courses based on the possibilities of institutions and skills of the participants. The course starts much sooner than the first student enters the course.

Anderson et al. (2001, p. 5) claim that “Teaching presence begins before the course commences as the teacher, acting as instructional designer, plans and prepares the course of studies, and it continues during the course, as the instructor facilitates the discourse and provides direct instruction when required. Through adequate teaching presence, formal learning that facilitates personally relevant and educationally defined outcomes is achieved.” The content is usually written by the author (it might, but not necessarily must be a teacher). **Instructional/e-learning designer** develops the script (narration) based on the content. (This can vary from one organization to another as mentioned above). This might be the whole team that creates and designs not only the text but also interactions that should visualise the content in a way it is very clear and memorable. **Graphic designer, illustrator, animator and videographer** cooperate to create visual support, they create illustrations, animations, simulation videos to visualise the content and support visual learners. **Teacher** (also called instructor, tutor or trainer) manages the educational process, controls it, provides the learners with the feedback, stimulates and helps learners to overcome personal, educational and to certain extent also the technical barriers. Tutor/E-moderator is one of the key factors influencing the success of a course. Tutor helps course participants in the initial stages to get familiar with system, other participants. Tutor makes himself visible when needed, he is resource, guide and facilitator; he creates the opportunities for students to cooperate, he

suggests activities in a way that students can interact with materials, he makes learning autonomous and learner centred; he gives the feedback. He has to have social skills to be good at communicating with participants, challenging discussions and keeping students motivated as well as technical skills (at least basic skills in working within the system). Marc Prensky claims that most teachers nowadays are babyboomers (people born in the period of baby boom after the war; in the US 1946-1964, in Slovakia after the war and the second wave in 70ties). In some institutions the teams have their **managers** who manage the complete process and also lead the training groups as there might be more teachers and trainers in a course).

The courses are created to be used by **students**. Most university students can be (or are) labelled as the net generation. Don Tapscott describes them in his book *Grown up digital* (2009, pp. 3-6). In this book he also summarises the most frequently sounded concerns and criticisms about them, namely, e.g.:

- They are dumber than we were at their age.
- They're screenagers, net addicted, losing their social skills, and they have no time for sports or healthy activities.
- They have no shame (they post a lot of personal information (and not about themselves unaware of the possible consequences)).
- Because their parents have coddled them, they are adrift in the world and afraid to choose a path.
- They steal (violate intellectual property right, downloading books, music, video).
- They're bullying friends online.
- They have no work ethic and will be bad employees.

Even though it sounds really depressing the truth is not as pessimistic as it might seem from what has been mentioned above (the world is not only black and white). The author also highlights the differences between the net generation and "pre-net" generation. Being digital immigrant does not mean that people are totally "incompatible" with IT technologies. "They use their mobile phones differently. You talk on the phone and check your e-mail; to them, e-mail is old-school. They use the phone to text incessantly, surf the Web, find directions, take pictures and make videos, and collaborate. They seem to be on Facebook every chance they get, including at work. Instant messaging or Skype is always running in the background." (Tapscott, 2009, p. 9). They are very good at reading images, similarly as they are good at multitasking. Not rarely, they read a book, watch movie and at the same time they check the messenger to make sure there is not an unread message in their messenger. However, concerning their concentration span they are often said not to be able to concentrate. On contrary, "their attention spans are not short for games, for example, or for music, or rollerblading, or for spending time on the Internet, or anything else that actually interests them," Prensky (2001, p. 48) writes. "It isn't that they can't pay attention, they just choose not to." They are not dumber, they just behave and think differently.

Students come to the online class with different skills, abilities and experience. Teacher has to be very sensitive, especially at the beginning of the course. It is not easy to create positive learning atmosphere and help learners to meet deficiency needs (esteem,

friendship and love, security, and physical needs) defined in Maslow's hierarchy of needs.

Niall Watts (2010, 19.2) stresses that "online learning is not inherently social and works best with groups that already know each other". (The ways how to build community and groups are described in the chapter 4.3)

### 4.3 CREATING SENSE OF PRESENCE IN VIRTUAL LEARNING ENVIRONMENT

"The environment of a VLE can range from web sites to virtual classrooms to 3D immersive worlds. When considering websites, a set of web pages does not constitute a virtual learning environment unless there is social interaction about or around the information." (Dillenbourg, c.f. Barkand, Kush, 2009). Currently, when we talk about e-learning system we deal with the learning management system that enables us to manage and administer class virtually on-line.

The terms Virtual learning environment and Learning management system are frequently understood as synonyms. Pinner (2011, p. 6) draws the attention to the differences between the two and claims that "LMSs are being designed and implemented primarily for training and in-house staff development, rather than education". He (ibid.) defines VLE as an environment that can be "characterised by constructivist pedagogical principles and are often used as a place to collaborate and extend discussions rather than merely hosting trackable learning objects". He adds that "VLEs, being constructivist in their design, feature the ability to allow students to create their own materials, collaborate with others and generally take more ownership of the online content, which can help boost their autonomy and motivation" (Pinner 2011, p. 7). Dobozy and Reynolds (2010, p. 98) discuss the terminology and mention confusion concerning the use of terms such as LMS, LAMS and VLE. They understand LMS "as transactional platforms that are mainly used by lecturers as document depositories and for posting announcements or collecting (and marking) assignments". On the other hand, to define VLE they quote Weller who in most of his publication considers VLE and LMS to be synonymous. He defines VLE as "a software system that combines a number of different tools that are used to systematically deliver content online and facilitate the learning experience around that content" (Weller, 2007, p. 5).

O'Leary (2014, p. 5) presented and examined different ways and levels of using VLE ranging from simple uses of tools to support face-to-face courses through the entirely e-courses that use a wide variety of sophisticated tools to create environment for delivering content, creating space for interacting and administration of learning.



## SIMPLE

- posting course information and existing course materials
- including links to other online materials
- communication between students, lecturer and outside contributors
- providing a 'shell' for computer-based learning resources
- assessment – self-assessment and end-of-term exams
- integrating online activities, support and materials with lectures and seminars
- collaborative student projects
- delivering complete online courses with fully integrated activities, e.g. distance learning courses

TABLE 4.2 Ways and levels of using VLE

Stephen Downes (2012) makes the distinction between LMS (in his understanding VLE is a synonym) and personal learning environment and explains that LMS is centralised repository of content and services. Individual learners access the LMS and obtain the content in one place. They can also perform activities on LMS including having discussions, conference or live synchronous conferences. The personal learning environment (PLE) in contrast places not the place to the centre, but rather a learner, individual who is in a centre and he/she accesses things like LMS, ibooks, google docs, which makes PLE decentralised. In formal education mostly VLEs are used (using naturally the external sources as well) but the added value is the possibility of challenging collaborative learning, belonging to the group and possibility to find the answers and solutions within the group and in VLE. This, however, must be planned ahead before the course realisation and what more “to create presence in the online environment, we need to think, feel, and behave differently than we do in the face - to - face environment because we have to make an effort to be aware of the intentions of others and their thoughts, emotions, and behaviors when they are connected to us via technology” (Lehman, Conceição, 2010, p. 2).

One of the main steps in creating effective course is a creation of an online community. The key “factor” affecting learning are learners themselves. Rogers (in Weller, 2007, p. 11) suggests five categories of attitude towards innovation, which are now part of common parlance:

1. Innovators;
2. Early adopters;
3. Early majority;
4. Late majority; and
5. Laggards.

Conrad and Donaldson (2004) categorised phases of engagement in e-course and named 4 phases in which learner's and teacher's roles differ. In the first phase when a learner is the role of newcomer teacher usually provides "socialising activities", helps learners to know each other and helps them to get oriented in a VLE and course itself (ice-breakers, (threaded) discussions about community issues. Palloff and Pratt (2007, In Lehman, Conceição, 2010, p. 8) "consider social presence to be a critical element in online community building. They say that in online environments there is a greater chance for learners to feel isolated because of a sense of loss of contact and connection with others. Social presence gives learners a feeling of connecting and belonging to a community".

When a learner feels more secure in an environment (technology and group) his role or position shifts to co-operator. In this phase teacher may provide activities focused on critical review, expressing opinions, reflections and sharing ideas. In the third phase the shift of the teacher's role is evident. While teacher in the first phase is manager and social negotiator in the third phase he moves from the central position and becomes facilitator rather than controller. The activities require small groups to collaborate, problem solving is a possibility how to make activities more authentic and real-like. The last phase moves a learner to the position of a partner and initiator and it is a learner who is active and initiates the discussions.

What we need to realise is that the cooperation and interaction is not natural to majority of learners in Slovakia. We instinctively work individually not relying on others and thus students may not feel comfortable in a group work and they prefer lurking rather than active engagement, i.e. teacher needs to learn a lot about his learner and especially well-managed activities and tasks in the first phase may help him/her to find out more about their learning styles, approaches to learning, educational background and intelligence types.

Watts (2010) defined three main types of interaction in an online distance learning course:

- learner-to-content interaction
- learner-to-learner interaction
- learner-to-instructor interaction.

Chickering and Gamson (1987) illustrate the importance of interaction in learning and postulated seven principles for good practice in undergraduate education, out of which five are directly connected to interaction:

- encourages student-faculty contact (learner-to-instructor interaction)
- encourages cooperation (learner-to-learner interaction, learner-to-instructor interaction)
- encourages active learning
- gives prompt feedback (learner-to-content interaction)
- emphasizes time on task (learner-to-content interaction)
- communicates high expectations (learner-to-instructor interaction, learner-to-learner interaction)
- respects diverse talents and ways of learning

We have already mentioned **(threaded) discussion** as a tool that might be used to help learners and teachers to get to know each other. In one way learners work individually and they may react to each other. Their presence in a discussion is “voluntary” even though teacher tries to make learners take even participation. The teacher monitors the discussion, stimulates it and navigates it to make sure the discussion fulfils its aim.

**Wiki** is another asynchronous tool that is frequently used in e-courses. Compared to the threaded discussion it requires cooperation and the result can be based on mutual work. Wiki is a collaborative writing tool which helps learners to give them a feeling of belonging to a group. Wiki is a shared space (simply said a document) where all participants can write and edit at the same time and thus to create one document. Some LMSs have in-built wiki-space, but there are wikis available online that might be used as external service. West and West (2009) bring criteria or question that teachers should consider when selecting the right wiki service and they mention – key features, e.g. number of users, ability to create separate groups, pages security, amount of administrative control; ease of use – skills learners need to navigate the web; cost – presence of adverts on web; support – availability of technical support, server space etc.

Wikis are usually integrated tools in LMS. In case teacher decides, one may also use for example google drive or tools in outlook for sharing document and collaborative work. Using the LMS tool is again advantage as it means there is no need for further registration (to have a Gmail account).

Wiki is an online open environment that anyone (allowed, approved) can edit. It can be used to solve or do e.g. grammar tasks, creative writing, poem writing, academic writing, writing reviews, etc. Wikipedia is probably the most known wiki and it is not accepted by many teachers as a credible source.

Tips for using **wiki**:

- Choose a collaboration tool that most suits your needs.
- Set clear goals and inform the students.
- Use tasks that require collaboration, this fosters and supports communication and helps to create a group and build classroom atmosphere.

Even though the major advantage of e-learning is that it is built predominantly as asynchronous model of education and participants do not need to be at the same place at the same time (and we use asynchronous tools) it still offers capacities and tools for synchronous online chats or discussion. Pair work or group work are interaction patterns where students need to collaborate and they often intuitively switch to synchronous communication (e.g. using skype – group call or chat or hangouts google). Bender (2010, p.130) suggests several types of synchronous online conversations, namely role-playing in synchronous time, virtual office hours, online guest lecturer, demonstration of a web site and community building. As online conversation lacks visual stimuli like mimics and gestures it is necessary to set the rules for communication, especially how to enter discussion, how to react to a particular person and how useful it is to express emotions (either using emoticons or expressing feelings in e.g. brackets).

Salmon (2002, p. 11) introduced **Model of teaching and learning online through online networking** (see figure 4.2) that discusses the stages of the course realisation focusing on the role of course-moderator. He divides the course into five stages. The purpose of the first stage (Access and motivation) according to Salmon (2003, p.30) “is to expose participants to the platform (not train them), and to enable them to become successful in using technology and see the benefits.” Salmon suggests participants should relate to a small number of other individuals (four or five). Students can e.g. write short emails about themselves introducing themselves, they can mention the motivation for registering for the course, some information about their hobbies or about the book they have read. It is important to offer them support in case of various problems. Many courses offer, e.g. different Technical and Social forums but as personal touch is important also e-mail contacts are useful.

Second stage (Socialisation) aims at building trust, “we try to address with the critical issues of participation, emotions and time throughout the e-tivities“. It is also the stage where we present the principles for online work and communication. Salmon stresses that E-moderators must „use their skills to ensure that participants develop a sense of community in the medium“. At stage 3 (information Exchange) „we first introduce the idea of using resources outside the e-tivity interchanges themselves“. Knowledge construction is stage number 4 that “includes a guide to online discussion, opening a topic, seeking information, building knowledge and closing down a topic.” The last, 5th stage is named Development. “provide closing e-tivities. These include a final ‘footprint’ and a relaxed ‘cyberbar’ area for saying goodbye and making arrangements to stay in touch“.

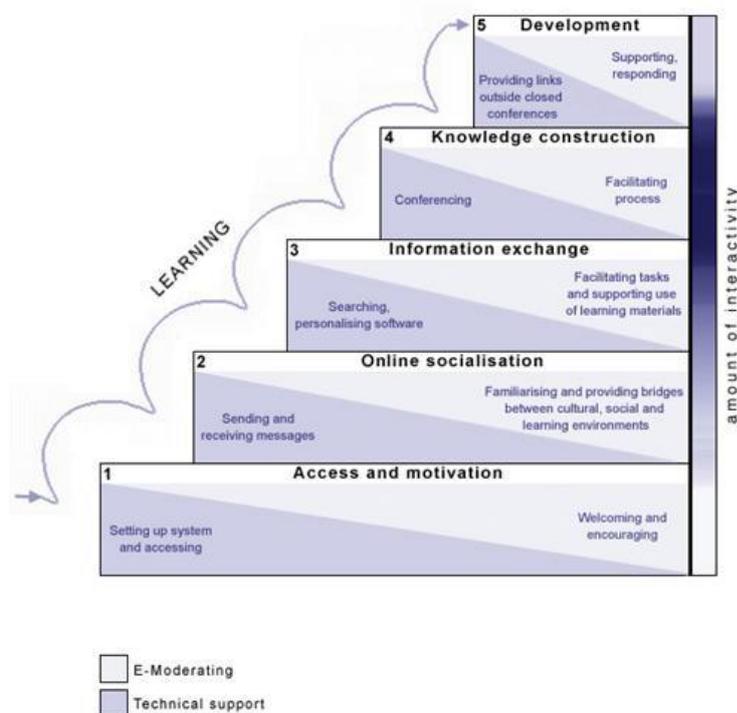


FIGURE 4.2 Model of teaching and learning online through online networking (Salmon, 2003)

While Salmon divides the course from the moderator's perspective, Mark Lange (in Schone, 2007) defines the stages (he uses the term level) focussing on learner experience:

- Level 1 – Passive – The learner acts merely as a receiver of information. The learner may read text on the screen as well as graphics, charts and illustrations and navigate back and forth.
- Level 2 – Limited Interaction – The learner makes simple responses to instructional cues – such as scenario-based multiple choice and column matching.
- Level 3 – Complex Instruction – The learner makes multiple and varied responses to cues. As well as multiple choice quizzes (Level 2) the learner may be required to type into text boxes and manipulate graphic objects to test the assessment of the information presented. Scenario-based branching, where the progress through the information is based upon answers and decisions input by the learner, can be used.
- Level 4 – Real-time Interaction – The training session involves a life-like set of complex cues and responses. The learner is engaged in a simulation that exactly mirrors the work situation. Stimuli and response are coordinated to the actual environment. Sessions are most likely held in a collaborative environment with other learners and a facilitator.

As it can be seen there is a clear interconnection between the Salmon's and Lange's stages and both authors lead participants starting in an unknown environment to fulfil students need (especially feeling of love and belonging, acceptance in group, self-esteem, need for self-respect, the need competence, mastery, and self-actualisation).

Kristiina Kumpulainen and David Wray (2002) open their book *Classroom Interactions and Social learning* by stating that "contemporary classroom presents a wealth of opportunities for social interaction amongst pupils, and this has led to an increased interest by teacher and researchers in the social nature of learning". Social and emotional skills are usually developed in virtual learning environment. Chickering and Gamson (1987) illustrate the importance of interaction in learning and postulated seven principles for good practice in undergraduate education, out of which five are directly connected to interaction:

- encourages student-faculty contact (learner-to-instructor interaction),
- encourages cooperation (learner-to-learner interaction, learner-to-instructor interaction),
- encourages active learning,
- gives prompt feedback (learner-to-content interaction),
- emphasizes time on task (learner-to-content interaction),
- communicates high expectations (learner-to-instructor interaction, learner-to-learner interaction),
- respects diverse talents and ways of learning.

We have mentioned the importance of interaction in the e-courses. It is obviously clear that the interaction learner-to-instructor (instructor-to-learners) can be managed by the tutor of the course. Writing private messages increased of group mails, using names, empathy, noticing changes etc. are small steps to building confidence between a teacher

and students. Expressing emotions is accepted in traditional f2f classes. In the e-course teachers can use emoticons to express their feeling (e.g. 😊 happy, :O surprised ...), still they have to be very careful when it is appropriate (see above).

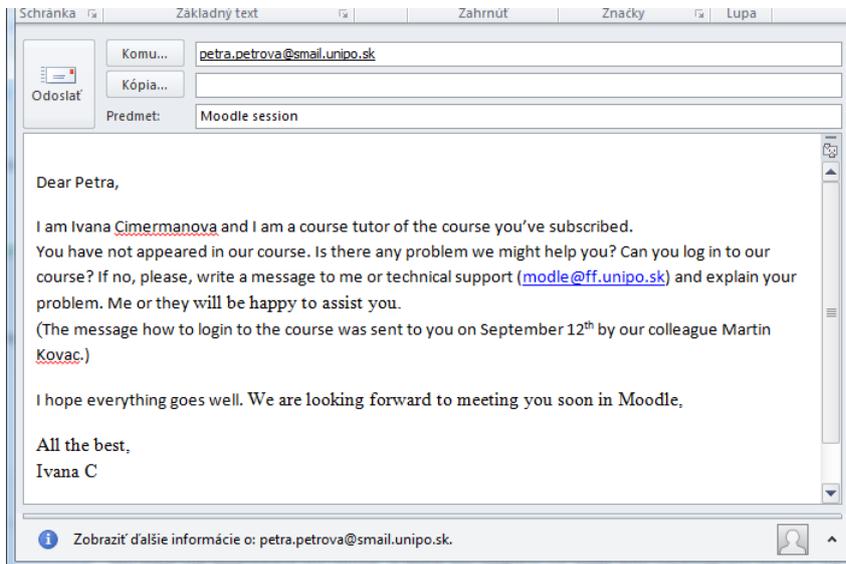


FIGURE 4.3 Simple interaction teacher-to-learner

The teacher is also the material creator, designer and he has to realise who his readers are and what are the conditions they will have for reading. Teacher has to prepare material in a way it partly substitutes him. The lesson should start with stating the aims, lesson objectives. This is very important to force and support student's self-evaluation and setting their personal goals. It can be presented as a statement, but also as a list of bullet text (we may even add the column for ticks and cross or yes/no notes). In case the majority of your students are visual learners you may consider adding or substituting the text by pictures (see e.g. William Horton Consulting, 2003). It is important to include and present the content of the lesson to enable better planning of student's learning as well as for better orientation in the course. One may consider starting with pre-test, or "to think" questions and issues that motivate the student, activate the prior knowledge, relevant background knowledge (see fig. 4.4).

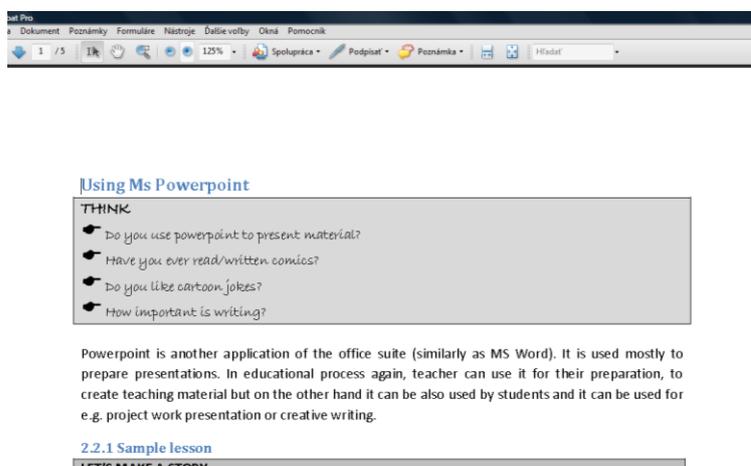


FIGURE 4.4 Sample of the study material

The courses usually have the material for reading – like lectures, or book, journals, articles references and they also include some practice and test or assignment session. Concerning language practice it is possible to create different activities using various tools that are user-friendly and many of them are open sources. The advantage of those activities is they provide immediate (extrinsic) feedback (see fig. 4.5 Activity prepared in Hot Potatoes that is fully compatible with LMS Moodle).

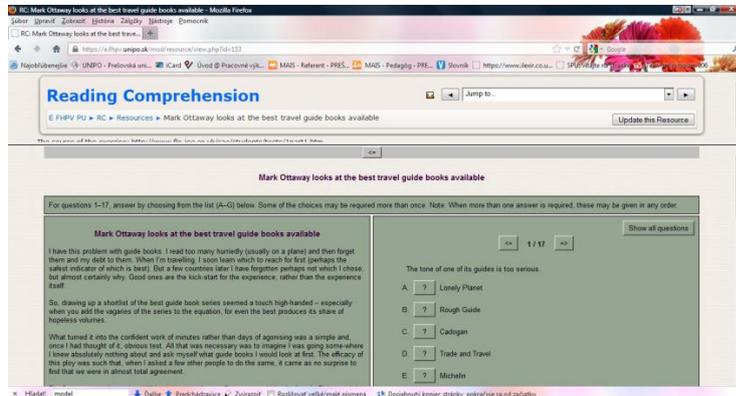


FIGURE 4.5 Sample of the HotPotatoes activity

It is again the teacher who has the role of organiser or manager who manages pair work or group work, sets the problem tasks and (re)groups participants to make them to interact, to build a group community.

Watts (2010) postulated the following benefits incorporating interaction into courses:

- Interaction builds a sense of community among the students, which leads to student satisfaction, retention, and increased learning (Brown, 2001).
- Interaction provides students with the feedback they need to determine if they are mastering the content in your course.
- Interaction exposes students to a variety of learning resources, including content materials and experiences and knowledge shared by other students.

Interactions in the classroom should make students become more actively engaged in the learning process, leading to higher levels of learning. All types of interactions mentioned in the article should help learner to feel safe, accepted, able to work and progress. Course designer and tutor are responsible for planning interactions and their realization. The tutor should be a really good manager to make learning learner-centered and not teacher-centered or material-centered. It is a difficult work, however it forces learner not only to memorise but also to deduce, analyse, synthesize, not to rely on their own something or themselves but also to cooperate, which helps them to develop social and life skills and prepares them for life.

It has been already mentioned how important it is to create positive, stimulating and friendly atmosphere. Based on the aims it is equally important to select the best tools to reach the aims. Collaboration tools link participants synchronously (all participants must be online at the same time; e.g. chats, videoconferences) or asynchronously (students post and reach information at a time convenient to them; e.g. emails, (threaded) discussions). In the next part we provide advice on what to consider in the process of

selecting the appropriate tools or how to manage the transfer from in-class teaching to on-line teaching.

#### Tips for **email management**:

- Can you use closed e-mail system? If yes, do so. Dozens of e-mails mixed with your personal or business e-mail might be difficult to organise.
- Create multiple folders to organise received mails (it makes searching for past emails easier).
- If it is possible to set the automatic routing of the messages, do so (establish *Rules*).
- Agree on *subject* and force senders to use it. This helps to organise messages.
- Use flags and markers to indicate e.g. its urgency or topic.
- Mark messages as *unread* in case you have not read them and they were automatically marked as read e.g. by hovering over the message, or clicking opening, but not reading a message.
- In case of need, do respond to indicate the message was delivered. It might be a very short answer.
- To (recipients) and CC (carbon copy) are two different items with different meaning. You usually expect recipient to answer the message however the person in CC is to be informed only.
- Archive messages after the end of the course.

#### Tips for **online discussions**:

- Engage students by good, interesting topic. If needed – provoke them.
- State dates of the discussion (beginning and the end).
- Be a model to your students.
- Be visible in a discussion.
- Manage / Intervene discussion, in case of distracting or antisocial comments are posted, try to move the discussion back to the topic.
- Encourage students not to copy the theory only but to support their ideas by samples, e.g. their personal experience.
- In case of need force students to contribute and to react to others' posts by some stimuli (especially at the beginning of a course). Lurking can be accepted, however if you want to create a cooperative and collaborative /shared learning environment students should contribute.
- Respect different opinions.
- To facilitate discussion you should provide the rules – netiquette that you expect
- In case of evaluated discussion, make sure students are aware of criteria.

#### Tips for **chat management**:

- Think carefully about the software you plan to use (some LMS have an integrated chat what is an advantage – no need to install it, no need of new sign-ups of students, etc.)
- Do not browse during chat process. Multitasking is typical for net generation but during the chat you should fully concentrate on chat.

- Set the rules of communication (how to take part in conversation, how to write long utterances, how to react).

#### 4.4 DESIGNING TASKS IN E-LEARNING

Clark and Mayer (2011, pp. 35-36) discuss the principles and processes of learning and they claim that the “knowledge construction view is based on three principles from research in cognitive science:

- *Dual channels* - people have separate channels for processing visual/pictorial material and auditory/verbal material;
- *Limited capacity* - people can actively process only a few pieces of information in each channel at one time; and
- *Active processing* - learning occurs when people engage in appropriate cognitive processing during learning, such as attending to relevant material, organizing the material into a coherent structure, and integrating it with what they already know.“

The e-course authors have to realise no matter the methods, approaches, forms and tools they use there are the principles of teaching they have to apply. Woolf (2009, p. 36) stresses that concerning e-learning “students need to be involved, engaged, and active in authentic and challenging learning. Learning is most effective when students are motivated to learn. Page turning, flashy graphics, and simulations are not enough; the experience must be authentic and relevant”. Activisation (and actualisation) of learner is very important. Reading of the text might present passive learning. Even the animations, videos and other multimedia content does not mean immediately active learning. Exercise should involve students and force them to apply the theoretical knowledge, prior experience.

The authors of the website SmartBuilder (Strategic Technology Solutions dba SmartBuilder, 2016) point out 5 design techniques that help to make e-learning effective, namely

- *Learner-Centric Design – creating a course starts with question what students should be able to do /know by the end of the course and all activities should correspond to this aim, should lead to reaching the aim. To support learner’s ability to recall and apply knowledge it is recommended to use a realistic context*
- *Intrinsic Feedback – comes from the performer, “comes from within; proprioceptors and kinaesthesia, concerning the feel of the movement, for example the feeling of the balance during a handstand and is important especially for autonomous learners who want to know what should be corrected and improved” (Sharpe, 2013). Intrinsic feedback „shows learners how they are performing based on real-world measures such as sales won, or customer satisfaction” (Strategic Technology Solutions dba SmartBuilder, 2016). In e-learning the feedback is often given immediately, in case the computer can evaluate the activity. This extrinsic feedback can have various forms – it can be verbal – that’s correct, No, try to consider.... Clark and Mayer (2011) discusses the importance of intrinsic feedback especially in the scenario-based e-learning (problem-based e-learning).*

- Delayed Feedback – *it is suggested not to always provide immediate feedback for each response but rather to encourage learners to reflect on their choices and responses, ask them to justify why they have decided to react like that, what are their arguments and only then to react*
- Case Studies and Branching Scenarios – *the case format allows students to see an issue from different perspectives what helps to develop decision making skills and also encourages creativity; branching helps learners to understand and analyse the consequences of their decisions*
- Motivation – *can be enhanced by e.g. linking the course content to real life, introducing content using fun, stories, etc., creating cooperating group e.g. by different discussion forums).*

## CONCLUSION

It has been already said that IT is developing at a rapid pace. In fact it is very relative. One may state that changes take place slowly. However we may predict what we might expect in near future.

- Internet will be accessible at most places (open wi-fi networks are reality of majority of hotels, trains, busses, city centres, restaurants, etc.).
- More and more information (not only new) will be provided in digital form (publications nowadays are usually published as printed and/or e-publications (not only it is less expensive, more ecological, it is also very important as it is more accessible; a lot of articles are now published on an open access basis).
- Clouds will be used more than USB especially for personal need.
- Authoring tool will be developed to enhance mobile learning and to simplify its development.

Speaking today about tomorrow might be difficult, however there is a possibility to use what is available today and what the net generation is natural.

## QUESTIONS

1. Think about an e-learning context.

- Describe teacher roles and explain why a teacher might take up these roles.
- List three considerations that are important when you are planning a course.
- What are the possible ways of building rapport in the classroom? Give reasons.
- What are some ways in which you can deal with a group of passive students?
- List three different ways in which you can get feedback from your students.

2. Think about the possible risks threats in e-learning. What are the benefits of e-learning?

3. What are the tools for building interactions?

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