USING INFORMATION AND COMMMUNICATION TECHNOLOGIES IN HUNGARIAN TEACHER TRAINING COURSES: THE ROLE OF THE FACILITATOR

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Abstract

This dissertation aims to explore the roles of facilitators in online teacher training courses. Data were collected from three e-learning courses delivered in Hungary to adult learners of English as a Foreign Language and ICT methodology. Quantitative data on facilitator behaviour were obtained using data mining techniques, and qualitative data were collected using interviews with the 28 facilitators in the courses. A mixed method analysis of data was implemented in the study. The quantitative data analysis was used to observe the patterns of online presence of facilitators, whereas the qualitative data were analysed using the constant comparative method. The results show that facilitators have a positive impact on participants' motivation, progress and achievements in the online setting. Contradictory findings are reported in relation with the roles facilitators play in face-to-face meetings with the participants in online courses. Due to the conflicting interests of course providers, learners, and facilitators, alternative views were identified on the role of meetings. Facilitators reported their strong belief that groups can empower individual learners and can enhance the results achieved in online instruction. The analysis of the data suggests that groups are not static during the online courses, but constantly develop. Group development, however, is more complex and less predictable than suggested by the models of Salmon (2000) and Moulen (2007). The course participants and facilitators in the three courses used both synchronous and asynchronous ways of communication. The communication patterns in the courses were evaluated as being useful mostly both by the learners and the facilitators. Evaluation and feedback techniques varied in the three courses, but were considered to be compulsory elements of online courses as well. It is suggested that new types of test taking methods should be applied in online courses that match the methodology of the courses. Finally, the necessity of special training for online instructors was proposed.

Key words: *e-learning, teacher training, facilitator*

TABLE OF CONTENTS

List of figures

List of tables

Abbreviations

The following abbreviations are used in this thesis:

CEF: Common European Framework of Reference

EFL: English as a Foreign Language

EPICT: European Pedagogical Information and Communication Technology
Licence

F2F: face-to-face

ICT: Information and Communication Technology

ISZE: Association of Teachers of Information Technology

IT: Information Technology

KSzK: Government Centre for Public Administration and Human Resource
Services

LMS: Learning Management System

1. Introduction

This thesis is concerned with the roles and tasks of teachers in an e-learning context, who are generally referred to as facilitators, e-moderators, or mentors. The definitions and the different factors influencing the attributes of online course are discussed in the thesis. The particular concern of the work was to establish the roles of facilitators in the design and implementation of e-learning courses for adult learners.

In this Chapter the overview of the research problem is offered. This research is justified by the need for a better understanding of the different roles facilitators undertake in e-learning courses, and by the current lack of a general agreement on the specific facilitator roles regarding the individual online learners; the group dynamical characteristics of online courses; the role of facilitators in face-to-face meetings with the course participants; the roles in the online interactions; roles in connection with the feedback and evaluation techniques, and finally, on the structure of facilitator courses. This chapter is concluded by presenting the structure of the thesis using chapter headings and summaries.

1.1. Research problem overview

In order to contextualize this study, a brief overview of the developments in the area of e-learning is provided.

1.1.1. Technological advances

In the past decades, significant changes have occurred in online learning. As opposed to traditional distance learning that characterized the 1960ies (Kovács, 2007) where the learning material was delivered to the learner via regular mail but the system of the training otherwise was very similar to face-to-face teaching, with the advancement of Information and Communication Technologies (ICT), e-learning is becoming a widespread form of education. The concept of learning has changed, and with this change, the roles of participants in the educational process also need to be redefined: there is a considerable difference in the role and activity of the learner who can access the information easily, and consequently, the teacher is not the sole owner of information any more. Education has shifted towards offering an environment for the learners where they have the opportunity to engage in learning activities that drive them towards their individual goals.

The new teaching paradigm differs from the traditional in several basic elements. Learning, as opposed to teaching, is more emphasized, thus changing the role of both the learners and the teachers in the process. The learner becomes the central element of education (Anderson, 2004), the learner's needs and individual characteristics are taken into consideration during teaching. Learning is becoming more personalized, and ICT tools are often applied to achieve the goals. Learners have to adjust to their new roles; they have to learn how they can benefit best from the opportunities brought to them with the help of technology.

Some of the traditional roles of the teacher in e-learning courses are taken over by technology, as a result of the basic difference from traditional courses, namely that the teacher in this environment does not convey information (Csoma, 2007). It is important, however, that the teacher-facilitators had a solid

knowledge of the subject of the course, the technicalities of the learning management system, and they were familiar with the ways they should behave in the online environment. Facilitators should also be prepared to foster the autonomous learning skills of participants, and provide fast feedback on the individual achievements of learners.

Traditional learner-teacher relationships need to change under the new circumstances. Some of the connections between learners and teacher can be transported to the virtual learning space, or become part of the learning material. Others, however, are needed to be redefined and the new pragmatic rules of communication between participants need to be established. A number of these rules are laid down as Netiquette rules, the word coming from the combination of Net and Etiquette. These rules offer guidance to the most common patterns of online behaviour, but in a working relationship between learners and facilitators in an online course these rules need to be modified according to the participants' needs.

The new aspects of learner roles have an effect the characteristics of the learning material as well. On one hand, individualized learning material will be available in the courses to meet the expectations of the learners at all levels. Another difference between the traditional and the e-learning material is its modality. As opposed to the linear nature of traditional learning materials, in an e-learning environment the learner is faced with an integration of textual, visual, and audio-visual materials, which allow the learner to choose their own learning path.

Teachers need to be familiar with the new learning process, and need both pre-service and in-service training opportunities to cope with the new

expectations (Kovács, 2007). Although the methodology of online instruction is not typically part of language teacher pre-service courses, a number of in-service ICT-related teacher training courses are offered worldwide (eg. The Consultants-E's e-moderation course, the British Council's e-moderator course, or the EPICT course), and in Hungary as well (eg. Sulinet in-service teacher training courses). As most of these courses are available in an e-learning form, the place of instruction does not influence its availability for those interested.

1.1.2.   The need for longitudinal research

In spite of the fact that activity logs are frequently mentioned as a resource for the observation of online behavior (Hung & Zhang, 2008), few applied linguistics studies have been focusing on longitudinal research of e-learning (Dörnyei, 2007). There is a more general focus in research on the outcomes of e-learning courses, on the course materials, or on the learning management systems, but there is a strong need for studies that investigate the behaviour and online presence of all participants of online learning.

Another important motivation for longitudinal research design is the tendency that the use of information and communication technologies by teachers in Hungary is typically analyzed in large-scale quantitative studies (Fehér, 2004; Kárpáti, 2004; Tót, 2004; Török, 2007) that aim at a general overview of trends that characterize the use of ICT in education. However, there is a need for a more in-depth understanding of facilitator roles and their development during e-learning courses.

1.1.3. Definitions

Learning is an active process where both learners and teachers need to participate through on-going discussions and interaction "through which the process of knowledge acquisition is collaboratively created" (Palloff & Pratt, 2007, p. 5). *E-learning* is where technology is used as a tool of instruction, creating the learning environment; and where learning is achieved through a series of interactions between the participants and the learning materials. Commonly used terms include e-learning, Internet learning, distributed learning, networked learning (Anderson, 2002), meaning "that the learner is at a distance from the tutor or instructor, that the learner uses some form of technology (usually a computer) to access the learning materials, that the learner uses technology to interact with the tutor or instructor or other learners, and that some form of support is provided to learners" (Anderson & Elloumi, 2002, p.36). E-learning is "the use of the Internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience" (p. 37). Dudeney and Hockly (2007) add that e-learning also refers to using portable devices like mobile phones and MP3 players for education (p.136).

E-learning is frequently associated with distance learning, online learning and blended learning (Kovács, 2007), and the use of these terms is rather confusing. Distance learning was originally defined as paper-based courses where learners received and sent learning materials and task via regular mail. Distance learning is also used for delivering learning materials using technology, for example e-mail, DVDs, or the Internet. Online learning is a sub-

branch of e-learning when any learning, interaction, feedback and evaluation take place on the Internet.

In contrast, blended learning is a method of teaching that combines face-to-face instruction with online elements. This method is often used in tertiary education when students and instructors meet once a week but do online work between the classes. In the present thesis, the focus of analysis will be online courses, where the instruction is completely carried out online, with occasional planned face-to-face meetings between participants and facilitators, typically at the beginning and at the end of the course.

Online facilitation is defined as the management of learners and learning in an online environment. As the primary focus of the present paper is facilitating in online courses, facilitation is considered to be a pedagogical act in structured computer mediated courses. Coghlan (2001) emphasizes the management of 'the communication of others online' as the main focus, in spite of the many other aspects of online courses, e.g. interaction of participants with the learning material, the learning management system or technology. Kempe (2001) uses the term for making a distinction between teacher-centred education to student-centredness, by shifting the role of the teacher from 'expert' to 'facilitator', or from 'sage on the stage' to 'guide on the side'.

An *online facilitator* is the teacher figure in online courses whose role is to facilitate learning (Salmon, 2000). A facilitator's roles include course management, group management, learner management, management of online discussion, giving feedback and enhance motivation. A more detailed analysis and understanding of online facilitator roles are discussed in the present thesis.

1.2. The areas of this research

This section focuses on the main areas of research that require further study. The overall issue of teaching in online adult courses is discussed. More specifically, the online presence of facilitators; the roles of facilitators in online courses; the pedagogy of facilitating; and the feedback and evaluation techniques in e-learning are the focus of this work. Research questions relevant to these areas are defined and anticipated contributions to knowledge are identified.

1.2.1. E-learning pedagogy

The importance of the pedagogical work in e-learning has to be acknowledged. Facilitators of online courses are trained to support online learners, but the focus of these courses is not specified and is generally left to the course providers. There is a general uncertainty regarding the pedagogical and technological skills facilitators should have. In the light of this, the present thesis aims at exploring the pedagogical and technological characteristics of online adult courses.

1.2.2. The Hungarian context

Hungary in the past decades technically has prepared for the introduction of online training. Also, the importance of language learning is emphasized at all levels, especially in the case of adults. There is a strong need for developing the language skills of professionals, and besides the internal training offered by

international companies, the Hungarian government also supports the introduction of e-learning instruction into tertiary education, training of civil servants, and teachers. The present study aims at the discovery and analysis of the work of online facilitators in three Hungarian distance education courses.

By launching Sulinet, Sulinet Expressz, the Sulinet Digitális Tudásbázis (http://sdt.sulinet.hu) (Könczöl, 2004), and the Világ-Nyelv programmes (Medgyes, 2011), Hungary has joined the European community which aims at the introduction of digital pedagogy in schools (Kárpáti, 2004). Although it happened some time later than in the rest of Europe, the main challenge today lies not in installing the latest hardware and software, but in persuading the teachers to accept and participate in spreading Information and Communication Technology (ICT) in schools (Dancsó, 2005).

The relationship between teachers and computational culture in Hungary has been analyzed several times (Kárpáti, 2001; Fehér, 2004; Fehér, 2009; Hunya et al., 2010). Research shows that the use of computers in educational projects, home assignment or project work is becoming more and more frequent. Parallel to this process, there is a strong demand from the part of the teachers for a practical, usable, technical and pedagogical training on the use of ICT. In 2006 several in-service teacher training projects, both face-to-face and computer mediated, have been launched, which aimed at training teachers for ICT use in the classroom (Kárpáti & Hunya, 2009).

1.2.3. Research questions

From all the above it is apparent that the present study will be investigating the main question: **What is the role of facilitators in online**

teacher training courses? In order to address this issue, the present research project was guided by the following research questions (RQ):

RQ1: What is the impact of facilitators on the success of the participants in

online teacher training courses?

RQ2: What is the role of face-to face meetings of facilitators and participants in

online teacher training courses?

RQ3: What is the role of the facilitator as a group leader in online teacher

training courses?

RQ4: What is the role of facilitators in the interaction in online teacher training

courses?

RQ5: What is the role of facilitators in the evaluation and feedback procedures

in online teacher training courses?

RQ6: What is the role of facilitator training before the online teacher training

courses start?

In order to answer these research questions, three online in-service teacher training courses were explored in two different ways: (1) the online behaviour of facilitators was analysed using the quantitative data of the activity logs of the course; and (2) the roles of online facilitators were further explored by interviewing each facilitator in the three courses in semi-structured interviews (See Table 1 for details).

Table 1

Methods of data sources and analysis

Research question	Data sources	Methods of data analysis
1. What is the impact of facilitators on the success of the participants in online teacher training courses?	Activity log of facilitation in the courses. Recorded interviews with the facilitators after the end of the courses they facilitated. Self-reflection.	Quantitative analysis of participation data. Constant comparative method of analysis of interviews.
2. What is the role of face-to face meetings of facilitators and participants in online teacher training courses?	Recorded interviews with the facilitators after the end of the courses they facilitated. Participation data of facilitators in the online and in the blended groups.	Constant comparative method of analysis of interviews. Descriptive statistics of participation data.
3. What is the role of the facilitator as a group leader in online teacher training courses?	Recorded interviews with the facilitators after the end of the courses they facilitated. Participation data of facilitators in the group activities.	Constant comparative method of analysis of interviews. Descriptive statistics of participation data: number of messages, number of hits.
4. What is the role of facilitators in the interaction in online teacher training courses?	Participation data in online interaction. Recorded interviews with the facilitators after the end of the courses they facilitated.	Qualitative analysis of interaction data. Constant comparative method of analysis of interviews.
5. What is the role of facilitators in the evaluation and feedback procedures in online teacher training courses?	Recorded interviews with the facilitators after the end of the courses they facilitated.	Constant comparative method of analysis of interviews.
6. What is the role of facilitator training before the online teacher training courses start?	Recorded interviews with the facilitators after the end of the courses they facilitated. Descriptions of facilitator training materials.	Constant comparative method of analysis of interviews. Content analysis of the facilitator training materials.

1.2.4. Contribution to knowledge

This research has significance in that it has the potential to contribute to the theory of online instruction by providing both quantitative and qualitative empirical data on the roles of facilitators in online teacher training courses. Through the use of mixed research methodology, a more inclusive understanding of online instruction can evolve, as well as the practice of data mining techniques and the application of grounded theory in researching e-learning related topics can be tested. Another important outcome of the present study is its special focus on group dynamics in an online environment, as a basic and less researched component of online courses (Paloff & Pratt, 2007).

1.2.5. Thesis structure

In Chapter 1, the technological advances are reviewed and the need for longitudinal research is explained. Then, the areas and the specific context of the present thesis are outlined.

Chapter 2 offers a review of the relevant literature by surveying the relevant areas of facilitation: the learning environment, the individual learners, the study groups, and the facilitators as well. Facilitator roles and training needs are also discussed in this chapter.

Chapter 3 offers and in-depth discussion of research methods applied in the thesis. First, the choice of research methodology is justified, which is

followed by the description of research implementation and the case studies. Finally, the methods of data collection and analysis are presented.

Chapter 4 discusses the results of the research projects, first focusing on the quantitative results gained from the activity logs, then describing the qualitative results of the interviews data.

Chapter 5 discusses the results of the analysis by answering the research questions of the thesis. The learning environment, the characteristics of individual learners and groups, the roles of face-to-face meetings, the modes of interactions and communication, and the evaluation and feedback techniques will be overviewed.

Chapter 6 offers a conclusion to the thesis by summarizing the findings, listing the practical implication, as well as the limitations of the study, and suggesting directions for further research.

2. Review of literature

In this chapter, the relevant literature will be reviewed. The focus of investigation will be on how e-learning courses for adult can be facilitated; and what personal characteristics and professional skills facilitators should have. Furthermore, it will be discussed how adult learners use information and communication technology, how they behave in groups during online instruction; and finally, how the facilitator can positively effect the learning process.

2.1. The learning environment

A key element of e-learning is technology. It is vital that all participants had constant and reliable access to the learning materials and the learning platform. Technology should be simple enough so that participants could use it effectively for interaction, communication, logging in, writing and retrieving information. As the learner is left alone with the computer interface, the pedagogical rationale behind developing the most suitable learning environment for the course is vital. The learning environment in distance education presupposes that the learner takes an active role in acquiring the skills.

First, the learning environment should cater for the needs of the learners. It is recommended that the learners can access the course anywhere at any time (Harasim, 1997, p. 151). Obviously, learners have to ensure the technical facilities of the access as well, but access to computers and the internet is becoming a minor problem. The e-learning environment should offer an

individualized learning space where the learner can share personal data (typically photos, background, and interests) that is accessible by the others in the system. The LMS also offers various possibilities for interaction with the learning material, the facilitator and the fellow learners as well. Immediate and automatic feedback should be provided for the learners by the system after completing certain tasks that are part of the learning management system.

Second, the learning environment should also serve the facilitators. The facilitator should have access to learner data, for example the list of participants, their results and achievements, and their personal data as well. Facilitators should be able to communicate through the system with individual learners, with groups of learners and with each fellow facilitator in the program. Feedback and evaluation processes should be clear and easy-to-use for facilitators to ensure fast and meaningful feedback to learners. Any course content (resources, materials, handouts, homework assignments, grade tracking) should be available to facilitators as well, preferably in multiple formats (Lynch, 2002) so that the different learning styles can be addressed.

Using virtual learning environments in e-learning courses presupposes learner autonomy; however, if the learners are not facilitated in the development of individual learning skills and self-directedness, then there is potential danger that autonomy will turn to isolation. Virtual learning environments generally offer a number of possibilities for the participants to get engaged into interaction, both synchronous and asynchronous, with other learners and ask for help or share their problems with them. Successful courses offer facilitation to prevent individual learners from dropping out of the course due to isolation or

the lack of learning skills. One major reason for dropouts from online courses has been reported technology-related problems. (Lynch, 2002).

Finally, learning environments should offer reliable and easy administration as well. When giving feedback and evaluation, it is useful for facilitators to access the profiles, contents and data of the learners. So that the certificates, access rights and data handling was secure and reliable, a good learning management system stores all the data and offers different analytical tools. Special attention is paid generally to data security, data storage and privacy issues, issues that facilitator need to be trained on.

2.1.1.   Moodle – a learning management system

Moodle, a learning management system is described here, as it was used in the courses analysed in the present research. It is one of the most popular systems used in e-learning projects for several reasons. First, it is an open source learning environment, which means that users can download and install it for free by simply signing a licensing agreement. Second, Moodle is available in multiple languages, so institutions and schools in Hungary generally find it easy to use in Hungarian or in a multilingual environment if they have non-Hungarian faculty or learners. Third, Moodle offers a number of possibilities for interaction, collaboration and evaluation in a secure environment. In this chapter those Moodle features will be described that are most typically used by the facilitators in e-learning courses (Stanford, 2009).

Facilitators in e-learning courses typically are not involved in installing the learning management system or setting up the course. Neither they are responsible for the content of the course, that should also include tasks and quizzes. Consequently, facilitators need to understand the way the learning management system operates and should be able to use its collaborative features, but they are rarely asked to add any content, including practice tests, in language courses.

What really important for facilitators is, however, the familiarity with those features in Moodle that are designed to improve the relationship between learners and facilitators. First, facilitators have to log in to Moodle by providing a username and password, and visit their Profile page. Here, basic information about the users can be set, including adding a photo of themselves. The profile should be filled in by the facilitator carefully, as this is also going to serve as an example for the participants.

Course content in Moodle is generally arranged in a linear order, with a range of different media types: text files, sound files, videos, and interactive quizzes can be easily part of an e-learning course. Any course content can be made time- or password-restricted, and the system records an automatic activity log report of each learner. Therefore, facilitators can check not only when the learners handed in an assignment, but it is also possible to track how much time they spent on a task or a quiz (Brandl, 2005).

Interaction in Moodle is designed so that learners can cooperate in solving the learning tasks. They can be arranged into subgroups, where they can interact synchronously in chat windows, or asynchronously using the Moodle forum.

The messages in the system can either be addressed to the whole group, to a subgroup, or to an individual participant as a message.

Moodle allows users to give feedback to student work in several ways. Facilitators can create marking scales which specifically relate to language work, and the assignments submitted by the learners can be assessed by giving written feedback and adding grades or percentages as well. The grades are collected in an online gradebook that can only be accessed by the facilitator and the course administrator; meanwhile, the participants can also access their own grades and track their own development. The gradebook offers some basic statistics on the items of the tests as well, so improving the tests is based on user data.

2.1.2. Tools in e-learning environments

With the development of new technology, the current Learning Management Systems, including Moodle, offer various tools both for the learners and the facilitators (see Table 2). Facilitators in e-learning courses rely heavily on these tools, and it is important that they understood the relevance and methodology of when and how to use for example the reply function, when to reference hypertext, keyword or subject line, or how to apply tags. Besides using them, facilitators should also model the good use of these, so that they created a suitable learning environment for those learners who do not have all the qualities of a successful online learner.

Table 2

Tools for learners and facilitators in e-learning courses

Pedagogical goal	E-learning tools	Example
Providing information	Uploading files (text, audio, video)	Moodle upload
Interaction	Forum Group forum Chat window Video conferencing tools	Moodle forum Skype MSN Moodle chat
Collaboration	Shared documents Mindmapping	Google docs Dropbox
Feedback and evaluation	Track changes function in word processors Automatic feedback in quizzes	Google docs Moodle
Language learning related specific tools	Quizzes	Quizlet Moodle quiz

In this chapter, the basic characteristics and functions of the learning environment have been reviewed, with a special focus on features that are most used by facilitators of online courses. Next, the personal side of e-learning courses will be discussed. First, the individual characteristics of participants and facilitators are described; then the group dynamical aspects of online training will be overviewed.

2.2. Facilitating individual learners

Although online courses in general, and the courses described in the present paper in particular are organized for groups of learners, understanding the individual needs of online learners, especially those of adult learners is of utmost importance for the facilitator. In this chapter the facilitator's role in handling the individual characteristics of online adult learners will be discussed.

Adult learners have a different approach to any kind of learning than young learners. Due to their previous learning experience and knowledge, they tend to be more self-directed, and try to rely less on the teacher for directions (Knowles, 1988). Palloff and Pratt (2007) state that "although the use of the Internet has grown among adults as well, adults often need additional training along with a shift in thinking and practice in order to successfully use the Internet for academic purposes. Consequently, a gap exists between our youth and those who are attempting to teach them – a gap that is not only forcing adults to become more technology-savvy but also to explore different theories and means by which to deliver education online to youth, whose expectations for learning have changed" (p.16).

Adults tend to be more interested in practical, how-to type of instruction online as well offline, and focus less on theories (McKenzie, 2001). They apply to courses with established values, beliefs and opinions, especially about learning and teaching. This does not necessarily mean that they have very little to learn, in fact, they very often benefit more from courses than young learners. However, they are likely to question or challenge the ideas delivered to them by the course; although they learn a lot by debating or arguing about an issue. Adult

learners expect that the instructors, the administrators and the other participants treated them as adults, they contribute a lot and might question some of the issues discussed. They prefer a problem-centered approach to learning, especially if the results are applicable to their own situation immediately (Knowles, 1988).

If the participants of an online course are practicing teachers, who have considerable experience of the process of learning from their daily routines, then they have an even more critical approach to the course. This, however, also prevents them from being open towards alternative ways of teaching and as a first step they aim at keeping their face-to-face classroom practices in the online setting as well. Also, they are in a constant dialogue with their colleagues with whom they share their experiences and learn from the interaction (Bransford et al., 1999).

The number of internet-based teacher communities is increasing where unstructured dialogues support the introduction of ICT in teaching, but according to a recent survey, networking and communication with national and international professional contacts is one of the most neglected fields of teacher ICT use in Hungary (Hunya et al., 2010). The advantage of distance teacher education is that the participants learn about technology by actually using it. During the course teachers have first-hand experiences on how to search the web, of data analysis and communication using the internet; thus seeing its advantages and drawbacks. This helps them incorporate new technology into their own private and professional life, and later in their pedagogical work.

On the other hand, participating in the online learning and training process also makes it difficult for teachers to act as learners, accepting that they know less about a subject, taking risks and failing in meeting the demands the course puts on them. Bransford et al. (1999) argue that teacher training courses very often fail to offer a learner-centered environment and mostly focus on lectures and workshops where it is rather difficult for teachers to relate the course material to their everyday work.

Learning online is different from traditional classroom instruction in its focus on the learner rather than the instructor. In the online environment learners can choose an individual learning path as they enter the course, they can plan their own learning, and they can spend a great deal of time reflecting before making their contributions, which enhances the quality of produced work. They can review and reread previous discussions, and take time in adding their own response (Kovács, 2007). These features favour some learners who need more time for reflection and are comfortable with spending time on contributions. At the same time, learners need to learn how they can benefit best from the online course by knowing their individual characteristics, as well as the aims and procedures in the course.

Another great advantage of online learning is its flexibility (Anderson, 2004). Online courses can be accessed any time, which gives a unique opportunity for learners to schedule their own learning. It is particularly important in adult education, when learners have typically several other commitments in their lives and take online courses besides their regular jobs. For some learners early morning hours are best for studying, others prefer late hours or weekends when they can fulfil the requirements. Also, online courses

can be accessed from any place as well. Participants do not need to be at the same location at all, thus allowing international courses or distant courses as well.

2.2.1. Individual differences of online learners

Successful online learners share similar characteristics. Generally, they are motivated to learn about the topic of the distance course, as the participation in online courses for adults are generally voluntary. Most adult learners have already acquired some learning strategies in their previous experiences and they can rely on these in the e-learning context as well. Successful online learners are characterized as being independent and active learners, who have good organizational and time management skills, as they have to allocate the place and time of learning themselves, which requires a high level of discipline and consciousness about learning. Learners who are not experienced in distance learning should also be able to accept and adapt easily to new learning environments and digital technology.

Reid (2001) lists six key elements of successful online learning: (1) time management skills; (2) motivation; (3) sense of community; (4) communication skills; (5) computer familiarity; and (6) access to technology. These six elements have proved to be highly relevant in the case studies analyzed in the present thesis as well, so in the following paragraphs will be further elaborated on.

Successful online learners are reported to need good time management skills. Although it is generally true that online learning is extremely flexible in

time, due to the fact that the course and its content can be accessed 24/7, and because the interaction is typically asynchronous, careful planning of participation is necessary. Adult learners often take online courses besides their regular work without realizing how much time it requires to learn online (Hiltz & Shea, 2005). Depending on the type of the course, an average of 4 to 15 hours a week could easily be the minimum time that should be spent by an online learner. Without good time management skills, the learners can easily lose the track and drop out of the course.

Just like in any adult training, motivation levels vary within online courses as well (Hiltz & Shea, 2005). Regardless of the initial reasons of joining an online course, let it be an individual, conscious decision made by the learner or the decision of the employer which requires the acquisition of certain skills, successful online learners need to be able to motivate themselves throughout the learning process. Keeping up self-motivation is a key issue in e-learning courses.

A further consideration in online courses is demotivation (Dörnyei, 2001). Highly motivated learners can loose motivation during the course and can decide to leave the course due to various reasons. Hurd (2005) argues that

> "…some have difficulty in coping with the amount and range of material that makes up the course, particularly at the start. For others, perceived inadequacy of feedback, frustration at unresolved problems, and lack of opportunities to practice with others and share experiences can have an adverse effect on motivation levels" (p.9).

It is the responsibility of the facilitator to prevent learners from dropping out, by offering them extra motivation.

Successful online learners have good communication skills. As opposed to the regular classroom practice, online learners must be active communicators to signal their presence in the course. As Harasim (1997) states, „students in traditional classes typically have little opportunity to be active in discussions; students in online group activities must participate and articulate their ideas to be present" (p.181). Communicating online, however, is different from face-to-face communication and participants should understand and cope with the differences. Interaction in e-learning courses is discussed in Chapter 2.4. later on, but it is important to note that many courses offer Netiquette rules for participants where the basic rules of online communication are laid down.

All participants in e-learning should have basic technical skills, that is they have to be able to operate the computers at a basic level, they should be familiar with electronic communication (e-mail and forums), and should have basic navigation skills on the web. Reading hypertext requires specific reading skills, whereas participating in online interaction presupposes basic knowledge of netiquette rules as well. In spite of the fact that many online courses offer e-learner training at the beginning of the course or offer detailed guides how to study most efficiently, Hiltz (1993) found that previous computer experience, typing ability, and whether the native language is used make no significant difference in outcomes for the online courses.

Students have different expectations of how their teachers will engage online and what roles they are expected to take, as well as what roles the teachers or facilitators are ready to take (Craig, Goold, Coldwell & Mustard, 2008). Therefore, learners need training before the course begins (Paloff & Pratt,

2001) on how to log in, how to access materials, how to interact online, and on how they can benefit most from the course. Learner training is most effective if it is combined with hands-on experience, but access to good manuals can also help. Starting the course with a face-to-face meeting when the course structure and learner training are in focus can be a good option.

Hiltz and Shea (2005) report a survey in which 14 experienced facilitators were asked to identify the most important factors in learner success. The most important reasons mentioned by the facilitators were access to and experience in technology. Participants were more likely to drop out of the courses if they had the technology tools but were not comfortable in using them. A further factor of success in online learning was the participants' recognition of their own learning preferences, study habits and skills. Also, successful students were reported to be motivated and have well identified goals. Finally, lifestyle factors of learners were mentioned: learners who had a good understanding of how much time they could devote to learning and how much support they will receive from co-workers and family were more successful at finishing the online course.

2.2.2. Facilitator roles in individual learner instruction

First of all, facilitators are also participants of e-learning courses, and the individual participant characteristics discussed in the previous chapter are relevant for them as well (Hiltz & Shea, 2005). They should have all the characteristics of successful online learners, as they will act as models for the

participants later on. Cheung and Hew (2008) argue that the online contributions of the facilitator are characteristic of their personality and individual characteristics, e.g. open-mindedness, accuracy, and sensitivity.

Therefore, it is beneficial for facilitators of online courses to have personal experience of online learning as well, as the lack of personal experience "can initiate unrealistic biases and expectations" (Carrier, 2010:25). Studying online is different from teaching online, just like classroom practices cannot be easily conveyed to online instruction. Therefore, it is advised that facilitators either take an online training before facilitation, or they participate in a facilitator training course online.

Facilitators, however, also need to have an understanding of the characteristic features of adult learners (Knowles, 1988) on one hand, and with the technological characteristics of the given course on the other. According to Anderson (2004), the main role of facilitators is that they should create the conditions in the online environment that would foster the development of individual learners. They should provide the technical and methodological tools that learners can use in their progress. As Kidd and Keengwe (2010) argue, "adult teaching and learning in the digital age is moving away from the passive acquiring of factual information towards a more active application of knowledge" (p.xvi).

Facilitators roles include enhancing the motivation of online learners by creating a welcoming online environment (Dörnyei & Murphey, 2003). For a number of participants the course is the first online learning experience, so at the beginning they feel confused and uncertain in the new environment. It is the

facilitator's role to provide a relaxed atmosphere where learner anxiety can be handled. Motivation techniques include catering for the individual needs of learners, providing timely support and feedback, and using group dynamics for learner support, which will be discussed later in the thesis.

Facilitators need a deep understanding of online communication. The extra time to process information allowed students to give more in-depth answers and promoted critical thinking skills. However, the professional skills in facilitating online discussions are essential to the success of the course. (Rovai & Jordan, 2004). Communication can be used to set the initial pleasant tone in the course, which will help to reduce the anxiety level in the course. Facilitators and learners are encouraged to use first names or nicknames in the online discussions. Using reinforcing statements in the forums and chat sessions, e.g. *Good idea! Thanks,* and personalizing remarks can support meaningful communication in the group (Harasim, 1997).

Facilitators need to be good communicators to respond to messages promptly and appropriately. Learners can access the course 24/7, and they expect the facilitator to answer any questions as soon as possible. According to Harasim (1997), "a new user who asks a question and does not obtain a response within two days is likely to feel frustrated" (p.151). Hiltz (1992) supports the importance of prompt facilitator response: „Student satisfaction is highly correlated with the performance of the instructor, particularly with his or her availability and response time" (p. 82). Varvel (2001) emphasizes the role of humour in facilitation, as a strategy to support online communication, and suggests using clear language for instructions and guidelines. It is also

recommended to take gender out of online discussion language. „Student satisfaction is highly correlated with the performance of the instructor, particularly with his or her availability and response time"(Hiltz, 1993).

As online communication is different from face-to-face communication, facilitators can suggest publishing Netiquette rules for the course. Netiquette is a collection of rules for online behaviour, often adjusted to the concrete characteristics of the online course. The basic Netiquette rules are related to respecting the participants, both their privacy and opinions. In relation with communication, it is generally accepted that the words of others should not be cited without acknowledging the source (Varvel, 2010) and use emoticons to bring paralinguistic features into the discussion.

Due to the written nature of communication in online courses, giving clear and concise instructions is an essential facilitator task (Hiltz & Shea, 2005). Online courses start with offering the learners a study guide that is available throughout the course. The study guide describes course requirements, netiquette issues, and expectations and should offer optional paths and ways for learners to achieve online success (Felix, 2003).

2.2.3. Problem solving

Facilitators need to be prepared for facing a number of problems during a course – just like teachers in a classroom. Problem solving skills, therefore, are important facilitator skills. One type of problems that occur in courses are

technical in nature: setting up computer and software, replacing forgotten passwords, opening files, etc. Although generally these problems should be handled by the technical staff offering the course, because of the safe environment created by the facilitator, participants will be likely to ask them for help first. Several solutions have been suggested in the relevant literature: facilitator training might be helpful just like technical support (Paloff & Pratt, 2005); online Help conference can be run by learners with the teacher monitoring it (Hiltz & Goldman, 2005); customized user documentation and online tutorials may also be helpful (Goold et al., 2010).

Another type of difficulty in online facilitation is related to the problems of unequal online participation. Learners have different interests, abilities, availability, expectations, etc. not only towards the course but also towards the facilitator and the peers as well. There are learners in all groups who like dominating the discussions and leave little room for others to participate; and on the contrary, there are learners who hardly add anything to the discussions and it is difficult to judge whether they are participating at all. Facilitators are suggested to contact these learners individually, but a good solution might also be to set the minimum level of messaging. Off-topic messages may be distracting as well, although Cox et al. (2000) claim that

> "the social chat and small talk seem to play an important part in creating the social cement for an online group. The asides, occasional personal remarks, expressions of feelings, and off-topic statements add to the bonding in the group" (p. 1).

Handling dropouts or learners lagging behind is another facilitator task, although a neglected area of research. It is difficult to find the reasons why a

participant shows lack of activity in the online course. Paloff and Pratt (2001:47) suggest personal commitments of adults, the inexperience of learners and facilitators as possible reasons. The facilitator has to find the reasons in due time so that the learner can still catch up with the course requirements. Sometimes the reasons are beyond the scope of the learner, for example technical reasons or workplace restrictions hinder their participation. The correspondence about the problems should be private and positive, searching for mutually acceptable solutions.

Handling problem situations constantly and quickly is important in online courses. Paloff and Pratt (2007) argue that problem learners need to be dealt with promptly, as due to the lack of face-to-face reactions; they might not even realize that their online behaviour is disruptive. There are several types of learners that facilitators need to handle and there are different strategies accordingly. Learners who express that the course offers very little new information for them should be given the opportunity to express their knowledge and draw their attention to equally valuable alternative solutions. It is important to achieve that these learners do not distract others from the main topic of the course. Learners lagging behind are usually the most common distractive element of online courses. Facilitators should use all digital tools offered by the system they use to stop lagging behind as early as possible and react to it in due time. With support and advice can be effective and facilitators should refer to the study guide of the particular course which states the basic requirements. Hostile and complaining learners can be very disruptive for the online community, but their complaint should be followed by a reaction from the facilitator. By ignoring any hostile comments, the facilitator should focus on the

problem by offering solutions openly to the learner. Another frequent problem is when a leaner dominates the forums and replies to all questions earlier than any other learners, thus demotivating them from sharing their thoughts. Facilitators can solve the problem by asking direct questions from other participants and once a suggestion was posted by the problem learner, asking for alternative solutions from other members can help. If this does not solve the situation, the facilitator can draw the attention of the learner to netiquette rules. In a number of cases the online community might also react to problem learners but the facilitator should be aware of reactions and is responsible for handling the situation.

In this chapter, facilitating of individual learners was reviewed, and a description of online instruction regarding participants was described. E-learning, however, heavily relies on group activities, collaboration and cooperation among the members of the course. In the next chapter, facilitation of e-learning groups will be discussed, and facilitator roles regarding group development will be suggested.

2.3. Facilitating groups

Learning communities are characterized as making learning more effective, and supporting the individual participant to develop during the training as well (Paloff & Pratt, 2005). Collison et al. (2000) state that healthy online communities have strong online presence, by posting regularly, defining expectations and help each other by spontaneous moderating. Palloff and Pratt (2007) conclude after reviewing a number of studies in the field that "the key to successful online learning is the formation of an effective learning community as the vehicle through which learning occurs online" (p. 4). In this chapter, facilitator roles regarding group dynamical issues will be discussed, including group cohesion, group development, interaction and communication features within groups, and feedback and evaluation strategies.

2.3.1. Characteristic features of online groups

An online community has six elements (Paloff & Pratt, 2005). First, the community means all the *people* who are involved in the learning process: learners, facilitators, and administrators. Second, a community has a shared *purpose*, the reason for choosing the online course, with the intent of sharing information and resources. Third, the community can only operate with a set of *guidelines* that define the structure of the course. The fourth element is *technology*, the interface for storing the course material and participant interaction. *Collaborative learning* is the fifth element, which is based on

learner interaction and knowledge construction. Finally, *reflective practice* promotes transformative learning (p. 8).

Success of facilitation largely depends on how the facilitator can create a community of learners in online courses, as it is the basic starting point for online interaction and learner initiated input. The facilitator can express this at the beginning of the course by explaining the course expectations and by modelling this attitude from the start (Paloff & Pratt, 2005). Using icebreaking activities and communication games at the beginning of online courses enhances group formation and good group dynamics. Although these activities and discussion are not part of the course material, they should be carefully planned and built into the course.

Working in groups adds to the motivational factor of need for achievement (Dörnyei, 2001). It is important for adult learners that the work they produce is of high quality if they know that other participants will also access their products. Harasim (1997) argues that „the fact that peers will view what they contribute provides students with a strong motivation to do work of which they will be proud" (p. 173). Similarly, Hiltz (1977) reports on a study where participants produced better results if they knew that the assignments will be made public for the others:

> „The results also indicate that "collaborative learning" did take place and did tend to have its intended motivational and learning consequences. For example, 55% felt more motivated to work hard on their assignments because other students would be reading them" (Hiltz, 1997, p. 12).

Facilitators working with groups of learners should emphasize and encourage collaboration among participants. Collaborative learning processes

promote the achievement of deep knowledge level (Paloff and Pratt, 2001). Collaborative processes will not be typical at the beginning of online courses. The facilitators will consciously work towards establishing a positive atmosphere where collaborative learning can take place.

There have been no clear results regarding the ideal size of groups in online courses. Arbaugh & Benbunan-Fich (2005) refer to their study of courses with over 50 participants, where the class size was negatively associated with learner development. It is proposed by Hiltz and Goldman (2005) that the instructor-learner ratio should be a maximum of 30 learners for every instructor. Depending on the number of participants in the e-learning course, it is advisable to form groups of four to six learners (Dawley, 2007). Paloff and Pratt (2005) suggest that heterogeneous groups work best, where the gender, age, abilities, and experiences of the members differ. Assigning participants into small groups has a number of advantages but selecting group members and allowing members move across groups need careful considerations. Setting clear goals for the groups, and supporting them in making joint decisions based on consensus might require close facilitator presence.

Although language teachers; or teachers in general, regularly use group work activities in the classroom, they are not necessarily used to work as a team themselves. It can be anticipated that collaborating in the online environment will cause difficulties for teachers and will take time until knowledge construction occurs. Decision making procedures might be difficult to agree on by the group members, as it is difficult to come to a consensus within the deadline, and group roles need to be adjusted to the task to avoid conflicts.

2.3.2.   Interaction and communication online

Interaction in online courses has been defined in several ways, regarding its participants. There is a dispute about the definition, whether interaction can only occur between participants, or the learner's interaction with the content should be regarded as interaction as well. Due to the lack of a number of features that are considered to be key elements of face-to-face education, such as eye contact, tone of voice, gestures, body language, etc., in distance education the quality of *interaction* is considered to be the most important factor. Palloff and Pratt (2007) argue that "in the online classroom, it is the relationships and interactions among people through which knowledge is primarily generated" (p. 15).

2.3.2.1. *Theoretical models on online interaction*

Berge (1995) distinguishes between two types of interaction in online learning: interaction with content and interpersonal interaction. The learner in this autonomous learning setting has to make decisions regarding the interaction with the content and the other participants, including the facilitator. Without the learner's intention, interaction will not happen, and the added variability allowed by technology results in changing the learning environment (Komenczi, 2004).

Learners can interact with the learning material in several ways: choosing the content that is most relevant to them; choosing the order of the elements in the material (generally there is a recommended but not compulsory learning route set by the material); choosing the types and number of exercises; manipulating simulations and interactive tasks; self-evaluation using diagnostic

tests; planning and following individual learning routes. Interaction with the learning environment is generally based on diagnostic and adaptive tests that rely on an on-going assessment and analysis of learner input. The tasks then are offered to the learners based on the system's calculation of learner needs.

Three dimensions, interaction between participants and the learning material, between the participant and the facilitator, and interaction among participants serve as a basis for quality analysis in Moore's (1989) paper. Interaction between participants and the learning material is the method by which learners handle the content of the course; learner-facilitator interaction is the flow of information, ideas and conversation between the learner and the teacher; and interaction among participants occurs when information, ideas and conversation flow between learners. He argues that facilitating interaction raises the quality in distance education. (Gunawardena & McIsaac, 2004).

Hillman, Hills and Gunawardena (1994) added a fourth component to the model on online interaction, learner-interface interaction. They argue that the interaction between the learner and the technology which delivers instruction is a critical component of the model which has been missing thus far in the literature.

A more complex framework of strategies to facilitate interaction in online learning is proposed by Northrup (2001). He distinguishes five types of interaction: 1) interaction with content, 2) collaboration, 3) conversation, 4) intra-personal interaction, and 5) performance support. Facilitators can enhance online interaction by understanding and structuring the types of interaction during the course. This typology gives a more important role of learner-to-

learner communication, which shows the recent trend in online education to shift from a teacher-centered to a learner-centered paradigm (Gunawardena & McIsaac, 2004).

Anderson's (2003) model of online learning focuses on interaction between learner, teacher and content. Based on this, six types of interaction are listed: learner-learner, learner-teacher, learner-content, teacher-teacher, teacher-content and content-content interaction (Figure 1).
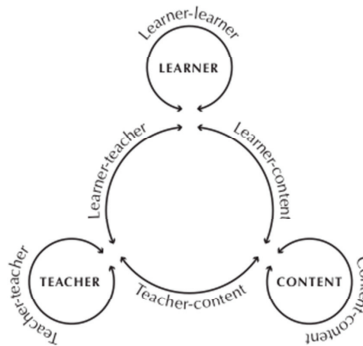
Figure 1. Anderson's (2003) model of education interactions

At the basic level, learners should be able to access the learning interface using the computer. At the next level the learner interacts with the content by accessing online materials and information. In the online environment, learners should interact with the content actively by analyzing, evaluating, and applying what they learn (Berge, 2002). Anderson (2003) states that online courses should also cater for the learners' need for interpersonal interaction, so the next

levels will include learner-learner and learner-instructor interaction. Finally, at the learner-context interaction level participants work on transforming the information gained through the interaction to construct individual knowledge of the course. The online course should be designed so that learners had as many possibilities for different types of interaction as possible (Anderson, 2003).

The most comprehensive model is based on the theoretical models introduced above. Ally (2004), proposes a four-level model of interaction, going from lower-level to higher level interaction (See Figure 2). The lowest level of interaction in the model is the learner-interface interaction, which refers to the ability of the learner to access the information of the course by using technology. The next level is the interaction between learner and content, that is the level where the course material is accessed, and the learner can start processing the information. As the learners are motivated to access the content through diverse paths in accordance with their needs, they will seek for support from the facilitator, the peers or outside experts. The highest level if interaction in this model is the interaction with the context, which "allows the learners to develop personal knowledge and construct personal meaning from the information" (p. 22).
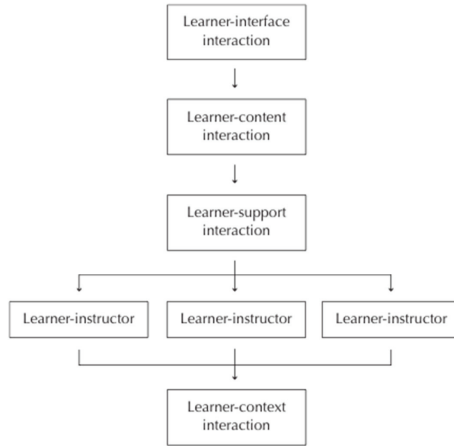
Figure 2. Ally's (2004) levels of interaction in online learning

The different models of interaction in an online environment have been reviewed in this chapter. The models contain different levels of interaction, with Ally's (2004) model drawing a synthesis of theoretical considerations. In the next chapter the two basic modalities of online interaction will be discussed.

2.3.2.2.*Synchronous and asynchronous communication*

There are two primary modes of online communication in respect of time: asynchronous and synchronous. Asynchronous technologies mean that learners are not online at the same time to receive and send messages; but instead, the interaction is accessible in an online system use by all learners who can log in

any time of the day. They use the materials at their own pace, they have the option of spending as much time with the activities as they need, and can do the exercises as many times as they wish. The most frequent asynchronous tools are e-mail, blogs and forums.

Synchronous communication takes place in real time, simultaneously for all participants in the discussion. Learners do not have to be at the same place physically but they connect to the class using their computer networks. Therefore, synchronous e-learning often has limited group sizes and tight schedules. The most widely used synchronous tools are video and audio conferencing tools (e.g. Instant Messenger, ICQ, Skype, Ustream).

Both synchronous and asynchronous communication can be text-based or audio-visual based, although due to technical limitations, e-learning courses rely more on text-based forms of both types of communication, as the primary aim of using these techniques is providing place for interaction and negotiation in the course. As a consequence, facilitators are suggested to have an agenda for the discussions that is posted in advance, so that learners can prepare (Varvel, 2001). Facilitators also have the role of moderating the discussions and interfere if a problem occurs. Chun (2008) summarizes the roles of the facilitators in online communication as "raising awareness, designing appropriate tasks, monitoring collaborations, and following up on these exchanges" (p. 36).

Főző (2006) offers an overview of using asynchronous and synchronous communication in Hungarian educational projects. Although mainly focusing on school-based communication, lists several advantages of asynchronous communication in education. Besides the obvious advantages of having more time for reflection, or offering a possibility for interaction for shy students as

well, Főző finds that the teacher-facilitator can participate in the learning process more efficiently, due to having more time to overview the learning process and thus offer support to learners when and where it is needed. As the most important advantage of synchronous communication is discussed, the active participation and cooperation between learners is emphasized (Főző, 2006). It is also noted however, that due to fast pace of interaction, the facilitator has less possibilities for intervention, evaluation, or feedback.

2.3.3. Group development in e-learning

The dynamics of groups in and outside classrooms have been described as a series of regular and predictable changes before. Research studies (Salmon, 2000; Paloff & Pratt, 2001; Moulen, 2007) have described multiple models for the development of groups in e-learning. In this chapter the three models will be described, with the focus on the role facilitators have at the different stages in the model.

The dynamics of online groups are explained in Salmon's five-stage model (Salmon, 2000). In this model the levels of group development are shown in five stages, and each stage shows both the technical support needed and the roles of the e-moderator. The right hand side column indicates the amount of interactivity within the group (See Figure 3)
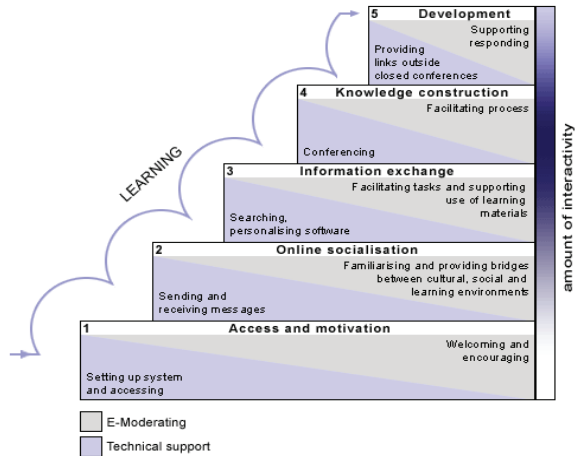
Figure 3. Salmon's (2000) 5-stage model of online group development

The first stage describes the initial situation when participants access the learning system; they are welcomed by the e-moderator, and are expected to briefly introduce themselves by answering questions. This will also help them to familiarize themselves with some of the e-learning tools they are expected to use in the course. Harasim (1997) suggests that at this stage, e-moderators often use face-to-face meetings or telephone conversations to help future participants join the online course.

At the beginning, learners, especially adult learners with limited or no experience in e-learning, might feel confused and worried about their abilities to navigate. The role of the e-moderator at this stage is to create a warm, welcoming environment and provide clear directions and support. Lynch (2002) suggests that each participant should be sent a personal message, welcoming

them, inviting a response and encouraging interaction, generally by asking to introduce themselves based on he model the e-moderator provides, and by encouraging participants to react to each others' introductions and information shared. Many e-learning systems allow uploading photos of participants that might help breaking the ice at the first level of the course. Facilitators should set clear expectations for participation in the online activities, and can help new online learners or learners with time management problems by making clear suggestions about how they can manage. Setting a specified time for learning each week, handing in a personal study plan at the beginning of the course, scheduling assignments in advance in accordance with the learner's study plan might be of great help.

The motivation level of learners may be different already at the beginning of the course and motivation levels change during the course as well. Facilitators can keep the level of motivation by appropriate course design and by focusing on topics and events that are relevant and interesting for the learners. Grades might add to the motivation level but individual instruction, rewards and personal encouragement work very well in an online environment as well. Because the facial expressions, smile and voice cannot be used as motivators online, prompt and positive feedback and acknowledgement from the instructor using the online forums can be highly motivating.

Asking questions is a very important technique in online facilitation. Direct questions help unmotivated or shy students to get back to the course and participate more actively. Also, technology allows calling specific learners to answer specific questions, motivating them to express their thoughts. The asynchronous setting gives enough time for learners to formulate their opinions

and post their contribution only when they feel satisfied with the level of their writing. In online language courses the writing skills of learners develops greatly by replying to the on-going discussions in the course forums.

At *Stage 2* in the learning process individual learners are already drawn into the course, so the facilitator should start to set up groups. The messages sent at this stage should be aimed at overcoming cultural, social barriers among participants, and make them familiar with the social aspects of the learning environment. At this stage, facilitators may assign groups and group tasks, or may assist the participants in forming study groups themselves. The coordination of group formation might cause difficulties due to time management issues, so if the participants need more guidance, the facilitator can also set roles (coordinator, editor) to assist learners to prepare for the tasks ahead and spend time more productively.

Stage 3 is when the most interaction happens in online courses according to Salmon (2000). Learners engage in interaction with the facilitator and with the members of their groups. Facilitator guidance might be necessary on how to accomplish tasks and how to use the online learning material. Consequently, *Stage 4* is the phase in online courses when the facilitator can withdraw from active participation, and let the knowledge construction to be done by the participants. The facilitator is generally present but more as a member of the interaction and not as a group leader or authority. If learners individually or as a group need support, the facilitator should offer their help.

Stage 5 is the last phase in Salmon's (2000) model, where the facilitator needs to prepare learners to finishing the course by providing links outside of the conference and providing support for learning after the course is finished.

Paloff and Pratt (2001) note that in the last phase of an online course, time for reflection should be given to participants, so that they can evaluate the objectives and outcomes of the course.

Salmon's 5-stage model has been criticized by Moule (2007) for excluding alternative pedagogies. An alternative conceptual model of e-learning, the 'e-learning ladder' was suggested by Moule (2007). As opposed to Salmon's model, it includes different learning approaches at the initial stage, and presents flexible pedagogies at different stages of the learning process as well. The model aims at offering a generally usable model for e-learning scenarios by describing seven hierarchically positioned 'rungs' that also leave room for the inclusion of new e-learning tools in the process. The first 'rung' shows accessing material or gathering information and the computer is seen as a tool that supports learning. The second 'rung' introduces the use of media, for example CD-ROMs, animations, simulations to support exploratory learning.

The 'rungs' towards the top of the ladder incorporate creativity, problem-solving, critical thinking and evaluation by using technical tools such as video conferencing to motivate debate and reflection, discussion boards and e-mails to enhance asynchronous communication among participants, and 'virtual classrooms' for effective online communication that leads to knowledge construction. The 'sides' of the ladder show the types of support that learners need during the journey (See Figure 4).
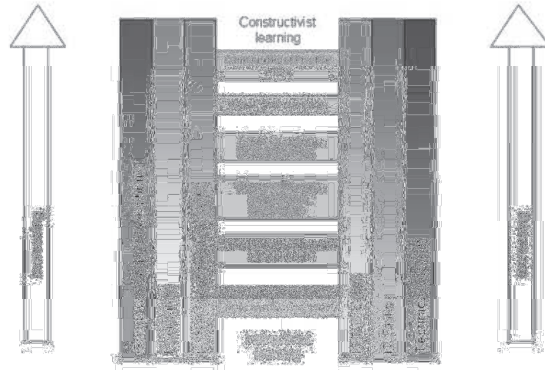
Figure 4. Moule's (2007) e-ladder model of online group development

It is notable that technical guidance and ICT skills development were found to be key issues in Moulen's research (2007) and are represented in the model as separate supporting needs. Furthermore, she argues that as the participants advance on the 'ladder', more technical support is necessary. Facilitation is mentioned as a key element in this model, too, also emphasizing the necessity of offering guidance at all levels of this model.

An additional element of this model is the emphasis on group working. The composition of the group in the research projects was found to have a great effect on learning, especially in groups where participants had known each other before the course. Contrary to Salmon's model, the e-ladder model is usable for long-term courses, that is represented by the 'Longevity of engagement' side of the model, where the necessity of engagement throughout the learning process is emphasized.

A third concept of the development of groups in the online learning process is described by Paloff and Pratt (2001). The stages in this model are: Pre-forming, Unity, Disunity, Conflict-Confrontation, Disharmony, Harmony, and Performing. The initial stage of this model is described as being very similar to the previous ones: this is when the participants are asked to introduce themselves, and the first connections in the online discussions occur. However, it is considered as a pre-stage to the course, where no content instruction takes place. The discussion of course material only begins in the next stage, Unity, which brought lively and active discussions without any difficulties. The central notion in this model is 'conflict', as Paloff and Pratt (2001) argue that the resolution of conflict is the path to knowledge building. The next stages in the process: Disunity, Conflict-Confrontation, Disharmony, are natural and important stages on the way to Harmony and Performance.

Paloff and Pratt (2001) conclude that the development of groups in an online setting is generally not linear, as opposed to previous models. Conflict is a central notion and it can occur at any stages in the process. Conflict resolution is seen as the major task of the facilitator in this model, who needs to be trained to notice the signs of conflicts early and help the group to move to the next stage in the process.

2.3.4. Blended online courses

There has been a debate on the definition of online courses (Heinze, 2008). In the present thesis the focus is on teacher training courses that are delivered online. At some stage, however, face-to-face meeting between facilitators and

participants is part of the course as well, but this does not mean that these courses could be considered blended. There is a difference in techniques in internet-based e-learning courses where learners only meet through the internet and blended courses, where learners meet face-to-face and work partly on the course material online. In blended learning the teacher can make use of all the advantages of both environments, substitute school-based activities, difficult to find the link, more complex instruction. In the courses discussed in the present thesis, however, the instruction and learning takes place online with occasional face-to-face meetings. It is argued that this form of e-learning should be considered online learning rather than blended.

Evans and Bellett (2006) draw the attention to the difference of examining student participation in online discussion, as opposed to collaboration of practicing teachers in schools. They argue that "where there is collaboration, this tends to be within, and not across, schools" (p120). They analyzed the online collaboration strategies of schoolteachers and found that successful online collaboration depended on four basic 'ingredients': face-to-face meetings, high quality IT support, useful outcomes, and adequate funding. Evans and Bellett (2006) found that face-to-face meeting with the facilitators had a positive effect on the group of teachers and motivated them to engage in asynchronous communication. "The real key to success appears in F2F meetings, which allow the participants to get to know each other on a personal level" (p. 126).

2.3.5. Evaluation and feedback techniques

As e-learning systems focus more on the learner and the learning process, evaluation and feedback techniques in these courses have to be adjusted to learner needs as well. Facilitators generally prefer using formative, rather than summative, evaluation techniques that allow the facilitators to give feedback on the learner's individual development during the course. Formative assessment informs the learner about their individual strengths and weaknesses, and often takes the form of verbal feedback to written assignment, project work evaluation, group work evaluation, or portfolio assessment. Using self- and peer-evaluation techniques is frequently part of e-learning courses as well (Anderson, 2004).

According to Harasim (1997), due to the complexity of e-learning courses, measuring the participants' advancement by discrete skill tests would be rather difficult. Ha argues that facilitators should make use of technology in their feedback and evaluation practices as well. First, activity logs in the system offer a lot of data on learner performance. Also, forum discussions allow the facilitator to have access to a recorded discussion of participants, and their language production can be studied and evaluated based on that.

In the case studies described in the present thesis, facilitators used portfolio evaluation to give an overall feedback on the progress of the learners. An electronic portfolio is a collection of a learner's work produced during a certain period or the whole learning process. Electronic portfolios can either contain documents only (or even a collection of selected documents only), or can refer to the collection of activities accomplished in the process, including participation data as well. Educational portfolios are generally aimed at

increasing self-directed learning, encouraging reflection and self-reflection, and demonstrating the achievements of learners in a creative and flexible way. Portfolios are suitable for promoting life-long learning and are frequently used in adult training courses (Falus & Kimmel, 2003).

Anderson (2004) finds that feedback and continuous evaluation puts a very heavy working load on facilitators. Similarly, Anderson and Elloumi (2004, p. 75) argue that the focus on feedback and evaluation adds an immense difficulty to online facilitation and new tools are needed to automatised feedback. Therefore, good online learning management systems offer a growing number of tools that facilitators can use to evaluate learner progress. Online computer-marked tests and other automated assessment tools are available, collaborative learning tools allow learners assess their own progress, peer evaluation tools allow more learner-learner feedback. Data on the activity of learners can provide a summary to the facilitator about the number of posts and the total number of words learners posted; can scan the posts for spelling and grammatical errors, present a gradebook of the results, or sending automatic messages to learners about facilitator feedback.

An additional consideration of evaluation and feedback in e-learning is that once the atmosphere in the course is set for collaboration, evaluation and feedback processes can also be shared by the facilitator and the participants. Paloff and Pratt (2001) point out that peer- and self-evaluation should be part of the course, although learners will need instructions and training on how positive and useful feedback can be given. In case of teacher training courses, like the

ones in the focus of the present thesis, the training for giving feedback to other participants might be related to the in-class practices of the teachers.

2.4. Facilitator roles

A number of definitions and frameworks have been suggested by researchers of e-learning regarding specific facilitator roles, as opposed to general roles teachers take in traditional classroom settings. The learner-centred nature of e-learning is emphasized in most definitions and frameworks, with different levels of teacher presence.

Anderson (2004) describes three levels of online facilitation: social presence, cognitive presence and teaching presence (Figure 5). Social presence refers to facilitator roles that enhance interaction between the participants, the teacher and the content by providing a learner-friendly environment suitable for discussions and exchanging opinions. Cognitive presence means establishing a supportive and content-rich learning environment. Finally, teaching presence is defined as the design and organization of learning experience, activities and offering content expertise. The educational experience of the learner within this framework is achieved at various levels that involve setting the content, setting the climate, and supporting discourse in the course.
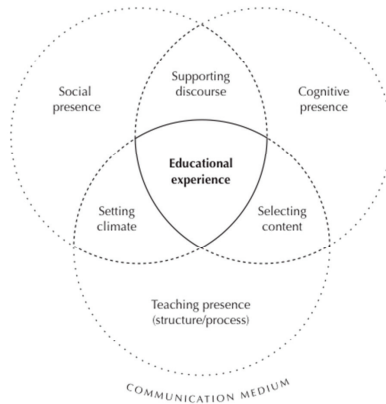
Figure 5. Anderson's (2004) model of tutor presence

Collison et al. (2002) define three key facilitator as roles as 'guide on the side (not sage on the stage)', instructor or project-leader and leader of group processes. The purpose of the first role is to guide the interaction among learners and facilitate inquiry, which is a similar role to supporting discourse in Anderson's (2004) model. The facilitator has to intervene, highlight important points and then move the discussion on to a higher level. Instructor or project leader roles include facilitating individual learners and respond to their development, as well as separating technical issues from content. Leader of group process clearly refers to the social aspects of online learning, and facilitator roles include community-building, creating a safe online environment, and student motivation. Collison et al. (2000) emphasize the importance the

facilitator's personality, and mention the importance of communication styles, adequate tone and humour.

This facilitator task of intervention, synthesis and guiding a conversation thread is referred to as 'weaving' and is considered to be one of the most difficult roles of a facilitator by many. Harasim (1997) states that „a good weaving message refers to specific ideas and information contributed in previous comments. It identifies points of agreement and disagreement, supplies a unifying overview by interpreting the discussion, and gives the group both sense of accomplishment and a better sense of where they are going next. The comment may end with suggestions for further discussion of unresolved issues, or it may explicitly signal the end of that topic of discussion and call for moving on to a new topic." (Harasim, 1997:184).

Weaving involves building knowledge centered learning rather than conversational discussions. It can involve "synthesizing, drawing threads together, watching for and correcting conversational drift, identifying good ideas, pulling ideas together, opening up new avenues for development in groups, making links between students and ideas, identify holes in the arguments and discussions, separating opinions form facts, challenging, encourage further exploration, creating and summarizing new learning, directing the thinking, building patterns." (Harasim,1997: 185).

Berge (1995) published the best-known and generally accepted framework, which groups facilitation roles into four broad categories: pedagogical, social, managerial and technical. Hootstein (2002) along these lines

refs to mentor-facilitators as people "wearing four pairs of shoes", referring to the four main roles they have to undertake.

In distance learning settings, as it is agreed by most definitions, the learning material in the learning management system is not provided by the facilitator. The *pedagogical role* of the facilitator supports the learners in understanding the basic concepts of the material and practice the skills covered (Berge, 1995). During the learning process the participants often ask the facilitator to solve the problems they are facing, but the correct response to these questions is one which helps the learners solve the problem by offering further strategies, ideas or resources, but the final solution is not provided and the learners have to work on those themselves. The second most important role of online facilitators refers to the *social role*, i.e. the facilitation of aspects of learning, and is aimed at the development of the best possible circumstances for learning, by creating a positive group atmosphere, trust and group cohesion. The 'third pair of shoes' (Hootstein, 2002) of facilitators is related to *administrative roles*, like setting the time frame of the course, deadlines, formulating rules of forum use, etc. Berge (1995) considers the administrative duties as crucial roles facilitators have to take in order to make the online course successful. In the Hungarian setting, learners have limited experience with distance education, so the facilitators should set clear deadlines, requirements, and communication rules in an open way.

Teaching participants how to use forums is considered one of the administrative roles facilitator have to undertake in online courses. It generally helps online communication if the rules of individual and group work, rules of forum presence and forum netiquette are clear to everyone. The rules can be

verbalized and recorded in a User Guide that is available to learners throughout the course. The fourth role of the online facilitator is the *technical role.* The goals of the online course can only be reached if the participants use a learning management system they know well and where they feel safe. At the beginning of the course, it is the facilitator's role to show how the LMS works, and should offer technical help if needed. Without being able to use informational and communication technology (text, images, voice and video) well, the participants will not be able to acquire the skills taught in the course. Obviously, facilitators have to master these skills in order to provide the best support for the participants with very different technical skills, learning styles and learning goals.

The European Union E-tutor project (Directorate-General for Education and Culture, 2004-2005) has published a model for facilitation (Figure 6):
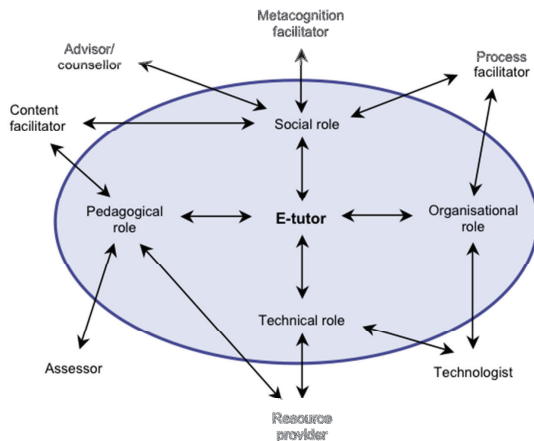
Figure 6. The facilitation model of the E-tutor project (Goold et al., 2010)

Goodyear et al. (2001) define eight distinctive facilitator roles in online classes: content facilitator, technologist, designer, manager/administrator, process facilitator, adviser/counsellor, assessor and researcher. The last role, that of a researcher, in this context refers to the role when facilitators create new knowledge in the content; a role that is not considered to be accepted by facilitators in most definitions. The seven roles that facilitators need to take in the online classroom described by Denis et al. (2004) are: content facilitator, metacognition facilitator, process facilitator, advisor/counsellor, assessor, technologist, and resource provider. There are considerable overlaps in the definitions of these roles among the researchers.

2.5. Facilitator training

Training facilitators for e-learning language courses, as it is discussed in the present thesis, focuses on the specific skills facilitators should have besides their basic language teacher skills. It is important that online facilitators- language teachers possessed all the skills that are expected of trained language teachers (Medgyes & Major, 2004), i.e. they should be advanced speakers of the target language; they should be able to communicate at an advance level both in spoken and written genres; they should be familiar with the target culture including literature, history, geography, pragmatics; they should have an understanding of pedagogical and andragogical issues. In an online environment, however, they are also expected to be familiar with technology, including office applications, ICT tools and Web 2.0 tools.

Salmon (2002) lists six groups of competencies facilitators should be trained for. First, facilitators must have an understanding of online processes, based on their own experiences as online learners. Facilitators should also receive training in technical skills and in online communication skills, where the goal is to "communicate comfortably without visual cues, being able to diagnose and solve problems and opportunities online, use humour online, use and work with emotion online, and handle conflict constructively" (p.190). Salmon also finds it important that the facilitator received training in the content of the course. Training, she argues, should be based on personal characteristics of the facilitator.   Personal characteristics involve determination and motivation to become a facilitator; the ability to establish an online identity; the ability to

adapt to new teaching contexts; sensitivity to online relationships; and positive attitude towards online learning; and the ability to create and sustain a useful, relevant online learning community.

Considering the complexity of online facilitation, it has to be admitted that not all in-class teachers can be trained to become good facilitators. As Paloff and Pratt (2007) argue, "the changes faculty are experiencing include greater accessibility to, availability to and availability of information but also encompass the development of new skill sets for teaching and the need to rethink pedagogy, redefine learning objectives, re-evaluate assessment, and redefine faculty work loads and culture" (p. 4).

.   Besides the basic language teacher skills, facilitators of online language course should be trained for specific tasks they have to fulfil in the e-learning course. Denis (2003) lists the following components of facilitator training training: (1) experience of a distance learning system, (2) sharing representations of the tutors' roles, (3) definition of a tutor's target profile, (4) consensus on tutor's roles and editing of a charter, (5) practical preparation and (6) animation and feedback loops.

It is important to emphasize that training of online facilitators should not focus on technological training, but more attention should be devoted to methodological and instructional issues. Thompson (1997) also puts the emphasis in facilitator training on conducting successful discussion online, new class management techniques, managing online commitments with other responsibilities, developing appropriate assessment strategies, and changing administrative processes. Cox (2000) agrees that facilitators must be trained and "need to be encouraged to weave, to create patterns, build the network and make

links, summarise and rearrange material, to add real value to the student's online experiences" (p. 15).

Consequently, online training courses can be most useful if the training itself is delivered online. Facilitators in this setting will also provide models of online behaviour and learning; whereas the facilitator trainees can experience being in an e-learning course. For this reason, it is also recommended that the learning management system and the courseware of the facilitator training are similar to the ones where the trained facilitators will start to work (Paloff & Pratt, 2001).

Banks et al. (2004) list a number of barriers in facilitator training. The most critical point they mention is time management, due to the heavy workload of participants. Another problem might be the levels of participation; similarly to online courses in general, participation might be high, low and zero. There is a difference in the confidence of participants, their background in experience and knowledge about e-learning. Finally, the workload of workshop facilitator is mentioned, as facilitator training courses are usually comprised of short workshops with concentrated timescale. This leaves the trainer little time to get to know participants, facilitating discussions, and cover all topics (Banks et al, 2004). Training online facilitators for language learning programs should be based on training teachers who already have experience in teaching traditional language classes, but who have adequate technological skills and preferably e-learning experience as well. Conrad (2004) argues that when learning to teach online, faculty will rely heavily on their past classroom teaching experiences.

Finally, facilitators constantly have to develop professionally to meet the new expectations set by technology and the learners' demand. Strategies of facilitators need to be adapted to the ever changing online environment they use

(Salmon, 2002). Goold et al. (2010) suggest that facilitators need on-going mentoring during the courses they facilitate and after the courses finished to prepare for the new challenges and technological changes.

2.6. Limitations of online learning

E-learning, in sum, can be an excellent form of adult education for several reasons. By putting the learners in focus, it enhances their motivation level, gives ground to cater for multiple needs, and strengthens learner autonomy and cooperation between learners. It is also rather flexible, as learning can happen in different places and time. However, e-learning is not for everybody and it is not going to solve all the problems of education at tertiary level, in corporate settings or in Life Long Learning projects. Before e-learning is introduced in any setting, it is necessary to consider whether the technological, methodological and personal resources are adequate for its use.

Technological limitations of e-learning refer first of all to the fact that e-learning requires hardware, software and access to network services both from the user the course provider. A number of small companies and organizations are reported not to be motivated to offer e-learning courses to employees due to the lack of resources (Wong, 2007); and even universities, e.g. Northern Arizona University are hesitant to offer video conferencing as part of their e-learning course due to limited bandwidth (Collins, 2002).

Methodological limitations of e-learning include problems with course design and learning materials design (Howell et al., 2003). Materials in e-

learning courses should meet the needs and expectations of the learners, and should allow easy access. Svensson (2004) argues that e-learning courses should not only focus on content issues but should make use of other components offered by technology that support learning. As many adult learners might have negative attitudes towards computer-based learning (Dawley, 2007), it is of utmost importance that the course is designed in a user-friendly way with detailed study guides.

Personal limitations of e-learning may result from the lack of experience, lack of technical skills and lack of personal qualities of both learners and facilitators. Learners who are involved in e-learning projects for the first time, already have learning experience and suppose that there is little difference between traditional learning and e-learning. Case studies (Dearnley, 2003; Tresman, 2002) report that new users feel lost because of the lack of milestones they are used to in classroom learning. The asynchronous nature of most online training courses also poses difficulties for both learners and teachers. Participants are not required to log in at the same time (which adds to the flexibility of the course), and mostly read and reply to learner comments hours or days after they were posted. Synchronous sessions when the voice and pitch of participants could be heard are not frequent in e-learning courses and even if they occur, could be text-based again. It is rather difficult to convey emotions in text-based discussions, although several compensatory strategies have become widely used in online communities to compensate these problems. There is usually no set timing for classes, so the learners have to develop their own timetable and schedules. Also, most learners enrol in online courses besides other commitments, so they do not have a lot of free time to devote to learning,

and they find it difficult to find the time for studying besides their commitments to work, family and social activities (Tresman, 2002). Classes in an online course do not have a typical length; consequently, it is up to the learner's abilities, previous knowledge, motivation and other factors to decide how much time is spent on a particular task. Focusing on a task requires a high level of discipline from the learner, and a number of learners find it particularly difficult to cope with it.

During participation in online learning, the learner is left alone with the computer, which in some cases causes frustration (Hamid, 2002). Very few adults are used to learning alone; they do not have the necessary learning skills for such a setting. The aim of a distance course is to provide the participants with the necessary learning skills as well, in other words it is important that the learners could use dictionaries, encyclopedia or background information resources to help their learning. They should be able to plan their learning considering timing and place of learning. In distance education courses the course managers or the facilitators advise learners to find a comfortable timing for learning, and keep that during the course. Generally, it is considered to be a bad strategy to leave some days out and persuade ourselves that we can make up for it afterwards. Also, it is important to plan in advance short intervals in the learning process. It is well received, and it can even be motivating for the learner, if after finishing one unit of learning, they stand up, have a drink or coffee, or a piece of chocolate. Course managers frequently draw the attention of learners to the importance of the setting (Kember et al., 2001). There must be a nice, clean place for the computer, keyboard and mouse. The speakers should have the adequate volume for listening. It can be useful to have a paper and pen

besides the keyboard, and a paper dictionary. It can be distractive if there are different other objects available, especially mobile phones, television, or radio, that can distract attention.

Teaching in an online environment also causes difficulties. Berge (2005, p.18) lists ten problems that typically may arise in online facilitation:

- changes in administration

- changes in organization

- lack of technical expertise, support and infrastructure

- changes in social interaction and quality

- problems of faculty compensation

- problems of time

- legal problems

- changes in evaluation and effectiveness

- problems with accessing technology

- problems with student support services

It will be argued in Chapter 6 that facilitators should be prepared to face these problems in online facilitator training courses and on-going professional development.

3. Methods

After the overview of the theoretical foundation of the present work, the selected research methods will be discussed. This chapter is divided into three sub-sections. The first sub-section will explain the choice of research methods, in the second sub-section the three case studies will be described, whereas the third sub-section offers an overview of the research tools used.

3.1. Choice of research methods

Both qualitative and quantitative research methods are accepted and widely used in e-learning related studies (Wingkwist & Ericsson, 2011). E-learning courses, as in the case of the present study as well, are carried out with the help of computers, generally using a Learning Management System (LMS). This results in the fact that any action that is taken by any of the participants in the course is logged by the system that is the complete learning process is translated into precisely recorded data. As a result, analysing on-line courses and online behaviour can be based on quantitative research methodology. On the other hand, although computer logs can record all the data on hits, results, messages, or posts of a participant, it is not possible to see the cognitive processes, the reasons for choices behind the recorded actions. A more elaborate understanding of facilitator behaviour and roles can be obtained from qualitative data based on observations and facilitator interviews. Based on these

considerations, mixed methodology, that is a combination of quantitative and qualitative methods were used in the present study.

3.1.1. Quantitative research methodology

Quantitative research is based on numerical data collected during the research process, and the data are analysed using statistical methods (Dörnyei, 2007). Using computers in e-learning results in data-logs, that is numerical data that records the participants' actions taken during the research process. Consequently, quantitative research methodology is an obvious choice in a number of e-learning research projects.

Quantitative studies focus on the facts and causes of phenomena. The codes and categories for the data to be collected are defined before the data collection procedure starts. Generally, a large number of numerical data are collected and systematically analysed using statistical methods, with the goal of eliminating individual variations and providing an 'objective' approach to the focus of the research. Quantitative studies based on the great number of cases, the pre-set variables, and standardized procedures of analysis aim at arriving at generalizable facts (Dörnyei, 2007).

In the present study quantitative data collection techniques were implemented to gather data from the log files of in-service teacher training courses. The activity files record all hits by all the participants in the course, their time and place, that is whenever a learner or the facilitator in the course enters the learning management system, clicks on a link, file or activity; posts a forum comment, writes a blog entry or engages in a cooperative activity with

others in the system, the log file adds the information to the database. The analysis of the database using descriptive statistical methods gives a numerical overview of facilitator presence in the course. This research method was used to find the answers to Research Questions 1, 2, 4 and 5.

3.1.2. Qualitative research methodology

Qualitative research is defined by Strauss and Corbin (1998) as „any type of research that produces findings not arrived at by statistical procedures or other means of quantification." (p.10). Generally, a qualitative research paradigm is chosen when the goal of the research project is to discover, explore, or describe a theory by looking at the process rather than the outcome. The samples in qualitative studies are small, and data types include interviews, observations, data logs, records, and films; and with the development of online research methods, some of these can be obtained online as well (Fielding et al., 2008). Many qualitative studies are based on longitudinal examinations of certain phenomena (Dörnyei, 2007) and take the form of interviews, note transcripts, and observation data (Knaff & Howard, 1984).

Consequently, there is a difference between qualitative and quantitative methods in the order of the steps in the research process, as qualitative methods are generally used for building a theory, as opposed to quantitative research that is mainly used for testing a theory. Qualitative data are important tools of "instrument development, illustration, sensitization, or conceptualization"

(Knaff & Howard, 1984), and offer a detailed understanding of the research focus due to their richness and sensitivity of the data.

In the present study, the Constant Comparative Method (Glaser & Strauss, 1967) was used for the qualitative analysis of data collected during the interviews with the facilitators. The goal of this method is explain and predict behaviour and serve as a ground for theory building, i.e. building new theories rather than testing old ones. The steps of this method follow the genera procedures of qualitative research: First, raw data are collected, typically in natural settings, and the theoretical explanations are based on the analysis and organization of the data afterwards. The second component is data organization, when the research categories are defined based on conceptualizing and coding the raw data. Good questions in qualitative studies are „sensitizing questions, theoretical questions, practical questions, and guiding questions" (Corbin & Strauss, 2008:71) that allow the comparison of individual cases or between classes of cases.

Coding in the Constant Comparative Method is carried out in three phases. Open coding is used for grouping and labelling of similar phenomena in the data that are classified into categories and subcategories. Axial coding is the next phase during which the categories and the subcategories are defined. The third stage, selective coding is applied for theory building; integration and refining the theory; and validating the scheme (Glaser & Strauss, 1967). The disadvantages of qualitative studies include that generally qualitative results are less generalizable than quantitative ones, due to the small samples. Also, during the coding procedure and the data analysis stages, the results can be influenced by the researcher's personal beliefs and biases, as Dörnyei argues (2007).

3.1.3. Mixed research methodology

Mixed methods in e-learning research are difficult to define, as these are „some sort of combination of quantitative and qualitative methods" (Dörnyei, 2007:44). The advantages of mixed methods include increasing the strengths of one methodology, while eliminating its weaknesses. The complexity of analysis might result in improved validity (Dörnyei, 2007). Strauss and Corbin (1998) propose that:

> „Qualitative and quantitative forms of research both have roles to play in theorising. The issue is not whether to use one form or another but rather how these might work together to foster the development of theory. Although most researchers tend to use qualitative and quantitative methods in supplementary or complementary forms, what we are advocating is a true interplay between the two. The qualitative should direct the quantitative and the quantitative feedback into the qualitative in a circular, but at the same time evolving, process with each method contributing to the theory in ways that only each can" (p.34).

According to Tashakkori and Teddlie (2002) mixed methodology should be applied in at least three research situations: (1) if the method will help the researcher answer research questions the other methodologies cannot answer (e.g. by exploring a quantitatively derived hypothesis using qualitative methods); (2) the research provides stronger inferences (e.g. by triangulation or

complementarity); or (3) the methods present a greater diversity or divergent views (p. 14). In other words, mixed methodology studies should be carefully designed, the collection of various types of data meticulously planned, the data should be analysed using multiple methods, thus arriving at a better understanding of the research focus.

Mixed methods research design might mean the occurrence of qualitative and quantitative research methods at one or at several stages of the study: setting up research questions, data collection, or data analyses well. Data can be collected simultaneously or sequentially during the study, and integrated at different stages of the research process. Creswell et al. (2003), summarizing the various possibilities in mixed methods studies, arrive at the following definition:

> „A mixed methods study involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research" (p.212).

In the present study the application of mixed research methodology was chosen. The technical nature of e-learning courses calls for a quantitative data collection phase, as the complete on-line behaviour is recorded and stored in the learning management system. On the other hand, the mere statistical interpretation of the data might lead to misunderstood facilitator presence, thus the motivation behind the online behaviour can be understood better if the numerical data are backed up with qualitative interview data. The mixed design

displays an enhanced validity of the data interpretation compared to relying either on the quantitative or the qualitative data only.

3.2. Applied research methodology

In accordance with the considerations above, mixed methodology was applied in the present study. On one hand, the basic research question to answer was „What is the role of online facilitators?", which can be best answered by collecting qualitative data on the courses where facilitators work. In the courses studied for this research project, logging the data of the courses was technically possible to do. All facilitator logs and hits were recorded first, and before the data was analysed, each facilitator was interviewed about their roles in the course. The sources of data in the present study, the reason for collecting the data, and the application of the data are shown in Table 3.

Table 3

Sources of data in the study

Data sources	Reason	Application
Data logs	The activity logs in the system offer a day-to-day record of facilitator work.	Statistical analysis of numerical data, qualitative analysis of verbal data.
Interviews	Semi-structured interviews gave the facilitators an opportunity to elaborate on the questions, evaluate their own work and explain their activities.	Constant comparative method of interview data to establish categories for facilitator roles and activities.
Documents	Course descriptions of the three case studies and the facilitator training courses.	Establishing the aims and outcomes of the courses.

In sum, the components of the data collection were a total of 28 online facilitators in three different e-learning teacher training courses. All facilitators

were interviewed and the activity logs of were used to analyse their online behaviour and roles. The interview data were analysed using the constant comparative method, using coding and categorization; whereas the quantitative data were analysed using statistical methods with the SPSS software. A summary of the research methods is shown in Table 4.

Table 4

Summary of research methods applied in the study

	Qualitative	**Quantitative**	***Present study***
Research design	'meaning in the particular' strategy	'meaning in the general' strategy	*combination of qualitative and quantitative*
Sampling	small samples, focusing on the unique meaning	large samples, eliminating individual variability	*small samples, but all the members observed*
Data types	open-ended, non-numerical	numerical data	*mixed data types*
Data coding	open and flexible textual labels	variables are defined in advance coding tables with scales	*mixed coding of the different data types*
Data analysis	non-statistical methods	statistical methods	*cyclical analysis of statistical and non-statistical methods*

3.3. Research implementation: the three case studies

The role of facilitators in online teacher training courses can best be observed based on real-life data. In the present thesis three cases studies are used to describe the online behaviour of facilitators. Case studies are widely used in applied linguistics research aimed at a deep observation of people, programmes, institutions, or a community (Dörnyei, 2007). The data are generally collected by combining quantitative and qualitative methods, which often results in a complicated and time consuming analysis. Collecting data from multiple cases is referred to as a 'multiple or collective study' (Dörnyei, 2007:152), which is used for the observation of one particular phenomenon. One concern about this research method is its generalizability, but purposive sampling and analytic generalization, i.e. using the data to conceptualize theoretical models can offer valid results.

The three case studies for the present research were chosen as the first early attempts to train teachers and adult learners to English as a foreign language using e-learning methodology. All the facilitators in the courses received training before the courses began, and access was provided to the facilitator training material as well. Two of the courses were run by universities and one by a major governmental institution, with a total number of participants totaling to nearly 4000 learners.

The three courses chosen for this research were all e-learning courses, but blended the course to various levels. Some facilitators did not meet the online participants face-to-face at all, other groups met at the beginning and at the end of the course, whereas there were some groups in the courses that besides

completing course tasks and using the communication functions offered by the learning management system, also met regularly, typically once a month. The consequences of the different levels of blended courses will be discussed based on the collected data.

3.3.1. Study 1: The EPICT course

The European Pedagogical ICT course is an in-service teacher training course, which is delivered in a distance learning format. The course builds upon pedagogical practice and is highly practical. The course provides information about information and communication tools that can be used in education, the main characteristic of the course, however, is that all the tasks are built around the classroom practice. This way, the course provides not only technical but also pedagogical training.

The course was designed and first implemented in Denmark, where over 65,000 Danish teachers have enrolled the course in six years. The course was adapted in Norway as well, with over 20 000 Norwegian teachers finishing the course. Other countries (Ireland, Australia, Greece, Italy, Iceland, the United Kingdom, Ghana, Uganda, Cameroon, and Hungary) have also adapted the EPICT course material to match the different school types and educational traditions. Generally the course material is translated to the native language of the country where it is offered.

The main pedagogical rationale of the EPICT course is that no ICT should be offered without pedagogical implications. The course content focuses on the information and communication technologies and the internet not only as

a topic, but also as a means and method of course content delivery. The content is process oriented problem-based and generally delivered for teaching staff working in the same school. Teacher teams of four or five are formed and collaborate with the facilitator to cover the topics. The participants generally meet the facilitator at the beginning of the course face-to-face, where the course is introduced, and the online learning phase is prepared.

The course is based on 12 modules, out of which four modules are compulsory, and four modules are chosen by the groups (See Figure 7). The first three modules are compulsory for all groups, and they should finish these first. During the first three modules the facilitator focuses not only on the content of the course, but also on social and managerial issues, creates a safe and friendly atmosphere where negotiations and learning can take place. After the first phase the group members have to come to a decision on the next four topics to cover. This phase might be difficult for the participants but offers an excellent opportunity for genuine online discussion and decision-making process. The last module on school development is compulsory again. In the Hungarian system the four compulsory modules are: The internet, Text and writing processes, Communication and collaboration, and School development and innovation.
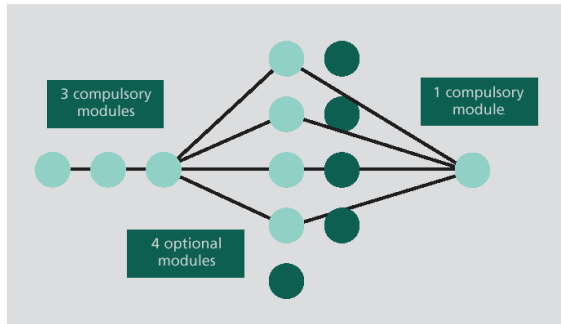
Figure 7. *The structure of the EPICT course*

The optional modules of the EPICT course are: Digital images, Numbers and spreadsheets, The genre of presentations, Producing and using educational websites, A head start with databases, Models and simulations, Using the media: Layout and DTP, Educational software, ICT, learning styles and classroom management, ICT as a compensatory tool, Games and learning, and Reading and ICT. Each EPICT module has the same structure; first the content is described in chapters, than some articles and case studies are offered for further reading, which is followed by a number of practical exercises and best practice examples. Each module has a collection of links, ICT manuals, special needs manuals and a digital library.

The participants of the course work in groups of four. There are different methods for forming the groups:

- teachers form the same school teaching different subjects,
- teachers from different schools teaching the same subject,
- teachers form different schools teaching the same age groups,
- school leaders,

- teachers coming from different schools but from one region,

- teachers from different regions.

Each group is helped by a facilitator chosen by the course provider. The facilitator may know some of the participants but it is generally considered to be an advantage if the facilitator is not a colleague of the group members. The course starts with a one-day preparatory face-to-face training, where the goals and procedures are explained to the participants. The teacher groups are formed during the day, and the virtual learning space is introduced. It is vital that all participants understand the basic philosophy of the course during the first meeting, and also that they felt comfortable with navigating the online environment. The online work process starts with studying the content of the module and doing the exercises individually. The group then has to agree on a module task and prepare a plan for carrying the task out. The plan should be handed in to the facilitator and it should contain the individual responsibilities, the task process and the deadlines for handing in the components. Preparing a detailed module task plan participants have to practice their online negotiation skills, and should take responsibility for their own schedule. If any problem occurs during the planning or the implementation phase, the facilitator could be contacted and should offer immediate help to the group.

The evaluation and feedback procedures in the EPICT course are crucial and EPICT facilitators are specifically trained to be able to cope with them. There is no fixed level of competence for any of the modules, but it is the facilitator who has to decide on the appropriate level of the task by making sure that all participants raise their competencies. Facilitators need to challenge the

teams after they submitted their module tasks to go further by asking specific questions and setting very concrete tasks.

The facilitators` roles and activity cannot be measured without taking into consideration the participants of the EPICT pilot course. 137 teachers enrolled the course, with different backgrounds, previous training and expectations. They were working in 34 groups, the number of teachers varying from 3 to five in each group. The groups were partly organized on the basis of the background of the participants (school leaders, kindergarten teachers, special needs teachers, language teachers), and partly on geographical considerations (teachers from the same institution or from neighbouring institutions, or from neighbouring cities). Due to the fact that this was a pilot course, all participants volunteered to enrol the course for free, but in exchange they agreed to become partners in the research projects and fill in questionnaires, forms, and answer research-related questions. The course lasted for eight months and at the end successful participants received a certificate. The success of participants in this study was measured by their activity in the course, by the assignments they handed in and the facilitator's evaluation in the interview.

The research focuses on the eight facilitators who participated in the pilot course. All of them received a facilitators' training in July 2005, offered by the Danish EPICT coordinators. There were five female and three male facilitators, aging between 35 and 60. Five of them had previous experience in distance education, and for three of them this was the first experience in distance education. In the present study all the facilitators were assigned pseudonyms and were numbered according the group numbers (i.e. the facilitator of groups 1-7 is referred to as Facilitator 1, the facilitator of groups 8 – 12 as Facilitator 2, etc.).

The background data about the facilitators is based on the interviews conducted with each facilitator (see Section 3.4.2.).

Facilitator 1 (F1)

F1 is an experienced teacher and teacher trainer, a very active member of ISZE (Informatikusok Szakmai Egyesülete – Association of Teachers of Informatics). He is the oldest of the facilitators, who joined the EPICT course bringing a number of participants as well. He works in a number of schools in the North-Eastern part of Hungary and had a personal contact with most of the teachers in his groups.

Facilitator 2 (F2)

F2 is a young facilitator with some experience in distance education. He graduated as a teacher of informatics, but at the university no courses in distance education were taught. However, as a student he participated in several research projects where different subjects were taught to primary school children via the computer. He also participated in the development of e-learning materials and worked at a company which develops e-learning systems. At the time of the project he was employed at the Multimedia Department of ELTE, Faculty of Sciences, the host department of the EPICT project, and as an employee, had multiple tasks both in connection with the project and his regular teaching job. As a consequence, he kept struggling with time and management of all the different things he had to be doing.

Facilitator 3 (F3)

F3 is a colleague of F2 at the Multimedia Department. He is responsible for the multimedia lab and the department's library. Originally trained as a teacher of Hungarian language and literature and a librarian, distance education was a relatively new area for him. On the other hand, being a member of the department he was an active member from the beginning, was part of the team who received special training in Denmark, and participated in the planning of the Hungarian pilot course. Also, it was part of his job to be available in the library for regular university students and in the media centre, so he could interact with EPICT participants very easily, several times a day.

Facilitator 4 (F4)

F4 also works as a teacher trainer at ELTE University but at the Faculty of Arts. She is trained originally as a teacher of English and in the past decade was involved in in-service teacher training projects. Her special interest is using ICT in language teaching, and in teaching generally. She worked in close contact with secondary school teachers who wanted to use technology in their classes and participated in several distance education programs as a learner herself. She was involved in the materials development for the EPICT pilot course.

Facilitator 5 (F5)

F5 works at the training centre of the Hungarian Post, and also a teacher trainer at ISZE, which delegated her to the EPICT course. She was trained to be an online facilitator at the Technical University and also received the EPICT

training. She has been involved in several online training courses both as an instructor and as a course developer, and consequently she is interested in the theory of online teaching as well.

Facilitator 6 (F6)

F6 is a secondary school teacher of Mathematics, Physics and Computer Science, and also works as a researcher, teacher trainer, consultant in distance education, she has published several course books for teachers on using word processors and spreadsheets. She is very busy, so she planned all her courses in the EPICT pilot courses with no face-to-face meetings, just online consultation. She, however, agreed to help F7 to facilitate her groups.

Facilitator 7 (F7)

F7 is the most experienced teacher and teacher trainer. She is not an active teacher any more but participates in a number of teacher training projects as a consultant. She has published several books on using ICT in education. She worked in the pilot course in close so-operation with F6.

Facilitator 8 (F8)

F8 is a teacher of Mathematics, Pedagogy and Computer Science. She has been teaching in a number of secondary schools and is a trained ECDL examiner as well. Currently she is the deputy headmaster of a business school in Budapest. She participates in teacher training courses as a trainer, consultant and quality assurance expert.

Facilitator 9 (F9)

F9 is a teacher in a Budapest secondary vocational school and is also a teacher trainer for ISZE. He manages his own e-learning system, and facilitates in system administration e-learning courses. They use Moodle as a learning management system, and he was a great supporter of this system in the EPICT courses as well. From the very beginning, his attitude towards the course was very critical and he stopped facilitating after the compulsory modules. His groups had been overtaken by other facilitators within the EPICT pilot course. Table 5 shows the total number of facilitators, groups and participants in the EPICT course.

Table 5

The number of groups and learners in the EPICT course

Facilitator	Number of groups	Number of learners
1	7	29
2	3	12
3	5	21
4	4	17
5	2	10
6	2	8
7	4	16
8	3	13
9	3	10
Total	33	136

Moodle was chosen to be used in the EPICT course by course administrators at ELTE Multimedia Department because it is student friendly, easy to navigate, promotes collaboration among participants, has multiple functions to help facilitators and course managers, and – most importantly – is

available in Hungarian. This was a crucial argument, as most teachers who participated in the pilot course, and the ones who will hopefully be trained later, do not speak English.

The course site is managed by the administrator or the admin user who is defined during the setup procedure. The administrator can choose the layout for the course, including colour, functions and the language of the course. The language of the teacher training course was Hungarian, as the participants were teachers of different subjects but all of them were Hungarians. The main tasks of the technical personnel in the online learning system included enrollment; on-going online technical help throughout the course; and uploading materials for the participants and the facilitators (see a screenshot of a list of participants in the course in Figure 8).

The participants of the course could access the site any time, through authentication by choosing a user name and a password after the first log-in. Users were also asked to give their e-mail addresses, which was verified by the confirmation of the user. During the registration process, participants were asked to upload a photo about them which appeared while using the forum. Participants could choose whether they wanted to receive all the messages posted in Moodle via e-mail as well or they wanted to access the course and the messages only online. All the options were chosen by the participants, and they could change these options any time, thus the administrator involvement was reduced to a minimum, while high security was provided for users.

After the registration the participants had access to two domains. The EPICT pilot course site contained the course material and the common forum

where they could communicate with all the participants of the course. Also, they could fill in the online questionnaires here. The group site was accessible by the members of the particular group and served mainly communication purposes among the group members and between the group and the facilitator.

Figure 8. A screenshot of a list of participants in the course

The management of the course was set by the administrator as well. Each course or group could be assigned an array of course activities. In the case of the teacher training course, all the groups were provided with a forum and a mail function. In the forum the messages sent were received by all the other members of the same forum, whereas in the mail function the participants could send private messages to other users. All postings had the author's photo attached. In the forum participants could upload other images and files, including their assignments. If the facilitators decided that the group needed more channels for

communication, they could ask the administrator to add a chat option to the group for synchronous text interaction. The chat function supports URLs, smileys and images. All chat sessions are logged and can be viewed by the members of the group later (see Figure 9) for a screen shot of a chat window in the course). The Moodle system keeps an activity report for each learner where the logging time is shown, as well as all the messages posted on the forums can be read, and the sites visited are recorded and shown by seconds.

The assignments were uploaded by the groups in their own forum where it was evaluated by the facilitator. If the assignment was accepted by the facilitator, it was sent to the administrator who put all the assignments in a database. This system was necessary so that each group developed their own assignments but it proved to be very useful for the teachers to see how other groups solved the same assignment, which they could use in their own teaching practice during or after the course.
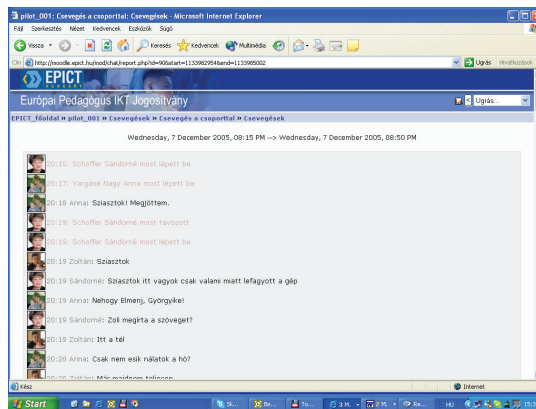
Figure 9. Screen shot of a chat window in the course

The survey function of Moodle was used in the common area of the course, where the online questionnaires were administered. The system automatically prevented partly finished surveys, and records which participants filled the questionnaires in. The data could only be accessed by the administrator and were strictly confidential.

One of the most important roles of facilitators during the pilot course was giving pedagogical feedback and evaluation. The EPICT philosophy supports an evaluation which is completely based on the progress of the participants; there are no standard minimum requirements set by the learning material but it is the facilitator's role to either accept the assignment or send it back to the group for further development. This is a very difficult and challenging task for the facilitators, as the group has to accept their decisions as well. The feedback for the assignments is always a detailed analysis of the solution, with critical remarks and concrete prompts for development.

The collaborative working methods in EPICT require daily communication among the members of the groups, mutual understanding and trust. It was absolutely necessary even in groups where the participants had known each other before, were colleagues from the same school or region (in Figure 10 see a screenshot of the main course page). Although a lot has been written on group building strategies in schools (Dörnyei & Murphey, 2003), these techniques cannot always be used in an online setting. Hootstein (2002) argues that online facilitators can enhance group cohesion by stimulating group discussions with case studies, problem solving tasks, or questions, as higher

interactivity is the key to success, and what is more, it is nearly as important as the course content.
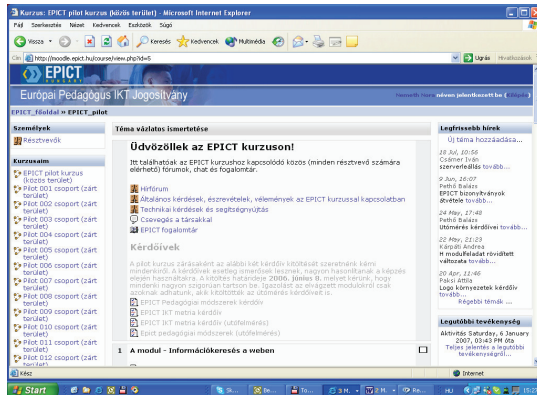
Figure 10. Screenshot of the course content opening page

As mentioned before, most facilitators in the pilot course had a degree in informatics as well, and they very often had to support the participants in technical problems.

Example for technical support on the forum:

> *You should transform your images into smaller resolution. I suggest that you use the Photoshop program or if you don't have this, than you can do it with the Gimp freeware. If you have any problems, please write, I am happy to help (F9).*

During the Hungarian EPICT course, the technical role of the facilitators was partly overtaken by the technical help desk offered by the course provider. The problems of signing in, forgotten passwords and uploading files were solved by the help desk, and the facilitators gave technical help mostly in connection with the concrete modules and assignments.

3.3.2. Study 2: The Precise Project

The Precise Project is a 10-module English language course for IT teachers in five countries (Hungary, Bulgaria, Portugal, Great Britain and Romania) supported by the European Commission in the framework of the Leonardo Innovation Transfer Project launched in 2007. The aims of the course were that practicing secondary or primary school teachers developed their professional English skills and enlarged their vocabulary so that they can read international professional literature and software manuals, apply to European teacher mobility programs, and give professional presentations in English. Obviously, by enrolling the online course, participants were expected to develop their self-study skills and self-assessment skills. Also, most participants showed interest towards online learning and teaching tools, as well as experiencing group work and digital portfolio work in an online environment. The teachers who participated in the course were expected to enter the course at A2 level of the Common European Framework and reach level B1 by the end of the course in reading and writing skills. 189 teachers enrolled the course from four countries (Great Britain participated in the project by offering learning resources and designing the learning materials).

The language course lasted for 5 months, during which period teachers had to cover ten modules. The topics of the modules were: The Internet, Hardware and software, Programming, Data security and data protection, Telecommunication, Networks, Mobility, IT-jobs, Digital gadgets, and Digital content development. Each module consisted of two subtopics and 8 parts. Each module started with an animation and a video, which were followed by written texts with links and vocabulary exercises. Previous vocabulary was also revised during the modules with interactive tasks. Each module contained a project task and participants were expected to choose one project during the whole training that they had to complete in small groups of 4. The language course design was flexible, as participants could not only choose the order in which they wanted to cover the modules, but the modules themselves were designed in a way that allowed skipping exercises or parts of modules.

The portfolio method was used as an assessment method during the course. Each participant had to include materials from the modules they covered, pass an online test for each module, and the end product of the project task. Furthermore, online interaction and a Learning diary in the blog function of Moodle were also part of the portfolio.

Participants reported to join the course for various reasons. Most importantly they needed to improve their English language skills in the area of expertise; that is, in information technology. As IT teachers, they were also interested in joining an e-learning course and professionally the methodology of e-learning appealed to them. As an international online course, participants were also hoping to find international contacts in the participating countries. Finally,

financial considerations were also mentioned as motivating factors, as the course was supported by the European Union and was offered to the participants for free.

The tutors in the online language course were teachers of English who had a 4-week facilitator training before the language course started. The training was designed to develop their online tutoring skills, so that they can act as online tutors in the 'IT English' online language course for IT teachers. The learning material consisted of five modules covering the theory e-learning and e-tutoring, the basic functions of Moodle as a learning management system used in the IT course, techniques of feedback and evaluation in e-learning, the IT course, and facilitating in the IT course, including management of learning and administrative duties. Each module in the E-tutor course contained detailed information on the topic, links and explanations for more detailed studies, a project task, a self-evaluation test, a glossary of terms and a forum for discussion. The structure of the course was similarly designed to the IT language course as most participants were new to facilitation and were supposed to act as online facilitators in the IT course immediately after the e-tutor course.

Evaluation in the e-tutor course was based on an electronic portfolio that participants had to hand in. The portfolio contained materials from the five modules, the results of the online tests on each module, a project task based on international collaboration, the learning diary and evidence of the participation in the online discussions. The electronic portfolio was also similar to the requirements in the IT tutor course, and was a new type of assessment tool for teachers.

In the Precise Project nine facilitators worked in four countries altogether with 175 learners-teachers. Two facilitators were from Bulgaria (F10, F11), three from Romania (F12, F13, F14), three from Hungary (F15, F16, F17) and one from Portugal (F18), all of them were women. Table 6 shows the number of groups and learners in this project.

Table 6

Number of groups and participants in the Precise Project

Facilitator	Number of groups	Number of learners	Nationality
10	1	11	Bulg
11	1	11	Bulg
12	1	34	Hun
13	1	20	Hun
14	1	20	Hun
15	1	25	Rom
16	1	17	Rom
17	1	16	Rom
18	1	21	Por

The background data about the facilitators is based on the interviews conducted with each facilitator (see Section 3.4.2.).

Facilitator 10 (F10)

F10 was a Bulgarian facilitator, an English language teacher and translator from Plovdiv. She worked as a consultant and language instructor in the Bulgarian business sector. She had little experience in e-learning and online facilitation, but as the company she worked for offered trainings in various fields, she was very motivated to participate. In the Precise project she facilitated one group of 11 learners.

Facilitator 11 (F11)

Facilitator 11 was a senior university lecturer at Sofia University in Bulgaria, specialized in teaching grammar courses within the Integrated Skills course. She was relatively new to distance education, but as her university also introduced Moodle to support blended learning, she was very motivated to participate in the training and the language teaching programme as well. In the Precise course she facilitated one group of 11 learners, who were IT teachers learning English as a foreign language.

Facilitator 12 (F12)

Facilitator 12 was the most experienced online facilitator in the project. As a qualified teacher of English, she worked as a coordinator and educator at the National Digital Secondary School network in Budapest, Hungary, where she offered both pedagogical and methodological support in e-learning to facilitators and faculty. In the Precise project she facilitated the largest group of 34 learners.

Facilitator 13 (F13)

Facilitator 13 was a young Hungarian teacher of English at the Gábor Dénes College in Budapest Hungary. The school mostly trains IT specialists, so she acted both as a face-to-face vocational English language teacher and an online language instructor in the courses. She had some previous experience in online facilitation, and she participated in facilitator training before. In the Precise project she facilitated one group of 20 learners.

Facilitator 14 (F14)

Facilitator 14 was a Hungarian secondary school teacher who teaches in a Budapest vocational school. The school is specialized in information technology, so she had a lot of experience in teaching technical English. She was involved in a number of projects in Hungary related to teaching English in vocational schools, but she had limited experience in e-learning. In the Precise project she facilitated one group of 20 learners.

Facilitator 15 (F15)

Facilitator 15 was a Romanian teacher of English, working at the Romanian Society for Lifelong Learning in Bucharest. She had limited experience in facilitating e-learning courses, but was motivated to participate and use the knowledge in her own institute. In the Precise Project she facilitated a group of 25 adult learners of English.

Facilitator 16 (F16)

Facilitator 16 worked at the Romanian Society for Lifelong Learning in Bucharest. She had no experience in online learning or facilitation, but was very enthusiastic to learn and apply the strategies in the project. In the Precise Project she facilitated one group of 17 learners.

Facilitator 17 (F17)

Facilitator 17 was an experienced trainer, translator and interpreter from Romania. She works at Bell Bucharest as a business and general English trainer and translator, and also an IT analyst. She has a number of years of experience

in e-learning and facilitating adult learners. In the Precise project she facilitated one group of 16 learners.

Facilitator 18 (F18)

Facilitator 18 was a teacher of English at the IEBA Centre of Entrepreneurial Initiatives Beira Aguieira in Montagua, Portugal. She had some experience in participating in e-learning projects but this was the first time when she facilitated language learning in Moodle. In the Precise Project she had one group of 21 learners from Portugal.

During the Precise course all facilitators worked in their own countries, using their native language for further help if it was necessary, whereas in the second phase of the course international teams of four learners were created and facilitated by one of the facilitators. The working language in these groups was English. All the facilitators had previous experience in teaching English at mixed levels, and 75% also taught English for Specific Purposes (ESP), typically Business English. The Hungarian facilitators also had experience in teaching IT English, as the coordinating institution (SZÁMALK Szakközépiskola) has long traditions of teaching IT English to their students. All the facilitators had previous experience in teaching adults, mostly in private language schools or at university, and two facilitators had some experience in online teaching as well.

Moodle was chosen as a learning management system (LMS) in the Precise Project as well. Besides the basic functions that were described in 2.1.1., the Blog function of Moodle was used extensively in the course. On one hand,

participants were prompted to publish an individual learning schedule in the blog where they had to plan their monthly progress in the material. Also, their task was to record their progress in the form of a Learning Diary in Moodle, partly to monitor their own learning, partly for the facilitator to identify problem cases or give feedback.

3.3.3. Study 3: The KSzK project

The e-learning language teaching project was introduced at the Government Centre for Public Administration and Human Resource Services (KSzK) in 2005 with the aim of providing flexible and high standard language learning opportunities for the Hungarian public sector. Participants in this project were civil servants and managers for public administration, whose language level was at a pre-intermediate level. Although the course was not recommended to those who had very low language skills and limited language learning experience, it was offered at all levels from A1 to C2, and between 2006 and 2008 over 2500 public servants attended the English and German language courses. 82% of all participants finished the course successfully, and 11% dropped out (Héder, 2008). The aim of the course was to broaden vocabulary; systematize grammar; and develop reading, listening and writing skills, raising the learners' language skills two levels according to the European Framework of Reference.

All participants had to sign a contract with their workplace, and had to agree to the course requirements (raise their language skills with two levels). They were also required to pay a reduced fee for the course, and if they decided

to quit the course, they had to pay the complete course fee. The facilitators sent regular reports about the learners' progress to the work places, thus the learners were both intrinsically and extrinsically motivates to finish the course.

The language course lasted for six months, but participants had access to the learning materials for 12 months, which offered enough flexibility to match the course requirements with their regular duties. The course started with a face-to-face Preparation Day and finished with a face-to-face Exam Day. At the Preparation Day the tutors introduced the course material, the online learning management system, and the exam requirements to the participants. In the following six months learning was supported by trained facilitators online, with monthly consultations if necessary. Participants finished their training and received their certificates after passing a written exam based on the course material. They could register for the exam within a year after starting the training. Participants could chose if they wanted to participate in a tutored course or preferred to study individually, and 65% of the learners opted for learning in a group with a tutor.

The learning material of the courses was based on the Tell me more multimedia software, which is available at different levels in multiple languages (English and German were used here) and its online version allows its use in e-learning courses. The software contains hundreds of multimedia exercises to practice all skill, including speaking skills due to its speech recognition technology.

The facilitators in the programme received a four-week training and were supported by a number of documents: Program description, Facilitators' handbook, Learning Guides for participants, Presentations for the face-to-face

sessions, prepared documents and exam procedures. Technical support was also provided by the helpdesk at the institute. Facilitators used forums to communicate with the participants and offered regular group tasks (webquests) to the study groups. Webquests were used to enhance interaction between members of the group and offer real-life language skills to participants. The learning progress was monitored using the software's internal activity log system, and required the successful (60% or above) coverage of at least 90% of all language tasks.

Facilitators in this project had a contract with the institute and started working on the language course by focusing on the administrative data provided by the course organizers, which basically meant getting to know the participants' background. The facilitators asked the participants to provide further data about themselves by filling in a questionnaire about their language level, previous language learning experience, language learning needs and motivation. The study groups were composed by the facilitators based on the basis of language level, region, interests, and motivation with minimum 12, and maximum 24 learners in a group. Before the training, the facilitators created online forums with general and specific goals: 'Questions and answers' forum for discussing any questions related to the course material, webquest forums for each monthly webquest, unmoderated forum for discussing any topic the participants initiate, Language Practice forum the language of which was strictly the target language (as opposed to the other forums where participants could decide which language they would like to use), Frequently Asked Questions forum for asking and answering frequently reoccurring problems, and a Technical forum. During the instructional period, the facilitators had to

introduce the participants to these forums, explain the differences among them and they also had to maintain the forums, that is monitor the discussions and copy misplaced messages to the relevant forum or open new discussions for new topics. The forums were also moderated regarding netiquette rules.

At the initial face-to-face consultation the facilitators introduced the course and its requirements, asked each participant to plan their own learning and upload a schedule for themselves to the forum. The schedule was discussed and modified in accordance with the learners' time schedule, previous learning experience and language level. Later in the course the facilitators had to check whether the schedule was followed by the learners and they could intervene in problematic cases. During the course the facilitators' main role was monitoring learner progress, motivating learners, organize small group work for webquest projects, giving feedback, administration, and answering learner questions. Once a month all tutors offered a 60-minute online consultation session where participants could ask any questions and discuss problems in connection with the course. At the end of the course all learners had to take an exam, and based on their progress a Certificate was awarded to them. The certificate contained the exam results, the formal evaluation and an individual evaluation by the tutor focusing on the learner's strengths and weaknesses. The courses were closed by the tutors' documentation, course evaluation and self-evaluation.

The e-learning language courses at the KSzK were supported by 7 facilitators, all language teachers and trained e-learning tutors. They had previous language teaching experience but were novice e-learning facilitators, who received their first facilitator training before the course. During the training

the facilitators signed a full-time contract with the Institute, and they facilitated
190 – 300 learners at the same time.

Facilitator 22 (F22)

Facilitator 22 was a trained language teacher of German. She has
considerable experience in language teaching as well as materials design, being
one of the authors at a national project producing ICT enhanced course material
for secondary school learners. She participated in the facilitator training at KSzK
and worked as a full-time online facilitator for four years.

Facilitator 23 (F23)

Facilitator 23 was a trained as an English language teacher, with a second
degree in Marketing. She has more than twenty years of teaching experience
with varied age groups starting from kindergarten children to adult education,
and in varied topics from general English to ESP and Business English. She had
some experience as an online learner before she started facilitation, but the
KSzK course was her first distance course and received facilitator training prior
to the course. She also had a special group of learners who were involved in the
Roma project and applied for the course grant. They were not very motivated at
different language levels and with different technical skills. They reported to
have bad learning experiences and personal problems as well. The language
course was not very useful for them, she said; however, she thought that „the
training gives the self confidence".

Facilitator 24 (F24)

Facilitator 24 was a teacher of German, and as a student studied in Germany where she met ICT tools for the first time. After graduation she was teaching General German to adults. She did not have any e-learning experience before joining the facilitator training but showed considerable interest in using ICT for language instruction. She had fewer learners in the project (150), as fewer people wanted to learn German than English among the civil servants.

Facilitator 25 (F25)

Facilitator 25 was a teacher of English and History, and was teaching mostly adults. She had no experience with e-learning as a learner or as a facilitator; she received her training at the Ski before the project. She also participated in materials development and examination procedures development in the project.

Facilitator 26 (F26)

Facilitator 26 was a trained teacher of English and Mathematics. She had experience in teaching in primary and secondary schools, and also worked as an interpreter and translator. She lived in a little village in the northern part of Hungary, which influenced her work as a facilitator. When she applied for the job of a facilitator, she was looking primarily for a job that can be done from home, and she previously participated in an e-learning teacher training course as a learner.

Facilitator 27 (F27)

Facilitator 27 was a young teacher who graduated as a teacher of English and Russian in 2007. She had some experience in teaching general English in secondary school and teaching adults in private language schools. She had not participated in online instruction neither as a learner, nor as a facilitator. She was not trained as a facilitator; she only received a quick overview of the courses at KSzK prior to starting teaching in the project. She was facilitating three groups for 5 months, where the group sizes varied between 15 and 30.

Facilitator 28 (F28)

Facilitator 28 was a young teacher who previously worked as an ESP teacher at SZÁMALK secondary and vocational school. She had experience in offering language course for adults but had limited experience in e-learning. As she joined the group of facilitators at the institute later, she received a quick training in facilitation and courses. She was facilitating 4 groups for 5 months, where the group sizes varied between 15 and 30.

The language teaching material at this course was based on the Tell Me More software. There were several reasons for choosing this as course material; first, the software is available at multiple levels; second, its online version allows multiple users to access the course at the same time with easy technical background; finally, the software records all user data, including the mails sent and received by participants. The only major requirement that the Tell me more software did not offer was a communication platform where learners could engage in interaction with each other. To tackle this problem, the institute

developed a course forum platform, a closed forum used only by the participants. It included all the opinions, frequently asked questions, problems, learner activities, and facilitator activities.

All participants filled in a diagnostic language test in the Tell Me More software, and based on this they are enrolled in the appropriate course level of the software. After the sixth months of the training all participants had to fill in a multiple choice language test that aimed at measuring their progress. The test was similar to the end-of-course test which served as an exam and was rewarded with a certificate. The language goal for participants was to successfully accomplish two levels of CEF.

Before joining the course, participants had to fill in a self-report questionnaire about their technical skills and access to technology. After finishing the course participants filled in a feedback questionnaire on technical and methodological questions, and also on learner satisfaction (regarding course material, supplementary materials, facilitators, organization, communication and self-evaluation) about the course. Facilitator work was evaluated on the basis of their activities in the online learning material, the internal mailing system, their forum participation, learner evaluation, facilitator portfolios, self-evaluation and a structured interview.

The Learning Management System of this course was a system developed by the technical personnel of the institute, to specifically supplement the administration system offered by the online version of the Tell Me More software package. The basic functions participants used this system for was forum discussion, group work activities, handing in tasks, giving feedback on tasks, reporting results, and interaction with the facilitator. Activity logs and

participation data from the language learning tasks were checked by the facilitators in the Tell Me More system. This double administration caused some difficulties in course administration, as it will be described in the Discussion chapter.

3.4. Methods of data collection and data analysis

This thesis sought to develop an understanding of how facilitators work and what roles they take during e-learning courses. The collection of empirical data was chosen to be applied with the longitudinal examination of three e-learning teacher training language courses. Activity logs were recorded and analysed using quantitative data analysis procedures; whereas qualitative data were collected from the interviews with the facilitators and analysed using the constant comparative method of analysis.

3.4.1. Activity logs

Since knowing the behavior of online facilitators would be crucial for effective facilitator training and e-learning courses, it is important that new research methods are used to observe and monitor online behavior. However, limited research is available that study online behavior using data in spite of the fact that similar methods have been applied in business (Hung & Zhang, 2008). Hung and Zhang (2008) used data mining methods to describe the online patterns of learning behaviours of undergraduate students in Taiwan. The analysis was based on a number of variable derived from the log file, for example total frequency of logins, total frequency of accessing course materials, total number of messages posted, total number of synchronous discussions attended, total number of messages read. Based on the data, first a descriptive statistical analysis was provided; then an artificial intelligence analysis was applied to build a model for online learning performance (p. 429). The results of

the study show that data mining techniques are powerful tools for discovering online behavior, however, more user-friendly tools would be necessary for a more general application.

Although the study described above focused on learner behavior in an online environment, the data analytical techniques can be applied for the observation of facilitators as well. As there are significantly fewer facilitators participating in the courses than learners, a meaningful statistical analysis can be applied for describing their presence in the online environment, but more data would be needed for finding groups of facilitator behaviours based on the cluster analysis of data.

In the present study, data mining techniques were used to map facilitator behaviour in the EPICT course. Activity logs were collected from all the facilitators who worked with the groups during the 8 months of the training (for a sample of data log see Appendix C). The logs contained data on the total frequency of facilitator hits, total frequency of accessing groups, total number of messages posted, and the total number of synchronous discussions attended. A descriptive statistical analysis of the data was applied to show the online behaviour patterns and online presence of facilitators in the EPICT course.

3.4.2. Facilitator interviews

In the research project each facilitator of the three online courses was interviewed after the courses finished. Generally, three types of interviews are distinguished in the research methodology literature: structured, unstructured

and semi-structured (Dörnyei, 2007:134). Structured interviews, similarly to the questionnaire-type data collection, are based on a well prepared list of questions, and leave little space for flexibility. Unstructured interviews, on the other hand allows the interviewee to control the topics, with as little interference from the researcher as possible. Due to the exploratory nature of the present research, as in the case of most applied linguistic research, semi-structured interviews were chosen to be the most suitable for data collection.

The facilitator interview (see Appendix A for the English version and Appendix B for the Hungarian version) contained 26 questions arranged around six broad topics. The first four questions referred to the facilitator's previous training and experience, and served as warm-up questions to set the tone for the interview. The facilitators also had a chance to start off from a positive note and express their interest and expertise in the project, and also during this phase of the interview they became comfortable with the recorder. The interviews were conducted in Hungarian with the Hungarian facilitators; and in English with the international facilitators in the Precise Project.

The initial interview questions were followed by the content questions, which were grouped around 5 broad topics: the facilitator's evaluation of his/her groups in the training, the facilitator's report on his or her own participation in the course including time management and group management strategies, the facilitator's evaluation of the face-to-face meetings, the facilitator's opinion on the initial training they received, and the facilitator's opinion on their roles in the e-learning projects. The interviews were closed by some closing questions about anything else the facilitator wanted to add. The order of the questions in

the content part of the interview was adjusted to the interview, ensuring the most

natural way of data collection.

4. Results

In this section, the results of the quantitative analysis of the course logs and the results of the qualitative analysis of the interviews will be presented. The discussion of the results will follow in Chapter 6.

4.1. Results of the course log

During the research the online presence of individual facilitators was examined with the goal of getting a better understanding of facilitator work and roles. The facilitators' working habits will be described using the results obtained from the EPICT Moodle log files. The system records each 'hit' a participants initiates, that is each time a participant logs in, clicks on a link, or posts a message online, the log file stores that information. The hits of each facilitator were recorded and processed using SPSS frequency counts, and then grouped according to months to analyse the longitudinal behaviour of facilitators, and according to groups to examine whether facilitators' online presence depends on the groups they work with. When presenting the data, some explanations are added from the facilitator interviews.

4.1.1. An overview of facilitator presence in the course data

Online participation of facilitators in the course is shown by numbers recorded at the EPICT course (Table 7). Nine facilitators worked for 8 months, and on average they interacted with the Learning Management System 3.0261 times a day. This means they logged into Moodle and visited their groups, wrote messages to the forum, gave feedback, or occasionally chatted with their

learners. The average number seems to be rather low, the standard deviation, however is high, and there is a considerable difference among the facilitators as well. It seems that an eight-month course results in big differences both in the frequency of participation and fluctuation.

Table 7

Online presence of facilitators in the EPICT course

Facilitator	Mean	N	Std. Dev.	Minimum	Maximum
1.00	3.8721	1915	9.00295	.00	140.00
2.00	2.3686	776	6.23793	.00	61.00
3.00	3.8290	1298	7.88135	.00	66.00
4.00	3.2512	1047	5.42681	.00	45.00
5.00	2.4159	529	6.87862	.00	50.00
6.00	2.9389	524	9.56772	.00	105.00
7.00	2.4756	1228	6.80598	.00	70.00
8.00	1.5367	518	5.13470	.00	48.00
9.00	1.8684	494	6.59621	.00	57.00
Total	3.0261	8329	7.48371	.00	140.00

The distribution of the monthly presence of the nine facilitators in the EPICT course is relevant because teacher training courses are often planned in a way that is not adequate for the participants. When designing a long course for teachers, their monthly duties at their schools should also be taken into consideration. The EPICT course was launched at the end of September and finished in early June. The design of the course planned for an even distribution of workload on a monthly basis, counting on lower participation during December. The monthly presence of facilitators is shown in Table 8, by calculating the average number of hits per day to avoid the misinterpretation of data due to the different lengths of months, and so that the first week of the

course in September and the last two weeks of the course in June could be compared to the full months.

Table 8

Presence of all facilitators in the EPICT course

Month	Fac 1	Fac 2	Fac 3	Fac 4	Fac 5	Fac 6	Fac 7	Fac 8	Fac 9
Sep	5.4	2.28	4.6	5.07	11	4.17	0.88	0.72	6.78
Oct	10.75	5.53	6.48	3.85	5.52	7.13	4.48	2.52	4.3
Nov	5.14	3.9	3.73	5.67	1.28	1.38	2.98	5.11	1.01
Dec	1.97	1.04	2.35	2.31	1.73	1	1.24	0.47	2.23
Jan	2.71	1.75	1.7	3.52	2.13	4.02	1.98	0.15	0.87
Feb	1.36	1.59	2.58	3.46	1.5	0.66	2.49	0.67	0
Mar	4.32	1.66	6.16	2.79	1.06	1.68	1.52	1.09	0
Apr	1.41	0.93	2.87	0.98	2.58	0.78	1.72	1.17	0
May	2.85	2.1	4.65	2.68	0.71	1.52	1.81	1.12	0
Jun	3.73	2.89	3.45	2.98	5.79	12.21	2.96	2.19	0

The results indicate that although the facilitators had different individual working methods, there is a pattern of facilitator presence during the course. The highest numbers of monthly hits typically occur at the beginning of the course (see Facilitator 5 in September or Facilitator 1 in September). There is another peak in the number of hits in June, just before the course finished and all assignments had to be handed in by the deadline (Figure 11). December, February and April were the least active months, which is important to know for organizers of teacher training courses. Although low participation data in December had been anticipated by the organizers, the low participation in February and April was not, and the possible reasons for it will be discussed in Chapter 7.
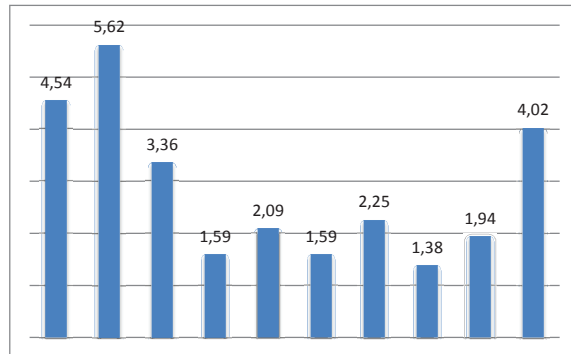
Figure 11. Facilitator participation during the EPICT course

It is also interesting to observe that facilitators, besides the common pattern shown above, fluctuated in their participation. It is difficult to find the reasons for it from the data, but the qualitative analysis of the interviews offered some explanation and insight into the patterns of course participation, and also highlighted some of the reasons for the differences. Figure 12 shows the participation data of the nine facilitators compared to each other.
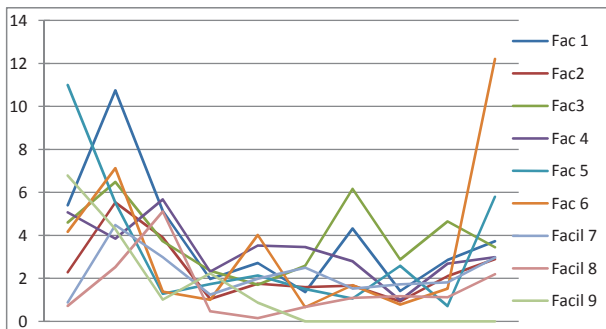
Figure 12. A comparison of facilitator participation in the EPICT course

The reasons for the individual differences are worth exploring, so the results of facilitator participation were further explored on an individual scale. The data of each facilitator were examined with their participation in the groups they were working with to see whether the online presence of facilitators was influenced by the group characteristics or the individual participants. The results are show in Figure 12; the individual differences and the reasons for the patterns as compared to the facilitator interview data will be discussed in Chapter 6.

4.1.2. Individual differences of participation patterns of facilitators

Facilitator 1

Facilitator 1 is an experienced teacher of informatics, a former school director, and self-employed educational consultant and trainer. He works in one region of Hungary extensively; therefore, he is familiar with all the school directors in that region and also knows most of the teachers. In the EPICT project he facilitated 29 teachers in 7 groups, so by far he was the busiest facilitator in the course. His presence in the course was on-going and regular, in the interview he reported that he checked his e-mail account five times a day, so that he could reply to any questions immediately. Also, even if there were no e-mails from the EPICT system, he logged in to each of his group every day, including the weekends. Table 9 shows Facilitator 1's presence in the EPICT course monthly, with the first column showing the average number of hits in each months in each of his groups, and the second column showing the average number of hits each day per group. These data offer the possibility to show the

facilitator's presence during a nine-months long course, regardless of how many

groups the facilitator had.

Table 9

The online presence of Facilitator 1 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	32.43	5.40
Oct	333.14	10.75
Nov	154.29	5.14
Dec	61.14	1.97
Jan	84.00	2.71
Feb	38.14	1.36
Mar	133.86	4.32
Apr	42.29	1.41
May	88.43	2.85
Jun	44.71	3.73

The distribution of work during the months of the course was rather

uneven. Launching the course required much stronger facilitator presence than

finishing it, whereas January and April were the two months that required the

least online work (Figure 13). In spite of the relatively low participation of the

facilitator towards the end of the course, all the groups successfully finished the

training and submitted all assignments in time.
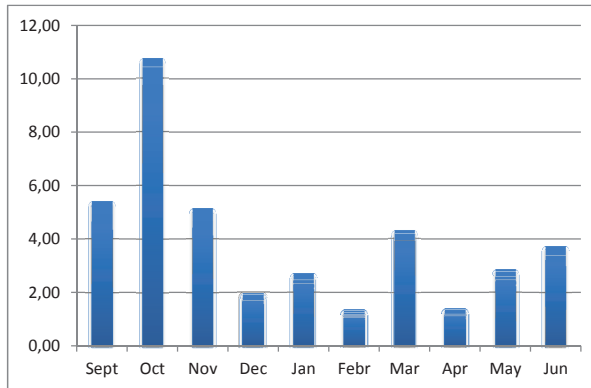
Figure 13. The online presence of Facilitator 1

It was typical of all the seven groups of Facilitator 1 that the members were either from one institution or one village, and they knew each other rather well. Consequently, at the beginning of the course it was rather difficult for the facilitator to motivate them to use the Moodle system not only for downloading and uploading assignments, but also for communication and problem solving. As the area where these participants came from is not very well equipped with computers and technology, at the beginning of the course the members of a group worked offline in a number of cases, by for example sitting down together around one computer in the school, one of them logged in, and they solved the tasks together. Although learning happened and a lot of work was done by the group, the facilitator could not check whether all the group members participated in solving the task or not.

Facilitator 1 had seven groups in the EPICT training, and the number of hits shows his presence in each group (Table 10). In the interview Facilitator 1 described *Group 1* as a very successful group, from one school specialized in

teaching children with hearing difficulties. The members of this group worked together very well and had good working methods in the school. A file sharing intranet system was used in the school; the most active member of the group downloaded the files and tasks from the EPICT Moodle and uploaded them to the intranet, where the other members could start working on it. However, this meant that the group had very little evidence on how much they worked in the EPICT system. Facilitator 1 had to explain to them how a learning management system works and what is administered in this course. After the initial problems, this group was the most active in the course, frequently used the chat option, and had good technical and teaching skills. Members of *Group 2* worked in the same school as well, but had more technical problems due to the lack of computer skills. Another problem in the group was that the director of the school was also a member and this resulted in some unpleasant situations. The director approached the facilitator in the middle of the course and said she wanted to quit due to lack of time, but the facilitator's opinion was that she felt uneasy because the other members of the group performed better in some of the tasks. Eventually, she stayed with the group and was mentored by one of her colleagues in the school.

Table 10

The online presence of Facilitator 1 in the EPICT groups

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Sept	45	28	33	33	30	33	25
Oct	345	355	293	468	215	403	253
Nov	221	109	186	194	73	169	128
Dec	63	109	54	69	49	51	33
Jan	90	62	147	64	76	85	64
Feb	37	33	30	30	31	56	50
Mar	109	95	210	65	315	37	106
Apr	22	3	48	103	27	48	45

| May | 56 | 125 | 112 | 69 | 139 | 65 | 53 |
| Jun | 30 | 94 | 51 | 31 | 39 | 53 | 15 |

As in the other groups, *Group 3* profited a lot and successfully finished the course due to having an active and computer literate member. Facilitator 1 emphasized the relevance of having a group member who takes on the role of a group leader and motivates the other members to participate. Typically, this member had considerably better technical skills than the others in the group. In *Group 4* it was the only male member, who worked as a system administrator in the school as well. He tried to share the job among the members but was willing to add the final touches to the product. Members of *Group 5* were from different villages but they knew each other well. They lost one member who was a director in one of the schools but was dismissed during the school year with no particular reason. The members of the group tried to support him both professionally and personally but obviously it had a negative effect on the performance of this group. The facilitator tried to keep him in the program but was not successful eventually. Members of *Group 6* and 7 come from the same town, but from different institutions. The facilitator explained that the weakest group was Group 6, both professionally and technically. The members of this group were lower primary teachers and the head of the kindergarten in the town. Although she had no access to the internet in the kindergarten, so she had to use the computer in the school where the other members worked, she became the group leader and eventually could pull the group together and they could finish the course. *Group 7* was the least active group (see Figure 14), and needed strong offline support from the facilitator, who had to meet them or talked to them on the phone several times.
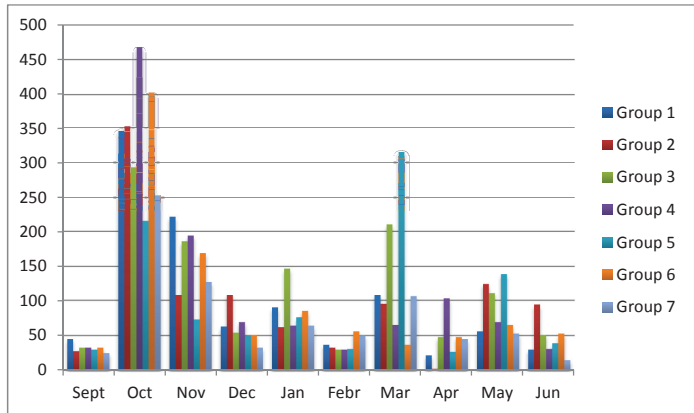
Figure 14. The online presence of Facilitator 1 in the groups

Facilitator 2

Facilitator 2 was a young teacher with a degree in Information Technology and Pedagogy. He had been involved in various e-learning projects previously, both as a participant and as an instructor, including the facilitation of upper primary learners. He acted as one of the co-ordinators in the adaptation of the EPICT course material, setting up the Moodle system and recruiting members to the course as well.

Besides facilitating three groups in the EPICT course, he had many other duties, so he himself had a rather critical opinion of his own work in the project. The number of hits (Table 11) indicate that he was active at the beginning and at the end of the course, although he also spent considerable time in the system during the whole course, but both his daily and monthly presence in the course were lower than the presence of other facilitators in the EPICT course,

Table 11

The online presence of Facilitator 2 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	13.67	2.28
Oct	171.33	5.53
Nov	117.00	3.90
Dec	32.33	1.04
Jan	54.33	1.75
Feb	44.67	1.60
Mar	51.67	1.67
Apr	28.00	0.93
May	65.33	2.11
Jun	34.67	2.89

Facilitator 2 worked with three EPICT groups, and in the most active month, October, he reached 5,53 hits a day in each group on average. In April, the least active month of the course he reached less than 1 hit a day (0.93) (See Figure 15).
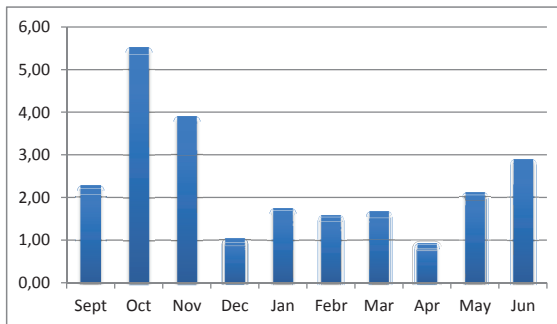
Figure 15. The online presence of Facilitator 2

Facilitator 2 was responsible for three EPICT groups, all of the participants in these groups were either kindergarten or lower primary teachers. It was debated in the EPICT course whether these teachers should participate in the course at all, as on one hand some kindergartens have the technical equipment and trained staff that would allow the ICT training of teachers; on the other hand, however, the EPICT training materials are primarily aimed at upper primary or secondary school teachers. This resulted in another responsibility for Facilitator 2: he had to negotiate with the participants whether the module tasks were meaningful for them or not, and if not he had to formulate the task requirements to match the needs of the kindergarten teachers. Facilitator 2 explained in the interview how difficult it was sometimes to do:

> „The problem was that the participants' motivation in these groups was rather low, as the learning material is not aimed at them. The examples and tasks in the modules are not relevant in kindergarten. For example, tasks about using computers for teaching the process writing approach, or classroom organization tasks are not relevant in kindergarten. Even the module on games requires reading and writing from the students, so they could use very little of that as well."[F2]

Facilitation in the three groups was different both regarding the hits of the facilitator per month (See Table 12) and the types of difficulties they had to face, as it was explained in the interview. *Group 8* had four members, all of them were kindergarten teachers from two institutions in one town. Both directors of the two institutions participated in the course. Facilitator 2 explained that because they meet regularly, their use of the Moodle system is limited. They

preferred working face-to-face and regularly called the facilitator on the phone as well. Their ICT skills were very basic, so when they met, they could help each other with the technical problems. As a result, their online participation was scarce but they still could finish all the tasks. Facilitator 2 had problems with initial motivation due to the lack of relevance in the modules, so he had to find alternative tasks to motivate them. One member was successfully pulled into the course by a task using digital photography, and another one was obsessed with the administrative help technology could offer. As Facilitator 2 explained in the interview, after the personal interests matching the tasks were agreed on, the group worked really well.

Table 12

The online presence of Facilitator 2 in the EPICT groups

	Group 8	Group 9	Group 10
Sept	16	16	9
Oct	193	202	119
Nov	117	123	111
Dec	26	21	50
Jan	81	37	45
Feb	43	55	36
Mar	40	36	79
Apr	28	31	25
May	53	77	66
Jun	17	47	40

Members of *Group 9* were also kindergarten teachers but form three different institutions. One of them was working in a school, and has difficulties with catching up with the tasks. The group was so sensitive towards her that without facilitator intervention distributed the tasks so that she was not overburdened with tasks and could still participate in the learning process. The group was hesitant to engage in forum discussion first and needed the

motivation to do so in one of the face-to-face sessions. They used these occasions also to plan their work for the coming period, agree on tasks and responsibilities. This, however, resulted in low participation in the online environment. An additional difficulty was that the ICT skills of this group were even lower than in the case of Group 8.
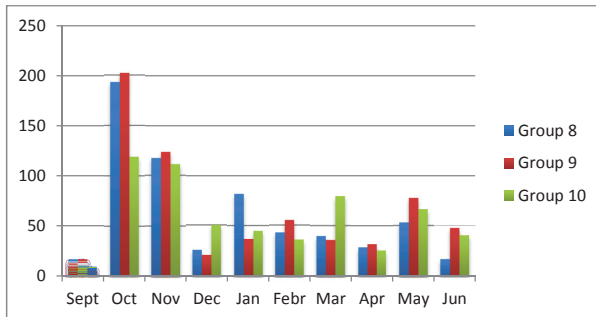
Figure 16. The online presence of Facilitator 2 in the groups

The monthly online presence of Facilitator 2 was slightly different in the case of Group 10, as this group started the EPICT course a month later than the previous two groups, as the data show that as well (green column in Figure 16). Members in this group were kindergarten teachers from the 13th district in Budapest, from different institutions. One member was a lower primary teacher and one was a Special Needs instructor. The technical skills of this group was the highest, they used computers in the kindergartens with the children in the classes regularly and creatively. They were very motivated to do the EPICT course, so it took approximately a month to keep up with other two groups. The facilitator did not invest more energy into this group interestingly; actually,

there were fewer hits in this group even in October when they needed the most support. Facilitator 2 explained in the interview that the members in this group not only used the forum regularly, but also met every Wednesday afternoon and worked on the EPICT task.

Facilitator 3

Facilitator 3 was a member of the development team as well and started working for EPICT at the earliest stages. He facilitated five groups during the eight months of the course. His presence in the course was continuous, although there are significant differences among the monthly performances.

Table 12

The online presence of Facilitator 3 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	23	4.60
Oct	201	6.48
Nov	111.8	3.73
Dec	72.8	2.35
Jan	52.8	1.70
Febr	72.2	2.58
Mar	191	6.16
Apr	86.2	2.87
May	144	4.65
June	41.4	3.45

During the course, Facilitator 3 was busiest towards the beginning of the course, in September and October (Figure 17). This is the time when the role of the facilitator is to launch the course, motivate participants to interact online and give out the tasks (as is explained by Salmon, 2000). As it was expected by the course organizers, there was a drop in activity in December, when both

participants and facilitators had holiday. However, it is interesting to see that the level of activity dropped further in January, being the least active month during the training. March was the busiest period in the second half of the training, with a lot of participation and activity towards the end of the course.
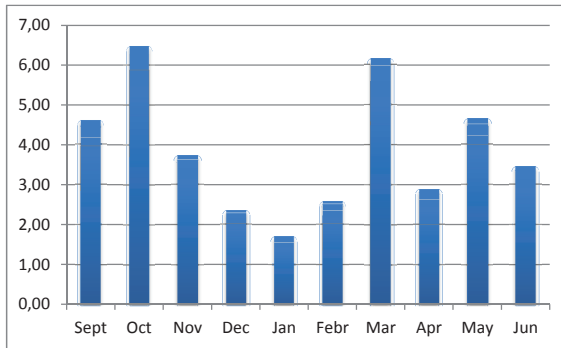
Figure 17. The online presence of Facilitator 3 in the course

Facilitator 3 had five groups in the EPICT training, and the number of hits shows that he was not equally present in all the groups. Group 12 and 14 were generally more often visited than Group 11 and 13, whereas Group 15 was completely neglected (Table 13).

Table 13

The online presence of Facilitator 3 in the EPICT groups

	Group 11	Group 12	Group 13	Group 14	Group 15
Sept	30	34	27	24	0
Oct	168	319	228	244	46
Nov	225	85	106	76	67
Dec	60	122	68	74	40
Jan	50	51	78	74	11
Feb	80	131	79	65	6
Mar	149	282	167	338	19
Apr	139	133	94	64	1

| May | 156 | 166 | 173 | 219 | 6 |
| Jun | 55 | 50 | 23 | 79 | 0 |

In the interview, the facilitator explained that *Group 11* was a little late to start the training and that had an effect on their initial work. They generally had a good working morale, with one group member who was more motivated than the others, initiated a number of discussions and motivated the other group members to work. However, this key figure in group was rather critical as well and expressed very clearly if there was a problem in the course. There was also a key member in *Group 12*, who initiated a lot of discussion and urged the other members to participate. The facilitator also noticed that genders played a very imported role in this group. The key figure being an experienced woman, the male member of the group felt that it would be rather awkward for him not to participate and let the women do all the work. This rivalry had a very positive effect on group cohesion, as they could achieve good results.

The number of hits in the case of *Group 13* was also significantly lower than in the other groups, and it turned out form the interview that the facilitator was also uncertain of the reasons. As a reply to the facilitator's inquiries, it turned out that they had no difficulties in working with each other, but used alternative ways of communication, most typically e-mail. They handed in all assignments in time, but without the facilitator knowing how they achieved the results. The largest number of hits of Facilitator 3 in the EPICT course was in connection with *Group 14*. In the interview the facilitator explained:

„This is a very difficult group. There are five teachers in this group, and everybody has a lot of personal problems. They are from Budapest, but

from different schools and there is no key figure in the group. They are of
different ages, have very different opinions as well, so there is no cohesion
in this group at all." [F3]

In other words, the facilitator spent considerably more time with a
„difficult" group than the other groups that were working well, especially with
the groups where some roles of the facilitator were taken over by one of the
group members. The case of Group 15 is interesting because this group was
formed of school directors only. The initial idea was that the directors of schools
might use this course to discuss issues of school development or management,
topics that are relevant to them but not to other participants. This expectation
was not met; the directors were interested but were not willing to work on tasks
designed for classroom teachers. They were also reluctant to share their
management-related questions, so they finally profited very little from the
course. There were directors enrolled in regular groups as well, where this
problem did not occur (See Figure 18).
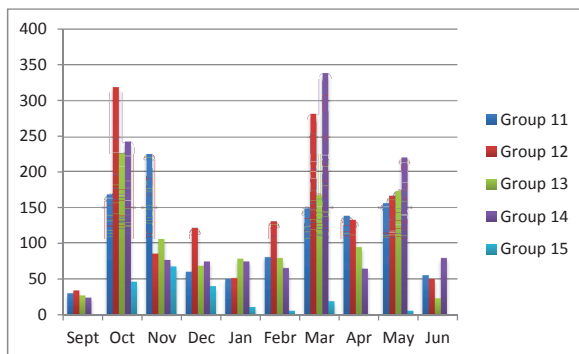
Figure 18. The online presence of Facilitator 3 in the groups

Facilitator 4

Facilitator 4 was a teacher of English with some experience in e-learning both as a learner and as an instructor. She worked as a teacher trainer as well, and was involved in the EPICT project from the early stages of materials development. In the project she facilitated 16 teachers in 4 groups, Table 14 shows her monthly presence in the course.

Table 14

The online presence of Facilitator 4 in the EPICT course

Month of the course	Average number of hits/month	Average number of hits/day
Sept	35.5	5.07
Oct	119.25	3.85
Nov	170	5.67
Dec	71.75	2.31
Jan	109.5	3.53
Feb	96.75	3.46
Mar	86.5	2.79
Apr	29.5	0.98
May	83	2.68
Jun	44.75	2.98

The distribution of work during the months of the course was rather even. More attention was paid to the groups at the beginning of the course, and there was a significantly less active month in April (Figure 19). The amount of interaction with the groups and individuals resulted in all groups finishing the course successfully and submitted all assignments in time.
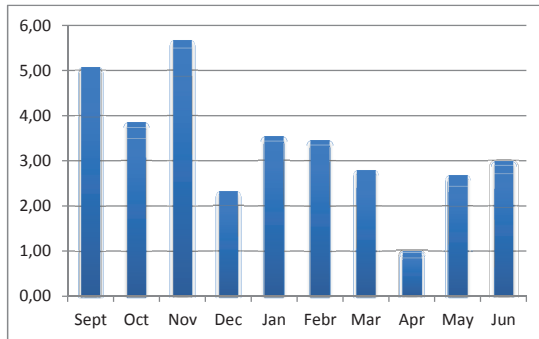
Figure 19. The online presence of Facilitator 4 in the course

Members of the Groups 16, 17 and 18 were secondary school teachers of different subjects, with three language teachers in Group 16. Members of *Group 16* came from different towns from the same area, which made the organization of face-to-face meetings problematic. Teachers in *Group 17* were from the same town, and two of them were teachers in the same secondary school. They were very active learners, asked for advice and cooperation from the facilitator very often (see Table 15 for more details). Group 19 was a group of Special Needs educators from the same institution, which is a boarding school for learners with disabilities and learning difficulties. Their special needs were not always catered for by the EPICT course material, as the facilitator explained in the interview.

Table 15

The online presence of Facilitator 4 in the EPICT groups

	Group 16	Group 17	Group 18	Group 19
Sept	42	53	35	12
Oct	160	151	82	84
Nov	167	212	173	128
Dec	82	83	69	53

Jan	101	150	83	104
Feb	78	157	84	68
Mar	79	112	82	73
Apr	32	30	38	18
May	108	85	90	49
Jun	35	86	38	20

The facilitator explained in the interview that there was a difference among the groups regarding the nature of support they needed. Typically, technical help was not given, as all groups had local technical help to solve problems. However, the groups were reported to need a lot encouragement and support in their online tasks, with Group 16 and 19 having more problems with motivation and time management, whereas Group 17 and 18 needed more instruction in interpreting the tasks and professional methodological advice was given. Figure 20 shows the facilitator activity in the EPICT groups during the course.
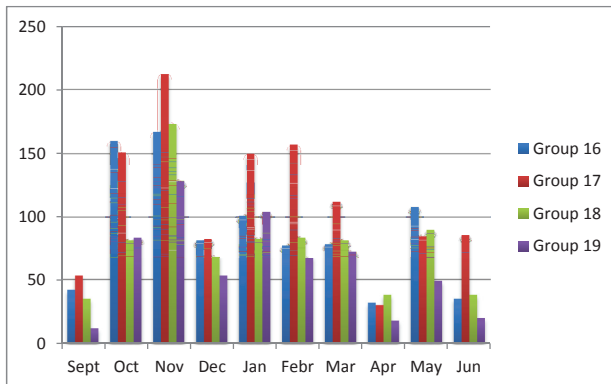
Figure 20. The online presence of Facilitator 4 in the groups

Facilitator 5

Facilitator 5 was a teacher of Mathematics, Physics and Information technology in a secondary school in Budapest, but she is also involved in teacher training and material writing. She had years of experience in offering online courses for adults, her field of expertise is using spreadsheets and word processing. As she had several other commitments, she offered to facilitate EPICT participants in a purely online format; that is she did not meet her groups face-to-face during the course, accept for the introductory day and closing day.

In the interview she explained that she did not really feel the necessity of meeting the participants, as she generally meets too many people in the courses that she cannot remember anyway. She spent considerable time in the system at the beginning of the course (see Table 16) when her goal was to introduce the participants to the course and the online learning management system. She realized quite soon that participants in both of her groups were progressing well without her help, so she decided to withdraw and let the groups work at their own pace.

Table 16

The online presence of Facilitator 5 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	66.00	11.00
Oct	171.00	5.52
Nov	38.50	1.28
Dec	53.50	1.73
Jan	66.00	2.13
Feb	42.00	1.50
Mar	33.00	1.06
Apr	77.50	2.58
May	22.00	0.71
Jun	69.50	5.79

She invested a great amount of energy at the beginning of the course, being an active facilitator in September and October with an average 11.00 hits per day. By April both groups needed some motivation form the facilitator to finish the course, which resulted in more frequent facilitator hits in June (Figure 21).
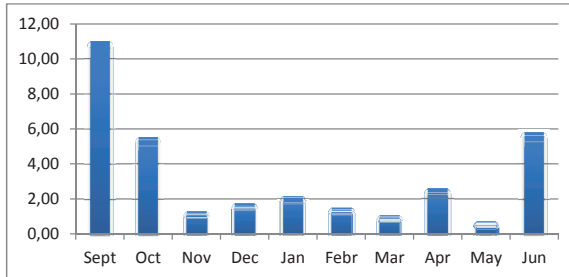
Figure 21. The online presence of Facilitator 5 in the course

Facilitator 5 had two groups in the EPICT course, Group 20 and 33. Group 20 was a group of teachers of information technology and one teacher of History. The facilitator's guess was that the ICT teachers joined the training because they were interested in the methodology of an online course more than the topics. It was clear that the compulsory modules technically did not cause any difficulty for them, although the facilitator admitted that she had very little idea how much work the History teacher put into the joint tasks.

Group 33 joined the course in the last minute; they planned to work in one group, being from the same primary school in Budapest. According to the facilitator, this was an enthusiastic group, who had access to computers in the school only; and as a result, they worked together in the school and spent very little time in Moodle. Consequently, she had vague ideas about their progress

and working methods, although the tasks they handed in were according to the schedule and of good quality. The group received the facilitator comments on the tasks well, and were ready to improve it as the facilitator suggested, so their overall achievement was appreciated by the facilitator (Table 17).

Table 17

The online presence of Facilitator 5 in the EPICT groups

	Group 20	Group 33
Sept	49	83
Oct	196	146
Nov	37	40
Dec	40	67
Jan	48	84
Feb	39	45
Mar	37	29
Apr	56	99
May	11	33
Jun	15	124

Figure 22 shows the different approaches Facilitator 5 had to take with the groups: more support was given to Group 20 at the beginning of the course, whereas all through the course, and especially at the end the 'problem' group needed significantly more attention and facilitator presence.
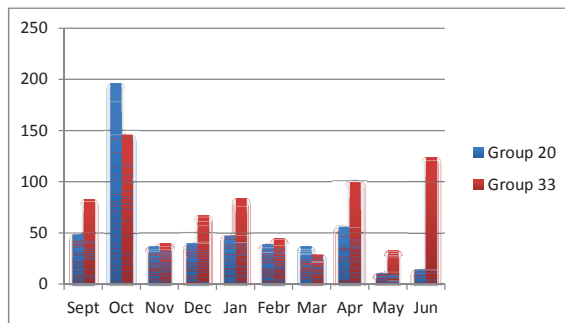
Figure 22. *The online presence of Facilitator 5 in the groups*

Facilitator 6

Facilitator 6 was the most experienced teacher and teacher trainer in the facilitator group. She is a teacher of Mathematics and Physics, with years of experience in teaching secondary school students. Recently she has been working for a publishing house that is responsible for issuing coursebooks and professional books in Hungary. Her experience in teaching online was limited, so she decided to meet her groups regularly, even if both groups were very far from Budapest, where she works.

There was some confusion at the beginning of the EPICT course with the groups, as members had difficulties with e-mails, passwords and understanding the learning management system. The facilitator mostly helped the groups with technical and management issues, often using telephone or email for communication rather than the system. This resulted in a considerable lag in both groups regarding the deadlines and finishing the course. The facilitator had to put a lot of energy into the motivation of participants to keep them in the training that is not evident from the Moodle log (see Table 18)

Table 18

The online presence of Facilitator 6 in the EPICT course

Month of the course	Average number of hits/month	Average number of hits/day
Sept	25.00	4.17
Oct	221.00	7.13
Nov	41.50	1.38
Dec	31.00	1.00
Jan	124.50	4.02
Feb	18.50	0.66
Mar	52.00	1.68
Apr	23.50	0.78
May	47.00	1.52
Jun	146.50	12.21

At the beginning of the course the facilitator tried to persuade the groups to use the system and work online, but she only managed to achieve this goal towards the end of the course. Figure 23 shows the uneven presence of the facilitator, with very few hits in November, December and February, and the highest number of hits in June. This was necessary because a lot of work was done by the participants in the last days of the training.
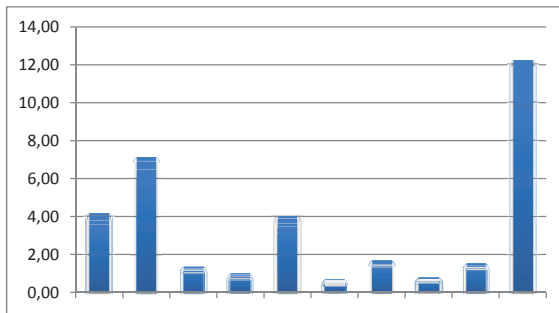
Figure 23. The online presence of Facilitator 6 in the course

Facilitator 5 had two groups in the EPICT course, Group 21 and 22. Both groups were from Borsod county, a very poor area in Hungary. Participants had limited access to computers, and also had a preference to calling the facilitator on the phone rather than using the system. The facilitator had to support the groups both technically and personally, and it also took time until the participants trusted her enough to tell her about the problems they could not solve. Group 21 needed more support towards the beginning and the end of the

course (see Table 19 for details), whereas the facilitator spent considerable time with Group 22 in January.

Table 19

The online presence of Facilitator 6 in the EPICT groups

	Group 21	Group 22
Sept	19	31
Oct	252	190
Nov	33	50
Dec	30	32
Jan	37	212
Febr	15	22
Mar	44	60
Apr	23	24
May	12	82
Jun	201	92

Figure 24 shows the difference between the treatment of the two groups, depending on how much attention they needed in the course. Facilitator 6 was experimenting with different methods to motivate the participants to use the system, and *Group 22* seemed to respond better after the December holidays in January, whereas *Group 21* realized that they would have problems finishing the course unless they put more effort into solving the tasks only in June. At the end of the course, both groups could hand in all assignments by the final deadlines, and successfully finished the EPICT course.
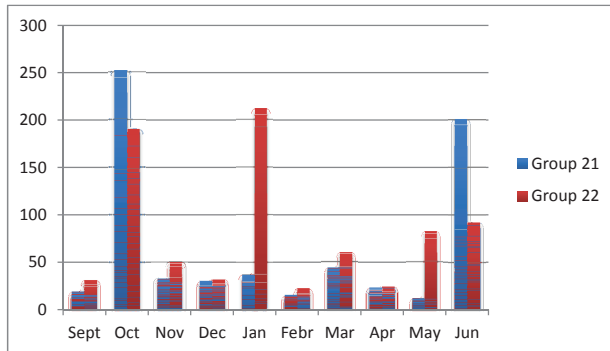
Figure 24. The online presence of Facilitator 6 in the groups

Facilitator 7

Facilitator 7 had a lot of experience in e-learning both as a participant and as an instructor, as she is employed by the training centre of one of the largest Hungarian companies. She also participated in a number of training courses, and had anticipated some problems in the EPICT course as well. She explained in the interview the importance of studying Andragogy and Group dynamics, two basic topics she missed completely from the training course offered for EPICT facilitators. The data for her online presence are presented in Table 20.

Table 20

The online presence of Facilitator 7 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	5.25	0.88
Oct	138.75	4.48
Nov	89.50	2.98
Dec	38.50	1.24

Jan	61.50	1.98
Feb	69.75	2.49
Mar	47.00	1.52
Apr	51.50	1.72
May	56.25	1.81
Jun	35.50	2.96

In the interview she argued that teachers during the December – February period are overburdened and usually very tired, so she decided not to interfere too much with the groups, but rather send them occasional messages and motivate them for hard work in the following months. After some difficult periods, face-to-face meetings, and discussions, all four groups successfully finished the course (See Figure 25).
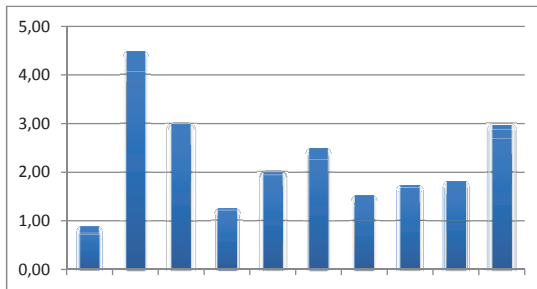
Figure 25. The online presence of Facilitator 7 in the course

In the course she worked with four groups, Groups 23, 24, 25, and 33 (Table 20). Members of *Group 23* were primary school teachers who were rather worried about cooperation within the group, as they were all teaching different subjects. Facilitator 5 had a lot of discussions with them, trying to solve this problem. Generally participants could devote little time to the course due to

other responsibilities in their schools, but as they were motivated at the beginning of the course, they could all successfully finish the course by working more actively towards the end. *Groups 24* and *25* were characterized by the facilitator as groups that were easy to work with, they were from the same school that is generally accepted in Hungary as a very motivated and highly technology-focussed teacher community. They take part in competitions, present at conference, eager to acquire new skills and hear about innovative pedagogical solutions. In the EPICT course they understood both the tasks and the working methods and could cooperate with the facilitator very well. As it can be seen from Table 20, the facilitator spent most time with the group that needed most help, and devoted considerably less attention to Group 34.

Group 34 was characterized as a difficult group by the facilitator (See Table 21 for data). This group had a late start, and thus missed the first face-to-face meeting and orientation day. It took some time until they understood what is expected of them. Members here had limited technical skills and expected the course to offer them practical computer-related tasks, thus they were rather reluctant to cope with the methodological orientation of the course.

Table 21

The online presence of Facilitator 7 in the EPICT groups

	Group 23	Group 24	Group 25	Group 34
Sept	7	10	4	0
Oct	191	136	128	100
Nov	150	87	69	52
Dec	36	45	39	34
Jan	104	44	61	37
Febr	124	67	40	48
Mar	45	30	51	62
Apr	71	66	51	18
May	76	58	31	60
Jun	48	36	32	26

The members had serious problems with group tasks as well, as the initial decisions were made by leaving one member out who could only join the course later. It was difficult to accept for the new member that she had to study the topics chosen earlier without her concern. Two members of this group left the course during the training but the two remaining members finished the course eventually. Figure 26 shows the facilitator's presence in the groups.
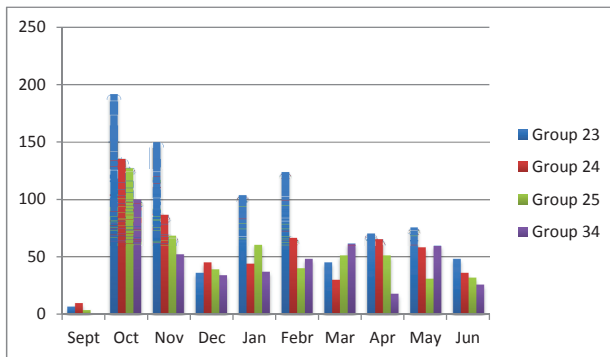
Figure 26. The online presence of Facilitator 7 in the groups

During the EPICT course an unfortunate event occurred regarding the facilitators. One of them, Facilitator 9 decided to quit the course in December. His groups were allocated to other facilitators, so Facilitator 7 also had to start working with two groups from January. Luckily, these two groups, Group 31 and 32 were highly motivated, with a very strong technical background, excellent ICT skills and personal qualities. The school director was also a member in the group, and they received considerable support for teacher training in general from their home city council. Although all members of these two

groups were from the same school, they logged in to the EPICT course on a daily basis and enjoyed working on the pedagogical ICT tasks.

Facilitator 8

Facilitator 8 was an experienced and very motivated teacher with limited e-learning training. She participated in the adaptation of the EPICT material to the Hungarian course; she was especially knowledgeable in the modules that are also part of the ECDL exam, where she works as an examiner. She expressed in the interview that she missed closer collaboration between the facilitators, but she knew Facilitator 6 in person that helped her in her work.

Her working method as a facilitator was that after launching the course she set Moodle to forward any message she receives to her private e-mail address. She regularly checked her e-mail but logged in to Moodle if there was a message she wanted to answer. This work method had two consequences: 1) she was not seen very regularly in the online system (see Table 22); in January she practically was not participating online in the course; and 2) participants started writing to her to her private e-mail address, e.g. digital e-cards for Christmas, that was a good experience for her, although this was not traceable in the online logs.

Table 22

The online presence of Facilitator 8 in the EPICT course

Month of the course	Average number of hits/month	Average number of hits/day
Sept	4.33	0.72
Oct	78.00	2.52
Nov	153.33	5.11
Dec	14.67	0.47

Jan	4.67	0.15
Feb	18.67	0.67
Mar	33.67	1.09
Apr	35.00	1.17
May	34.67	1.12
Jun	26.33	2.19

Facilitator 8 explained her attitude towards the EPICT modules as well. At the beginning of the course the compulsory modules covered the topics of the ECDL exams, with a special emphasis on the pedagogical implications. She felt secure and knowledgeable in these areas. However, in the second phase of the course the EPICT groups could choose from a variety of modules, including digital photography or games. Facilitator 8 expressed her dislike and uncertainty in the case of these modules, and felt uncomfortable answering the participants' questions about them. This might be a reason for the relatively low number of hits in the second part of the course, although she motivated her groups to finish the course and showed greater activity in June be fore the course finished (See Figure 27).
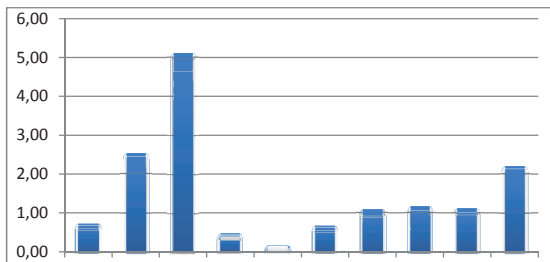

Figure 27. The online presence of Facilitator 8 in the groups

Facilitator 8 was facilitating three groups in the EPICT course: a group of primary teachers, a group of PE teachers, and a group of teachers of different subjects form the same school in Szekszárd. Members of *Group 26* were very enthusiastic, although they worked in the same school and had no internet access at home. Consequently, they used the computer room in their school to work on the EPICT tasks; they even agreed to try the chat function of the course. The facilitator explained in the interview that having limited access to technology had a negative effect on the perceived usefulness of the course, as the participants merely had a chance to get to know the materials but had little opportunity to actually include those into their own teaching. The facilitator met the group regularly and tried to motivate them through the forums, telephone conversations and private e-mails as well. In January she had no contact with the group in the online system (Table 23).

Group 27 was a group of Physical Education teachers, for whom it was rather difficult to match the EPICT tasks with their work. Module B, for example, covered the topic of the development of writing skills using word processors, a topic that is not relevant in their classes. The facilitator's role and responsibility in these cases was to adjust the EPICT task to the participants' needs, in this case, the facilitator asked them to plan an event, and design posters about sports competitions.

Table 23

The online presence of Facilitator 8 in the EPICT groups

	Group 26	Group 27	Group 28
Sept	7	3	3
Oct	82	77	75
Nov	135	158	167
Dec	14	14	16
Jan	0	6	8
Feb	15	20	21

Mar	58	32	11
Apr	22	43	40
May	28	37	39
Jun	16	24	39

Group 28 was a group of very motivated teachers form Szekszárd, from the same school, who also had good ICT skills. The facilitator had regular Saturday morning chat sessions with them, and although she offered to the group to have a pure online course, they insisted on meeting the facilitator face-to-face regularly. The online activity of the facilitator was noticeably higher before and after the personal meeting with the groups (October, November and March, see Figure 28).
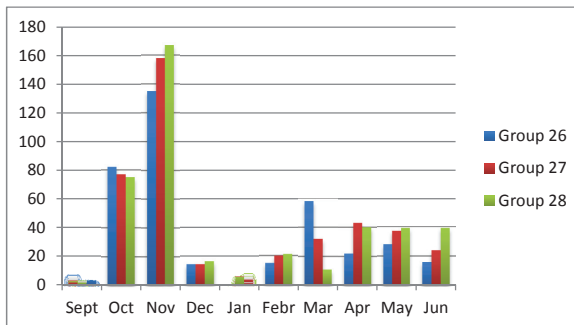
Figure 28. The online presence of Facilitator 8 in the groups

Facilitator 9

Facilitator 9 was not only a secondary school teacher of information technology, but also a teacher trainer and an entrepreneur who offers e-learning solutions to companies, and was interested in Linux system management and installation. Due to his commitments, he agreed to take part in the EPICT

project as a facilitator in the first half of the course only and left the project at the end of January.

During the months of participation, the presence of Facilitator 9 varied greatly. He started facilitation early in the course and spent considerable time with the groups in September and October (Table 24). Interestingly, his presence was the lowest in November, with December and January being more active. He already told the EPICT course organizers at the beginning of the training that he could only facilitate the first months of the course, when the compulsory modules were discussed.

Table 24

The online presence of Facilitator 9 in the EPICT course

Month of the course	Average number of hits/ group/month	Average number of hits/group/day
Sept	40.67	6.78
Oct	133.33	4.30
Nov	30.33	1.01
Dec	69.00	2.23
Jan	27.00	0.87

Facilitator 9 also explained in the interview that his original understanding was the in the second half of the training each special module would be facilitated by different experts, so he already committed himself to other tasks outside of the course. In December and January his goal was to aid the groups to finish the compulsory modules and prepare them to work a different facilitator (Figure 29).
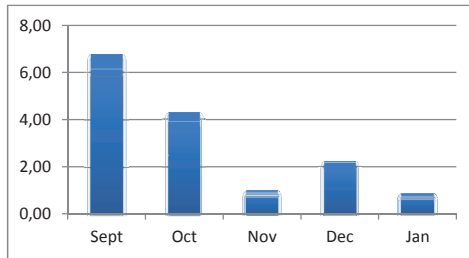
Figure 29. The online presence of Facilitator 9 in the course

Facilitator 9 worked with three groups in the course, Groups 29, 31 and 32, as Group 30 could not be launched from the beginning. Three participants were originally assigned to *Group 29*, a married couple and a teacher with limited computer skills. Facilitator 9 described him in the interview as a teacher who needed assistance in creating an e-mail address, and was very reluctant to log in to the e-learning course. In the third month of the training he stopped responding to e-mails as well and left the course. Facilitator 9 had serious difficulties afterwards with giving feedback to the two remaining members, as it was difficult to judge how much joint effort was put into the tasks. As the facilitator knew the husband personally, being a teacher of informatics himself, he could contact them and clarify the working methods of the couple. Nonetheless, the facilitator expressed his dislike about enrolling family members into the same group in an on-line course.

Considerable time was spent in October by the facilitator with *Group 31* (Table 25), that was characterized as the best group out of the three. One member of this group was a teacher of informatics and had very good ICT skills, whereas the other two members in the group were very enthusiastic and motivated to learn about the pedagogical implication of using technology in the

classroom. Although the facilitator claimed in the interview that he tried to interfere as little as possible, he still devoted most of the facilitation time to this group.

Table 25

The online presence of Facilitator 9 in the EPICT groups

	Group 29	Group 31	Group 32
Sept	48	33	41
Oct	114	191	95
Nov	45	46	0
Dec	33	70	104
Jan	23	32	26

Group 32 had four members, with one very active leading figure, two occasionally occurring members and one member with very low ICT skills who rarely participates in any of the online discussions. The facilitator claimed that having a very active member in the group might result in a situation when that single person works on the tasks and offers few opportunities for the others to join in. Another concern was the presence of the whole group at the first contact day, as the facilitator argued in the interview. Missing the opportunity to meet the group members in person and understanding the structure and goals of the whole course might cause serious problems later regarding cooperation and group cohesion. Facilitator 9 tried to solve this situation in late December and January, as it can be seen in Figure 30. He met the group in person and offered personal help to members who were trying to catch up with the tasks.
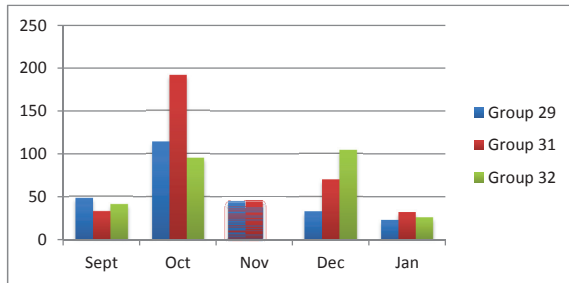
Figure 30. The online presence of Facilitator 9 in the groups

4.2. Results of the interview data

The analysis of the interview data produced 21 main coding categories (See Appendix C for a sample from the coding sheet). Five categories were established concerning the content of the e-learning courses, five categories refer to the learning management system, four categories are about the groups and the group members, and finally, seven categories refer to the facilitators in the e-learning courses. The results of the analysis are presented in a coding scheme (see Table 26), which includes the name of categories, the definitions and a sample quotation for each category.

Table 26

The coding scheme of the interviews

Name of the category	Definition	Sample quotation
THE E-LEARNING COURSE		
Course administration	The facilitator's opinion about the coordination of the e-learning course, the course organization, and administration.	The whole course lacks coordination really.
Course content	The facilitator's opinion on the modules of the e-learning course, the technical and pedagogical aims and requirements.	The compulsory modules can be studied with average technical background, but the optional modules not.
Course structure	The facilitator's evaluation of the timing, length, and the required advancement in the course.	The participants are not going to do much in the course during the end of the first school term, or at Christmas time either.
Course tasks	The facilitator's evaluation of the tasks, both compulsory and optional in the course material.	The wording of the task was not relevant for the kindergarten teachers, we had to modify it.
Face-to-face meetings	The facilitator's opinion about the necessity of face-to-face meetings with the groups, the content and organization of the meetings.	I think the face-to-face meetings are necessary, there needs to be some team building, and we also discuss basic technical problems.

THE LEARNING MANAGEMENT SYSTEM		
Activity log	The facilitator's opinion on the advantages and disadvantages of the log file produced automatically by the system. The file stores the activity of each participant in the e-learning course.	The log file showed me who were the most active members between two consultations.
Communication	The facilitator's comments regarding the synchronous and asynchronous communication channels available in the LMS: forum, chat, and instant messaging.	We did not use the chat function at all with my groups. I don't really know how to use it myself.
Design	The facilitator's opinion about the design of the LMS, including ergonomic considerations.	I see a number of problems here. The website is poorly designed, there is a lot of text on it in really small letters.
Functions	The facilitator's opinion about the technical functions offered by the system, including uploading and downloading files, testing, and evaluation functions.	I really miss a joint file library where everyone could upload their files.
Technical help	The facilitator's opinion about the technical help offered by the LMS, including software problems and forgotten passwords.	The participants could ask the technical assistant if, for example, they forgot their passwords.
GROUP DYNAMICS		
Cooperation	The facilitator's evaluation of the cooperation among the group members.	Usually one member in this group checked the task, downloaded it and sent it to the others. They agreed on who

		does what and started working. I told them that they should work in the LMS, otherwise it is impossible to check their work.
Forming groups	The facilitator's opinion on forming groups, including the group size, the subject taught by the members, and the geographical location of participants in the groups.	I really find it disturbing if there is a married couple among the members of a group.
Group development	The facilitator's opinion on the technical, pedagogical and inter-personal development of the group throughout the course.	It really happened automatically that one member of the group became the leader.
Group members	The facilitator's feedback on the individual differences of the group members, including their ICT skills and motivation as perceived by the facilitator.	All the members in this group have excellent ICT skills.
FACILITATORS		
Communication	The facilitator's method of communication with the groups, including the LMS forum, chat, e-mail, and telephone.	Sometimes I receive private e-mails, for example, I also received an e-card for Christmas.
Cooperation with facilitators	The facilitator's cooperation with the other facilitators in the course.	I sometimes write to the facilitators' forum but I hardly receive any answers.

Feedback and evaluation	The facilitator's description of his or her working methods regarding feedback and evaluation.	I usually give feedback to the task they hand in, I send it back to them twice or three times. I add my notes using the Track the changes function of Word.
Individual differences	The facilitator's background, previous training experiences, e-learning experiences.	I teach in a secondary school.
Relationship with participants	The facilitator's relationship with participants.	I knew 60% of the participants in person, especially the school principals.
Facilitator training	The facilitator's evaluation of the facilitator training offered before the course started.	There are some special modules in this course that need training of facilitators.
Work methods	The facilitator's description of the methods applied during facilitating in the course.	I always check the system in the morning as I arrive and in the evening before I leave.

5. Discussion

In this chapter, the discussion of the results from the qualitative and the qualitative data collection is presented. The organization of this chapter will follow the topics discussed in literature review (Chapter 2) and the research questions (1.2.3). First, the facilitators' opinions in connection with the learning environment and the course structure will be analysed; then the role of facilitators in catering or the needs of individual learners are presented; which is followed by an overview of the results regarding facilitating groups in an online environment. Finally, the lessons on the training of facilitators will be discussed.

In the text, relevant quotes from the facilitator interviews are cited. The facilitator is identified at the end of the quote in square brackets, and the quote is identified by a code which it has in the database of the facilitator interviews.

5.1. The learning environment

The learning environment in online courses is a basic element of instruction. The learning management system, its functions, design, and content in teacher training courses are presented to the facilitators before the course begins, generally in the facilitator training course. It is not the role of a facilitator to design the LMS, to fill it with content, or to design pedagogical tasks for the participants. Obviously, it can be the case the facilitator is involved in the planning of the course, but these considerations are out of the scope of researching facilitator roles.

Decision making about the course administration as presented in the learning management system is a task that other participants of the course, the course administrator have to make. The number of participants facilitated, the size of the groups, the entry requirements for participants, and the different ways of administration have an effect of facilitator roles, but they should cope with the decisions of the course providers.

As a result, the learning management systems of the courses analyzed were described in Chapter 3, as well as the relevant literature was overviewed in Chapter 2, but originally no research question was defined for the examination of the course organization issues. It was hypothesized that the issues related to course design and learning environment design are beyond the scope of facilitators. Although they should be familiar with them but they will not be in a position of altering them.

However, during the interviews with the facilitators it became clear that they have very strong opinions about the learning management system and course design, as it is highly relevant for them and to the roles related to them. On the on hand, when designing the course, the role of the facilitator is just one among the many aspects that need to be taken into consideration. Consequently, a number of decisions taken do not cater for the needs and roles of facilitators in the course. On the other hand, facilitators are expected to produce reports for the administration of the courses on learner progress, so the design and usability issues have a strong effect on the roles of facilitators.

5.1.1. The learning management system

Regarding this topic, four coding categories emerged from the data analysis: (1) using the activity log of the LMS, (2) the design of the LMS, (3) the functions of the LMS, and (4) the technical help offered to participants. In the following, these results will be discussed in more detail. Facilitators in the interview commented on the positive aspects of the learning management system. They emphasized that the access to the activity log helped them follow participant progress and find the ones who were lagging behind or needed support. Facilitator 1 reported using the activity log file for learner motivation as well. He showed the log file to the groups at the face-to-face meeting and confronted them with the statistics of participation.

The learning management system in the EPICT course was criticized by the facilitators for several reasons. Facilitator 2 commented on the design of the course site:

> I see several problems with the website. The design is bad, the letters are too small to read, so it is difficult to find the focus points. [F2, 108]

Another problem with Moodle was mentioned by Facilitator 1 and 8. They argued that Moodle is not user friendly with file transfers and file organizations. They referred to the participants who complained that uploading files to a directory in the LMS where the other members of their groups could access it is not possible in Moodle. Those who had access to an intranet and those whose ICT skills were good enough to use alternative solutions of file sharing (e.g. Google documents), opted for these. Therefore, the activity log did not record their presence in the course in spite of the fact that they were actually working with the course material. The other consequence of poor methods of file transfer

was that the facilitators spent more time on working out which files belonged

together if an assignment was submitted in multiple files.

> I don't see in the system how much they work. [F8,489]

> They simply can't store their work in the learning management system. They need to upload the file somewhere, then the others download it, works with it and uploads again. This is impossible in Moodle. I really miss a directory that we can use. [F8, 492]

> My other problem is that I don't see which files go together when they hand in assignments. I have to open the files one by one. [F8, 496]

Another important point was made in the interviews with the facilitators

of the KSzK training. There were over 2000 participants in the EFL courses for

adults, who were facilitated by seven full-time facilitators. Facilitating 2-300

learners at the same time put too much pressure on the facilitators who admitted

in the interviews that the regular feedback on the progress and the administrative

work they had to do kept them too busy, and they had little time left to cater for

the individual learners.

> It was difficult for me to track the progress of learners. [F26:539]

> In my experience any online course means unbelievably long and complicated administration as well. This is the boring part of facilitation. If the documentation is well structured and are used later for example for research or quality management, then it makes sense. Otherwise it is really unnecessary. [F22:547]

The KSzK project required the facilitators to send progress reports for

individual learners every three months, and keep an up-to-date administration

file about each learner. The facilitators often felt the administrative work

prevented them from focusing on more professional tasks. F22 reported to spend 10 minutes to 2 hours daily with each group, and offers a 60 minute online session every week for each group. F23 noted that in her experience those who work with the computer all day are less motivated to learn online. Typically, „language learning is done as a free time activity, and they don't want to sit down and learn even in spite of the many advantages." [F23]

Technical help was offered by the course administrators in the case of all three courses. The facilitators referred to the technical personnel as being very useful in assisting individual learners in their technical problems, for example forgotten passwords or installing software on their computers.

> The participants could ask the technical assistant if, for example, they forgot their passwords. [F1:201]

In sum, the learning management system and its functions have a considerable effect on the roles facilitators take. The learning management system was proved to be useful for the online courses analyzed, as it offered numerous possibilities for accessing course content and communication possibilities (Lynch, 2002). However, facilitator feedback can be useful in the future of the courses, as they provide a good insight for course designers into the development of the courses. If the system is not automatized for example for administration well enough, the administrative roles of facilitators (Hootstein, 2002) will overwhelm them. As a result, they will have less time and energy to facilitating individual learners and groups of learners. More attention should be paid by course organizers to the functions of the learning management system and the facilitators should be prepared well for effective administration.

5.1.2. Course design

In the second part of this section, another topic is discussed that was not part of the original list of research questions. Course design and administration tasks are usually administered by the methodological, technical and administrative personnel in the course, and the facilitators receive information on these issues in the facilitator training. However, in the interviews the facilitators in all three courses commented on the course itself. As the comments offer an insight into the issues form the facilitator's perspective, it is discussed in a separate section. The comments in connection with course design centre around two major elements that emerged from the data: (1) course content, and (2) course structure.

The content of the courses were commented on in the three courses. The facilitators of the EPICT course found the content interesting and relevant for the participants, and only complained about printing the course materials out. Facilitators did not quite agree whether an online course should offer printed course material besides the electronic version of the material in the learning management system, or not. Some learners obviously appreciated the printed booklets offered by the course administrators but this resulted in working offline more on one hand, and additional costs to the course providers on the other hand.

Facilitators of the Precise Project were not so satisfied with the content of the course. The ten language development modules aimed the development of vocabulary and reading skills for IT teachers were accessed as separate study units from Moodle. The facilitators found the content of the learning materials relevant but too difficult for the learners, and in spite of the fact that the learning

materials were checked by the British partners in the project, the facilitators still spotted some grammatical and spelling mistakes in the learning material.

> At the beginning of each reading exercise there are some questions for setting the focus. It is hard to understand what to do with these questions, because when the page opens the audio stream starts and the learner already focuses on the text and skips the questions. [F17:551]

> Why do we have to click that much? The layout is not that easy to understand. It takes a few minutes to figure out where to click on the main page. (…) and why does it open so many browser windows? Why can't it stay in just one? Surely there are some reasons behind it, but it looks rather unprofessional. [F19:555]

Facilitators in the KSzK course used the Tell Me More software as content material and were really satisfied with the quality it offered for individual learners. The only consideration they mentioned was that the course designers found group work motivating for participants, so the facilitators were asked to offer webquests to groups of learners in which the y had to cooperate. The results of the group work will be discussed later, but the facilitators agreed that adding content to a unified language learning material might be problematic.

The course structure of the three courses was rather different, as it was described in Chapter 3.3. Facilitators expressed their views in the interviews regarding the timing of the courses. In the EPICT course, which lasted from the end of September to June, the course structure was adjusted to the Christmas period. However, due to the fact the participants were primary or secondary school teachers, the end-of-term duties and the exam periods should have been also planned in advance. The facilitators explained that in these periods the teachers were so busy in their schools that very little activity could be expected from them.

They are really short of time and very tired. They are not going to do anything at the end of the semester or before Christmas. [F7:39]

In sum, although decisions in connection with the learning management system, course design, course content, and course structure are made by the course providers, facilitator roles are heavily influenced by them. Facilitators either have to spend more time on administration and adjusting course content to the needs of the learners, or decide not to take responsibility and try to cope with learner demotivation. It can be considered by the course providers to receive feedback on these issues from the facilitators and adjust the course to their needs as well.

5.2. Facilitating individual learners

The first research question of this study concerns the facilitator's role in supporting individual learners in online adult courses. Regarding this topic, four coding categories emerged from the data: (1) previous experience of learners, (2) gender differences, (3) access to technology, (4) ICT skills, (5) motivation, and (6) time management skills. In the following, these categories will be discussed in detail.

5.2.1. Previous experience of learners

It was mentioned by several facilitators in the interviews that previous experience and the school subjects the teachers were trained had an influence on their performance in the course.

In the EPICT course the teachers was a special of group of teachers-school principals. Some groups were comprised of only the heads of schools, in other groups the principals were members with regular teachers. Apparently, these participants found it difficult to cope with the course content. On one hand, the facilitators thought that these people wanted to outperform the regular teachers, and felt terrible frustration if they thought they failed. On the other hand, principals were reported to have even less time than school teachers, so many of them dropped out of the course due to lack of time.

> One participant in this group was a school director and she was really upset that the others knew more than her. She finally decided to quit the course" [F1:378]

> She was a school principal but was fired in the middle of the course, she left the school, and she is at a bit of a loss personally as well. [F1:449]

It was interesting to see how much the facilitators knew about the people they facilitated. The facilitators in the EPICT course and the facilitators in the Precise Project knew a lot more about the learners than the KSzK facilitators. Naturally, they had more time to spend with the learners, as they had fewer participants in the group. Although the facilitator interview questions (See Appendix 1) did not ask any personal questions, the facilitators seemed to be happy to share background information about their learners. There was an especially strong bond between participants who met face-to-face outside of the course as well.

> X is an experienced teacher, who hates technology. Very intelligent, often criticizes the content, and in many cases, she is right. [F2:465]

> He is a rather confused person. He wrote a long post on how we should learn in the course. He is the kind of guy who makes plans but

never accomplishes anything. He did not come to the orientation day, and sent a substitute to the face-to-face meeting. [F9:442]

5.2.2. Gender differences

It was not the aim of the present thesis to study the gender differences in e-learning courses, nor was it to relate it in any way to the gender of the facilitators. However, as the facilitators were asked about the individual learners in the interviews in general, a category related to gender issues emerged. Because only two facilitators referred to this issue, and both of them were facilitating in the EPICT course, a brief description of the cases will be given here. Further research is needed about the role of gender in online adult courses.

Three case will be mentioned in which the facilitators reported on the relevance of gender issues. In one of the cases three members of the group were women, and one was man. The facilitator found that "the only man in the group felt it uncomfortable when he did nothing, so they distributed the work according to gender roles" [F9:437]. A similar case was reported in another group where out of the three members, two were a married couple. The husband was much more proficient in ICT, so they divided the tasks in accordance with the gender roles in the family, the man doing the computer work, the woman working on the content of the tasks. In the third case the facilitator was trying to describe the characteristic features of a participant and said "(…) a typical teacher in her 50ies, she will never learn how to use a computer" [F6:347].

It is important to emphasize that the facilitators were not prompted to talk about gender issues, and only two facilitators made direct references to the cases above. It is interesting to note, however, that facilitators might also need strategies to handle these issues as well.

5.2.3. Access to technology

Participants in the three case studies generally had access to technology, as this was a requirement set by the course providers. The KSzK Project aimed at the language training of civil servants, who could use the technology tools at their offices for learning if they had no access to computers or the internet at home. The Precise Project also required fast and reliable internet connection from participants, and the facilitators were satisfied with the technological background of participants.

The only type of problem occurred if the participant became inactive and did not log in for some time. The role of the facilitator in this case is to try and find the learner and find out the possible reasons for not participating to prevent them from dropping out of the course. Facilitator 23 reported a case when "the learner let her know that she can't log in to the online learning material, but did not answer any questions on the details of the problem" [F23:543]. She supposed that the learner was not successful due to lack of resources or incompetent ICT skills, and admitted that she could not solve the problem and let the learner drop out.

Facilitators in the EPICT course had to facilitate teachers where access to computers was problematic for participants in a number of cases. Some

teachers could use the equipment of their school only, in some cases the only computer that was available was in the staff room. Also, the quality of the equipment was reported to be bad, with old and outdated machines and software.

> They only have access to computers in the school. [F1:378]
> If there is one computer in the teacher's room, then one of them will log in and they can all see the course content. [F1:466]
> (…) they have very old computers. [F1:462]
> (…) she has to go the other school if she wants to use the computer. [F1:458]

Access to technology is a basic requirement in online courses that participants have to be responsible for. Research on access to computers by teachers in Hungary (Hunya, 2010) shows the tendency is that access is becoming less problematic. However, facilitators should know the circumstances the learners come from so that they can offer adequate help and prevent them from dropping out of the course.

5.2.4. ICT skills of learners in online adult courses

Despite of the fact that access to computers caused difficulties for participants in relatively few cases, the lack of ICT skills was reported to be more problematic in all three courses. The basic requirement for admission in all three courses were having a working e-mail address and feeling comfortable with browsing on the web. Facilitators explained in the interviews that most drop-outs in the course were due to the lack of sufficient computer skills.

Participants were expected to use Moodle in the first two courses, and the Tell Me More software in the KSzK course, which also required them to use a

different platform for forum communication. Logging in to Moodle, finding their way around the course material; and engaging in a meaningful online communication was a too complex task for those, whose initial ICT skills were at a basic level. Assignments in the courses were expected to be handed in using word processors, in the EPICT course the groups were even encouraged to use the Track changes function of the word processor.

> For some time only one participant communicated, the one who has the best ICT skills. [F3:510]

> He lacks absolutely all technology skills. So much so that he had no e-mail address and was using his wife's account. I guess she logged in and solved some of the tasks as well. [F9:536]

> She had basic problems, because she could not send e-mails. [F17:614]

> They didn't use the forum, they rather phoned me, they do not use computers generally. [F3:355]

There were also concrete technical problems in the courses, for example with sending files due to the problems experienced in Moodle (see Chapter 5.1.1. for details). Several facilitators reported this issue.

> It was a typical problem hat they could not unzip the files. [F1:406]

> It was a problem that I sent them the zipped files and they couldn't unzip them, so I had to send them files one by one. [F7:447]

The level of ICT skills is important in online courses, as those who were technically ready to participate, benefited a lot from the courses. Facilitator 2 noted that lack of ICT skills had an effect on their levels of motivation as well: "I didn't have any participants who were motivated with a

lack of ICT skills." [F12: 333]. Motivation issues will be discussed in the next chapter.

5.2.5. Motivation

The motivation of individual learners in online courses is one the most important issues for facilitators. Knowles (1988) argues that adults prefer courses where the achievements are applicable to their situation right after, or even during the course. In the three EFL and ICT courses studied for the present thesis, the topic and results were highly relevant to the participants, they took the courses voluntarily, and the online delivery of the courses gave enough flexibility for them to study without neglecting their professional commitments.

In other words, in accordance with Dörnyei's (2001) motivational construct, participants of the e-learning courses should have been self-motivated. The facilitators agreed that all the features of the courses mentioned above enhanced the motivated behaviour of most of the participants. In the EPICT course, participants with good ICT skills were reported to enjoy the course, whereas in the IT teachers group of the Precise Project the learners with some level of English also showed enthusiasm. It is hypothesized then that e-learning courses are more motivating for those who already have some basic skills in the content, and their goal is to deepen or develop their skills.

> Their ICT skills are very good, they will only receive methodological tips from the course. [F9:57]

Facilitator 27 in the interview said that the effectiveness of the course depends on the learner's motivation. In her case, many participants studied in the course because language learning was required at their workplaces, in spite of the fact that they had limited access to technology.

> „The goal of these learners was merely to comply with the basic percentages that were required, and they were not willing to read, browse or chat on the forum. They don't have the time to do it during their working hours and in their free time they like to do things they choose and not something they are forced to do." [F27:712]

Learning languages is not always easy in face-to-face courses for people in small villages. Facilitator 24 said that it was great motivation for some participants that joining an e-learning course was their only option for studying a foreign language. Those who live in small villages and work there as civil servants at the local government only needed a reliable internet connection and a computer to join. It was also an excellent possibility for those who could only learn according to their own schedule.

Motivation in the EPICT course and especially in the KSzK courses was further enhanced by extrinsic motives (Dörnyei, 1997). In the EPICT course, some of the teachers joined the course with the consent of the school principle or the city mayor, as the facilitators told in the interview. The participants were motivated to finish the courses because they knew that they would be checked upon on their results.

> The school director will check if he finishes the course successfully. [F3:519]
> The school director and the city mayor both support ICT. [F6: 529]

Another way of adding extrinsic motivation to the course was applied by the KSzK course organizers. The participants in the language courses had to apply for the courses and signed a contract with the course provider which stated that they could participate in the course for free for 12 months, but if they failed to meet the requirements, they would have to pay back the training fee. This method could work well according to the facilitators, but required discrete measurement of language skills, extra examination dates, organization, and much more administration that Facilitator 22, 23, and 25 agreed that it was not worth the trouble eventually. Facilitator 3 in the EPICT course also raised this issue in the interview by saying: "If they have to pay for the course, they will come" [F3:165], but the example of the KSzK course contradicts this opinion. Further research would be necessary to understand the role of payment in adult online courses.

Motivation levels of participants were reported to fluctuate during the courses. Facilitator 26 found that most learners were motivated at the beginning of the online course. However, the level of motivation dropped during the course, which she was trying to solve by sending positive feedback. She said that "surprisingly, a lot of learners reacted to positive feedback, they were very happy and it meant real motivation for them" [F26:588]. However, she admitted that later in the project when the facilitators had a lot of learners, she had no time for sending feedback at all, and she only focussed on sending warning messages for learners lagging behind.

In the Precise Project the motivation of learners was supposed to be enhanced by the introduction of The Learning Diary. All participants were required to publish their plans and regularly make comments on their own

progress in the language course. By tracking their own progress, facilitators and course providers were hoping to maintain the levels of initial motivation of learners. Facilitators 13, 15 and 19 reported very good experiences with this method, although they admitted that the introduction of it caused difficulties. Facilitators 16 and 21, however, found that the Learning Diary meant too much extra work for the learners and they recommended not to use this method in the future courses.

Motivation of participants depends on future expectations in connection with the course. Facilitators in the KSzK pointed out as a problem of motivation that by using the online version of the Tell Me More software, after the course finishes in 12 months, the learners are left without any course materials as opposed to regular language learning courses where the course book and other printed materials remain with the learners. On the other hand, they found motivating to include synchronous learning sessions that brought back the traditional 'teacher and student role'. In the interviews they reported to use a number of technical solutions to enhance motivation, e.g. e-mail, forum, chat, task development software (Hot potatoes), free online learning materials, tests, games, trailers, or e-cards. As Facilitator 22 told in the interview, after the first negative feelings towards language learning in the e-learning setting at KSzK, the attitude changed and seeing the success of colleagues, learners who enrolled the course in the second or third year were less doubtful about the method.

In the interviews there were some examples mentioned for the demotivation of participants as well. The main reasons for demotivation according to facilitators were the lack of sufficient technical skills, as it was

discussed in Chapter 5.2.4. Another reason that was mentioned by Facilitator 20 in the Precise Project was the high expectations of participants towards the facilitator. Although the learners' motivation can be enhanced by prompt feedback from the facilitator (Hurd, 2005), it is difficult to estimate the time limit within which the feedback can be sent. Facilitator 20 showed a message from one of the participants that is a good example of an extremely inpatient participant. The message said:

> I may not be able to participate in the discussion for the next five days, as I'll be going on vacation, and may not have internet access. Yet, I'd be glad to receive a prompt answer. [Participant, Precise Project]

Finally, the role of the facilitator as a motivator of individual learners was commented on by Facilitator 22. When talking about the responsibilities of online learners, she argued that motivation and self-motivation was also the responsibility of the individuals rather than the facilitator. Although facilitators in this course were overwhelmed with the number of learners they facilitated, it seems that not all facilitators agreed to take this role.

> In this training the main characters are the learners and not the facilitators. We provide opportunities: extra tasks, forum interaction with the facilitator and the group members, and oral development classes in Skype. Those who are motivated and can use the possibilities, can make huge progress in six months. [F22:539]

In sum, motivation of online adult learners is a very complex issue. The roles of facilitators in this process needs to be further explored, and the techniques of online motivation should be described similarly to in-class techniques. The interviews showed that although learner motivation was supported by the programs' predesigned questionnaires and strategies, a lot

depended on the facilitator's personal and professional qualities. Continuous online presence, fast reaction to learner-initiated interaction, positive feedback, and varied facilitator input resulted in higher levels of motivation and greater learner satisfaction.

5.2.6. Time management skills

As it was argued in Chapter 2, one important attribute of successful online learners is good time management skills. Hiltz and Shea (2005) argue that inexperienced online learners enroll courses without knowing how much time it requires and without planning how they will cope with the course requirements besides their regular tasks.

In order to avoid bad timing scales, both the KSzK and the Precise Project facilitators prompted participants to plan their own learning schedules very early in the course. In the introductory message to the course, facilitators asked each participant to reply to a Forum called 'My Schedule' by planning their learning and by publishing their plan to the other participants. Teachers had their own tight schedules, including school leaving exams and other duties, but they had the option of calculating these and plan their online language learning accordingly. Figure 31 shows an example of a screenshot of a plan for an IT module in the Precise Project. The facilitator stored the schedules, and later could check the learner's progress in the Moodle log files and could intervene if it was necessary. Participants in the Precise Project could decide autonomously on their pace of studies and it had a positive effect on their motivation, facilitators argued in the interview.
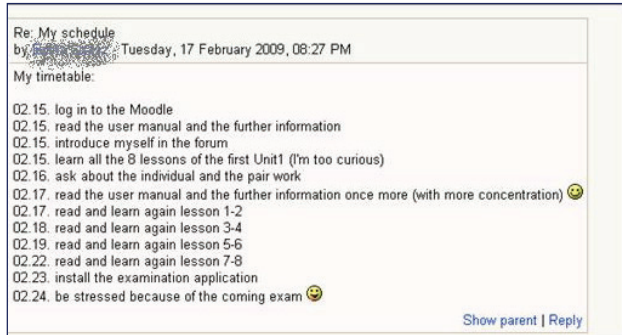
Figure 31. Screenshot of a participant's plan in the Precise Project

Time management skills were not only important for the participants. As Facilitator 13 explained in the interview, facilitators also have to understand the importance of good time management. As they serve as good models of successful online learners for participants, and especially teachers, they should be very careful about their own schedules, deadlines and management.

> I had some problems dealing with the course and my program every day. The course needs time and concentration but in the same time you have to deal with your own program at home and at work. I also had problems with the deadlines but managed it in the end. [F13:38]

In conclusion, answering the first Research Question *(What is the impact of facilitators on the success of the participants in online teacher training courses?)* it was found that facilitators have a positive impact on participants' motivation, progress and achievements in the online setting as well. Techniques were quoted form the facilitator interviews to give some examples of how facilitation of individual learners worked in the three courses. It was

found that facilitators can benefit a lot from knowing the background and individual characteristics and circumstances of learners (previous experience, ICT skills, access to technology). Based on this, and relying on the activity logs of the learning management systems facilitators can offer support to individual learners in e-learning courses.

5.3. Face-to face meetings in online courses

The second research question of this study concerns the role of face-to-face meetings in online teacher training courses. Regarding this topic, three coding categories emerged from the data: (1) the place of face-to-face meetings, (2) the content of face-to-face meetings, and (3) the organization of face-to-face (F2F) meetings. In the following these categories will be discussed.

As it was argued in Chapter 2, the teacher training courses analyzed in the present thesis are considered online courses in spite of the fact that facilitators and participants of the courses met face-to-face in a number of cases. Because the instruction and learning took place online, these courses cannot be considered blended courses. First, the motivation behind the face-to-face meetings will be discussed, based on the structures of the courses and the facilitator interviews.

Facilitators and participants in the EPICT course were supposed to meet at least once in the course. The course was started with an Orientation day, where all participants were invited. The goal of the first face-to-face meeting

was to introduce the participants to the goals and content of the course and the course structure. The presentations were offered by the course organizers, so although all the participants were present, they did not necessarily meet their facilitators or group members.

Facilitators were asked to evaluate the F2F meetings in the interviews. Facilitator 5 argued that "there were too many people at the orientation day" [F5:43] and "it made no sense really, not more than 16 participants should be there at these meetings" [F5:44]. She argued that the primary purpose of the Orientation day should be group building rather than introduction to the course structure. Facilitator 1, 4, and 9 shared this view by criticizing the first meeting in the interviews. Facilitators 2, 7 and 8 argued that there is no need for F2F meetings at all in these courses, whereas Facilitator 3 found the goals of the Orientation Day appropriate, although criticized the way it was organized.

The EPICT course was closed with a F2F meeting as well, but it was not compulsory for the participants to attend; it was rather a formal event when the certificates were presented and the results of the course were presented. Two more F2F meetings during the course were organized by the course providers, but on these occasions considerable time was spent by the groups and facilitators together. These meetings were not compulsory to attend, the facilitators discussed with their own groups online whether they needed to meet or not, and agreed on the content of the meeting as well. The facilitators expressed very different opinions about the F2F meetings in the interviews:

> The F2F meeting should not be at the beginning, but in the end. I would evaluate their work there and answer any questions. [F5:44]

> I told them in September that they should do the course online, because they are really far away, but they always wanted to come for a F2F meeting. [F6:528]

> A F2F meeting is only necessary if there is a problem. [F3:193]

> The groups where the members have no technical problems will do the course without the F2F meetings. Those who do not have the skills, will not learn it in an afternoon, will not use it every day. [F3:194]

> If the group is good, you don't need a F2F meeting. [F9:341]

The examples above illustrate that there was a big discrepancy between the ways facilitators thought about F2F meetings. The course coordinators left the decision to the facilitators, and it was considered to be a facilitator role to decide when and why they should meet the groups.

In the Precise Project, which was the only international project, face-to-face meetings were not planned at all. The participants in the first phase of the course worked individually, but could approach their national facilitator if they needed help. In the second phase of the course the course coordinators formed international groups of 4, and participants worked on joint projects. Obviously, the groups being international they could not meet face to face at all.

The KSzK project had strict rules about F2F meetings, as they employed the facilitators who were paid to travel to the groups and offer face-to-face consultations twice during the course. These meetings served multiple purposes: the participants took a test to measure their levels of English, they solved the problems that occurred during the online phase, and they were also offered an hour of oral skills development. At the end of the course the participants met the facilitators again to take the final test only.

The content of the F2F meetings in the EPICT course was mostly left up to the facilitators as well. The course organizers offered teaching materials and tasks for the meetings, but the facilitators were not obliged to use those if they found that alternative tasks would serve their learners better. They reported on a variety of activities and strategies they used the meetings for:

> On the F2F meeting I showed them the activity logs, and told them how many times they logged in, who were the most active members, and so on." [F1:286]

> On the F2F meetings they should learn how to use the forum, how to use Moodle. [F1:199]

> I think the F2F meetings are necessary for group development, group cohesion, error correction. [F4:194]

> They came to the second F2F meeting again because they had the feeling that they only receive something if they are here. [F7:140]

As it can be seen from the facilitator interviews, the facilitators disagreed not only about the necessity of F2F meetings, but also on the content of it. Facilitators 1, 6, 7, 8 and 9 were more technology oriented and expressed the importance of the development of technical skills during the meetings. They argued that unless learners have a clear understanding of how technology should be used, they will have difficulties in making progress during the online phase. Facilitators 2, 3, 4 and 5, on the other hand opted for the importance of group building during the meetings. This is also supported by Paloff and Pratt (2007) who argue that "it may be difficult to develop a sense of community among the class, which makes communication and cooperation among students

even more important than f2f. Computers offer many new tools for promoting student-student interaction" (p. 26).

> If there is no group cohesion building at the F2F meeting, the facilitator will not have the resource to create it, because for them the LMS is not a natural way of communication. [F5:500]

In connection with the content of F2F meetings in the KSzK project, Facilitator 22 in the interview agreed that the regular face-to-face meetings with the learners helped the teaching process, but at the same time she pointed out that the content of the face-to-face meetings were based on the material studied prior to the meeting. Consequently, learners who spent limited time with the material at home, did not profit from the face-to-face meetings either.

The organization of the meetings in the KSzK project was handled by the course administrators, and as the facilitators were full-time employees, they travelled to the learner groups and spent a whole with them. In the EPICT course, however, the facilitators were responsible for the organization as well, and they reported on very different strategies. Facilitator 1, who facilitated 7 groups but within the same region in Hungary, decided to organize the face-to-face meetings in the schools near to most participants in the region. Multiple dates and different but close locations were offered and the groups had to agree on which meeting they could all go together. Facilitators 2, 3, and 4 met the learners at their institutions, where they could offer working computers and good facilities for the meetings. Facilitators 5, 6 and 9 went to the schools of each group separately, whereas Facilitators 7 and 8 did not meet the learners face-to-face.

In sum, a large confusion in connection with face-to-face meetings was reported in the interviews by the facilitators. On the one hand, the course providers have different views on the role of these meetings, and design the courses in accordance with the practical and theoretical considerations. On the other hand, the facilitators interviewed in the projects also have different opinions about the role of facilitator-learner meetings. Because many of the facilitators spent considerable time teaching in the language classroom, they find it important to have more than virtual contact with the learners.

5.4. Facilitating groups

The third research question of this study concerns the roles of facilitators as group leaders in online adult courses. Regarding this topic, three categories emerged from the data: (1) group formation, (2) cooperation among group members, and (3) group development during the course. In the following, these categories will be discussed.

5.4.1. Group formation

In the three courses observed, the importance of group work was emphasized by the course organizers and the facilitators alike. Consequently, group work was included in the curricula of the courses, and facilitators had an important role in managing the groups in the online environment. The three

course, however, employed different strategies for group formation, as it was explained by the facilitators in the interviews.

In the EPICT course, the participants were grouped into 34 groups of 4 members. The grouping of the participants was based on several considerations by the course organizers: first, the geographical closeness of applicants were considered, and teachers from the same school or from the same town were enrolled into the same group; next, some special groups were formed based on the age groups taught by the teachers, i.e. kindergarten teachers, primary or secondary teachers, preferably teaching the same subjects; and finally, there were some groups for school principals and special needs educators. Participants were allowed to but not encouraged to switch between groups.

The Precise Project had two distinct phases; in phase one, national groups of 15-20 learners were formed, who worked on the language units with their national facilitators In the second phase, international groups of 4 members were formed by the course coordinators who had to work on a joint project, using English as a *lingua franca*. Participants were enrolled in the small groups based on how fast they finished studying the course units. Whenever four participants finished studying the units, they were ready to form a group, and worked with one of the facilitators. Participants were not allowed to change groups.

In the KSzK project, large groups of 25-30 learners were formed based on geographical location and language level. As they started learning the units, the facilitators asked them to work on *webquests* in groups of 4. They encouraged forum communication among participants in English.

The facilitators in the EPICT group were the only facilitators in the courses observed for this research who could experience the advantages and disadvantages of different group types. Facilitator 1 argued that the advantage of the geographical closeness of group members is that they can get to know each other and continue cooperating after the course is over as well. He also commented on the disadvantage he experienced in the groups:

> It is a big disadvantage if members of the groups come from the same town that their activity does not happen in the learning management system. [F1:240]

> It was difficult with this group, because one of them logged in, downloaded the task, sent it to the others in the group, they talked about it and started working. I showed them the activity log, that nothing is recorded there, they should not work during the breaks. [F1:241]

In sum, forming groups in online adult courses should be conscious decisions, with taking both practical and methodological considerations into account. In any case, the facilitators should be familiar with the reasons of forming the groups, and could also have the role of choosing the group members themselves based on pre-set criteria.

5.4.2. Cooperation among group members

In the interviews, facilitators were asked about the ways groups operated in the courses. Facilitator 22 (KSzK course) argued in the interview that those groups where at least one learner was more active than the others, worked better, as the 'proactive' learner added extra motivation to the other members of the group. „It was rather characteristic of the groups to refrain from forum

communication; however, if there was an active member in the group, the others also spent time in the forum willingly" [F22:567]. She added that the facilitator's role in this situation was to find the person in the group who could be appointed with the task of the 'group leader'.

Similar observations were reported from the facilitators in the EPICT course. The groups where there was an active, or proactive member, were always characterized as good and successful groups, whereas the ones where all participants had low technical skills and had no leader-figures were evaluated be 'difficult' groups.

> I noticed that those group were the most successful that had one member with very good ICT skills, or they have a very active member. You really need a motivated member, who wants to do all this. [F2:43]

> They all come from Budapest, but from different schools. There is no group cohesion at all, no leading figure. They are from different age groups, and think differently about a lot of things. [F4:67]

When asked about their roles as group members, most facilitators expressed the importance of good atmosphere and mutual trust. Facilitator 16 explained that it was important for her that the learners knew that they could approach her any time. Both with linguistic and technical problems and in connection with distance learning she was happy to answer their questions and she felt they were willing to ask her. "This is supported by the high number of forum entries as well" – she said [F16:541].

Similarly, Facilitator 22 spent a lot of energy on maintaining the good group atmosphere online. She achieved that at the beginning of the course by asking the learners to introduce themselves on the forum. She argued that this method proved to be a good icebreaker in the online setting as well, although

she spent considerable time by answering each forum entry promptly. After three or weeks, this online communication was continued in the learning process as well. Facilitator 22 explains:

> "By this time the learners knew each other very well and it was easy for them to cooperate. From this time on, if the facilitator did a good job and directed the communication well, she had to participate as an observer, and had to intervene only if it was necessary. In a healthy group the dynamics formed automatically." [F22:681]

Facilitator 26 emphasized the importance of presence of facilitators in the groups as follows: "It is obvious that in e-learning facilitators are very important. Skills development in e-learning materials is more effective than traditional learning because of personalized pronunciation practice, listening skills development, vocabulary development, and so on; however, the presence of a trained language teacher is also necessary. On one hand, for maintaining motivation, on the other hand because some types of skill development require support from language teachers. These can be text creation or grammar systematization. The learning material we used needed extra materials, and the facilitators helped the language development of the learners by providing them with supplementary exercises." [F26:737]

Not all facilitators were enthusiastic about groups; especially the KSzK facilitators had a very difficult task with group formation. Facilitator 27 argued in the interview that the effectiveness of the instruction depended only on the individual learners. Practically her learners did not function as a group, and everybody was focusing on passing the exam. She reported to have spent 30 minutes a day with her groups, and once a week a longer period of time, some

hours with uploading materials and tasks and giving feedback. She did not spend time on creating groups or breaking the ice between participants at all, and accepted the situation that learners work individually. She only met her learners at the exam, when she said "it was useful to match the names with the faces". [F27:711]

In sum, most facilitators claimed that their role as group leaders affected the success of the participants in online courses. They strongly believe that groups can empower individual learners and can enhance the results achieved in online instruction. Facilitators need to have a better understanding of how groups work, and how they can act as catalysts in the formation of groups in an online environment.

5.4.3. Group development

On the basis of the quantitative data of the course log and the facilitator interviews, it can be observed that groups in adult online courses change as the courses progress. In Chapter 2.3.3. three models of group development were reviewed, and in spite of the differences, the models agree that group development occurs in online settings as well. In the three courses analysed in the present thesis, the development of groups will be presented based on the online presence of facilitators, and their reports on group development in the interviews.

In Chapter 4.1., data on the presence of the nine EPICT facilitators were presented (see Tables 7 and 8, and Figures 11 and 12). The results show that

facilitators changed their online behaviour during the nine months of the training considerably. When they were asked about the reasons of these differences in the interviews, they gave various explanations. First, all facilitators agreed that they special attention to online presence at the beginning of the course. Second, in Figure 12 several peaks of participation can be observed, the reason for which is that both them and the participants were more active before face-to-face meetings and deadlines for handing in course tasks. This pattern contradicts to the theoretical models by Salmon (2000) and Moulen (2007). It seems that group development is a more complex phenomenon, as it is explained by Paloff and Pratt (2001). Further research is needed to understand the operation and development of groups in the online environment.

In the KSzK project, Facilitator 26 had the following experience:

"Typically learners were studying hard at the beginning of the course. Then this was followed by a period when they hardly learned anything, and before the exam they were trying to make up for the missed time. I understand that it is difficult to study besides family and work, especially if there is no regular testing, but after the course a lot of learners told me that they were really sorry that they had no time for studying during the year." [F26:612]

Paloff and Pratt (2001) argue that the patterns of online presence of groups and facilitator in online courses do not always match. This is supported by an example from the Precise project, where the teacher presence (hits and messages posted) are compared to student presence in the same group. Similarly to the patterns observed in the EPICT course, the teacher is present

heavily at the beginning of the course and then participates to a less extent with some peaks of hits (Figure 32).

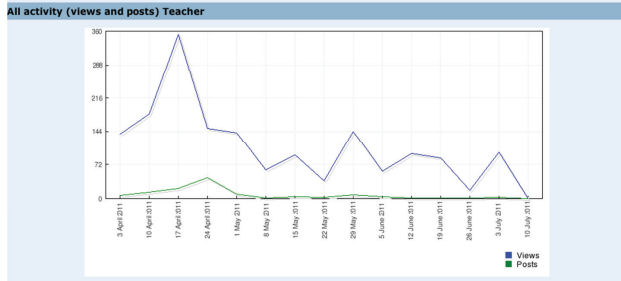*Figure 32.* Screenshot of teacher presence in the Precise Project course

As opposed to facilitators, Figure 33 shows the participation pattern of a learner in the Precise course. Learners who are more at the beginning of the courses when they are still motivated by the course, and show even greater activity before exams or tests.
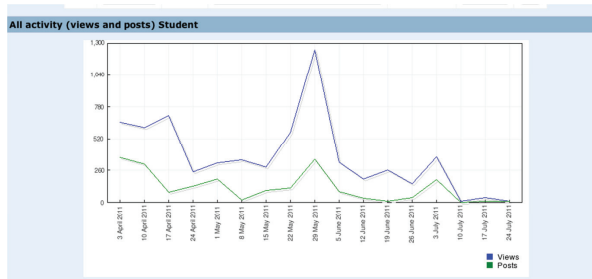
)

Figure 33. Screenshot of learner presence in the Precise Project course

Facilitators in the KSzK project reported a problem related to the participation patterns of learners. They complained about the uneven distribution of facilitator workload during the course. In their setting the groups were continuously launched for months, which meant a lot of work at the beginning of the courses. Consequently, when the groups finished the course, facilitators again had to travel a lot to administer the final language exams.

In sum, the quantitative and the qualitative data suggest that groups are not static during the online courses, but constantly develop, as it is argued in the literature review as well. Group development, however, is more complex and less predictable than suggested by the models of Salmon (2000) and Moulen (2007). The participation data and the qualitative interviews are not sufficient data to arrive to a full understanding of group dynamics in online courses, but the patterns of participation showed similar fluctuation in all three courses observed.

5.5. Interaction and communication

In the three courses observed for the present thesis, both asynchronous and synchronous communication was applied as it was explained in Chapter 2.3.2. The courses aimed at the development of language and ICT skills, so using these forms of communication was necessary. The asynchronous communication tools used in the three courses were forum and e-mail; whereas the synchronous tools were chat and Skype. The asynchronous tools were not used in all groups to communicate with the facilitators, as some of them

refused to use them in the course or the participants' ICT skills were too low to use them.

Facilitator 22 described the challenges of online communication in the interview as follows:

> „Due to the fact that in distance education communication takes place in alternative channels and asynchronously, that is in a different way compared to any personal conflicts, and also because it is easier to misunderstand each other because of the technical tools – we don't see each other's faces, we can misunderstand words or phrases, and we can react to these more sensitively – it is important to communicate in a precise and polite form. Also, using non-verbal elements like smileys and graphics come in very handy." [F22:611]

Using asynchronous communication was easier for the participants, as facilitators argued, because they could take the time in formulating their messages. Also, they could read back the conversations from earlier discussions from their peers or the facilitator and react to them. Using forums, however also caused difficulties. Participants need to have an understanding of how forums work, and facilitators can guide them to the most useful ways of forum communication by openly setting up some rules.

> The problem is that they post about a task to 3 or 4 different forums, so in the end they have no idea where they are. [F2:45]

Synchronous communication was not used by all the participants in the courses. In the EPICT course Facilitators 2, 4, 6, and 7 reported to have used the chat function of Moodle, and found it useful for the participants who seemed to like the task. The other facilitators in the course decided not to use

synchronous communication, either because of the low technical levels, or because they were also reluctant to use it.

> This group uses the chat function regularly, the others don't. [F4:68]

> I didn't use the chat function with the groups. I have no idea how to use it myself. [F9:173]

> They really enjoyed chatting. [F6:201]

Facilitators in the Precise Project and the KSzK project used synchronous voice chat as well by offering online development of language skills for the participants. The learners could choose to log in in the appointed time slots but participation was not compulsory.

> The communication with the group was a bit hard because we have different programs. I've tried to talk with the others but have not answered, only a friend I had in the course. [F12:366]

In sum, the course participants and facilitators in the three courses used both synchronous and asynchronous ways of communication. Hung and Crookes (2009) compared the performance of teacher-moderated groups to peer-moderated groups in their experimental study using data mining techniques. The results showed that the presence of the teacher promoted student interaction not only with the content, but also among students and the teacher as well. Similarly, the communication patterns in the courses were evaluated as being useful mostly both by the learners and the facilitators.

Obviously, activity logs and interview data can be used to measure the frequency but not the quality of online communication. Goold et al. (2010) proposed a typology of facilitator messages, and grouped the types into four groups in accordance with the facilitator roles described in Chapter 2.4.

(content, management, social, technical). They found a difference in the types of postings by novice facilitators and expert e-tutors, as expert tutors offered scaffolding in understanding content. This qualitative analysis can be used in analysing the facilitator messages in these courses as well to have a better understanding of communication patterns in online courses.

5.6. Evaluation and feedback techniques

A great emphasis was put on the evaluation and feedback techniques in all three courses analysed in the present thesis. In the EPICT course, participants had to submit group tasks for each module they covered, which had previously been accepted by the facilitator. It is an EPICT strategy that the first versions of assignments should not be accepted by the facilitators, but they have to send them back to the groups with clear instructions on how to improve them. This method is aimed at pushing the group's limits one step further and motivates further learning. Neither the participants, nor the facilitators had a clear understanding of this method of giving feedback [F4:112], and one reason might be the cultural difference between the Danish and the Hungarian feedback techniques.

In the Precise Project, participants had to take multiple choice tests after each module they covered and submit a webquest task as a group. The participants seemed to dislike the multiple choice tests because of the unreliable testing software that was used on one hand, and because the methodology of the course content contradicted this method of evaluation. The facilitators reported on a number of complaints from the IT teachers regarding

the test. They did not like the webquests much either [F11:69], as they found the method very difficult to do in a group. Interestingly, Facilitator 21 told us in the interview that although the language course was primarily aimed at the development of vocabulary and reading skills, due to the international groups which worked on the webquest tasks, participants made considerable development in their writing skills. [F21:652]

Evaluation and feedback in the KSzK project was based on templates prepared by the consultants prior to the training. Facilitators sent the statistical data of the learner progress to the administration office and the learners' work place. Besides that, individual feedback was sent to each learner on a monthly basis that contained information on the progress the learner made, whether that matched their initial learning schedule, and contained recommendations on what the learner should focus on in the next period, how to manage time, and what learning strategies could be applied. Evaluation of the group tasks in the KSzK training was provided by the facilitator and by the learners as well, on the basis of a questionnaire. The learners evaluated their own roles and their progress in the webquests, whereas the facilitators gave feedback on both language issues and group dynamical issues.

> Due to the large number of learners I could not spend as much time with individual learners as I would have liked to, but from the assignments, the face-to-face meetings every six months and the results of the exams I could see their development. [F26:443]

> Many learners reported that they developed a lot during the course – mostly their vocabulary and listening skills. Besides that, they said their ICT competence also increased – they use the web regularly, they started using forums and they also learnt how to prepare PowerPoint presentations. They felt it was great success. [F26:444]

In sum, evaluation and feedback techniques varied in the three courses, but were considered to be compulsory elements of online courses as well. If the times of the tests are compared to the online presence patterns of the participants, it is clear that exams and tests generate participation in the courses. Facilitators explained that adult learners were motivated by being tested, but the form of the tests was not appreciated. It is suggested that new types of test taking methods should be applied in online courses that match the methodology of the courses.

5.7. Facilitator training

The last research question of this study concerns the training facilitators should receive before working with groups online. Regarding this topic, two categories emerged from the data analysis: (1) the content and (2) the delivery of facilitator training courses. In the following, they will be described in more detail.

In all three courses, facilitators had to participate in a training course before they started facilitation. It was an important point to mention, as all the facilitators in the courses were trained teachers, but the course providers still had an understanding of the differences between classroom and online instruction. The training course were designed by the course provider, lasted for 3 or 4 weeks, and had a practical element included.

Facilitators in the interviews said that they found the training courses necessary and useful, although they expressed some critique towards the content and the organization of the courses as well.

The content of the training courses was criticized mostly by the EPICT facilitators. The training in this course was offered by the Danish EPICT trainers, who focussed on the philosophy of the EPICT courses and on the feedback techniques. However, the learning management system was not introduced to the facilitators, and the contents of the modules were also studied very briefly.

> Facilitators should be prepared to enhance group cohesion. [F6:285]
> The training should have focused on Moodle as well. [F4:212]
> We did not learn about the learning management system. [F1:358]
> The facilitators participated in the training without knowing the course material. [F3:265]

The facilitator training in the Precise Project and the KSzK project was carried out in the learning management system the facilitators were expected to use. The content and the organization of the training mirrored the courses; in other words, the facilitators participated in similar activities and under similar circumstances as the future learners. It was considered to be especially relevant, as most of the facilitators were novice online instructors.

In the interviews, several facilitators noted that the training should be continuous throughout the course. They had to face several problems in the courses where a facilitator discussion group or support group would have been needed.

> We, facilitators should meet and discuss how we work.[F5:312]

> I think some kind of consultation for the facilitators would be necessary at once a month or so.[F2:319]

In sum, answering Research Question 6 (*What is the role of facilitator training before the online teacher training courses start?*), it can be concluded that all facilitators agreed on the necessity of special training for online

instructors. They found it important to become familiar with the learning management system, the content of the course, and specific facilitating techniques in supporting individuals and groups of learners in online adult courses.

6. Conclusion

6.1. Summary of findings

Based on the research and the literature review presented in this thesis we can conclude that successful online courses need to be facilitated, and the roles the online facilitators need to take are numerous. Chapter 5 discussed the research findings in the light of the literature and pointed out similarities and differences. Generally, the quantitative and qualitative data collected for this study support several theories and results of published research. However, the data also point out some considerable contradictions, and call for the further development of the concept of online facilitation.

Six research questions were formulated in an attempt to explore the roles of facilitators in online adult courses. Research Question 1 concerned the roles of facilitators in connection with the success of individual learners in online teacher training courses. It was found that facilitators have a positive impact on participants' motivation, progress and achievements in the online setting. Techniques were quoted form the facilitator interviews to give some examples of how facilitation of individual learners worked in the three courses. Facilitators can benefit a lot from knowing the background and individual characteristics and circumstances of learners (previous experience, ICT skills, access to technology). Based on this, and relying on the activity logs of the learning management systems facilitators play a significant role in offering support to individual learners in e-learning courses.

Research Question 2 referred to the role of facilitators in the face-to-face meetings during the face-to-face meetings with participants in online courses. The data analysis showed contradictory findings in connection with the roles facilitators play in face-to-face meetings. Due to the conflicting interests of course providers, learners, and facilitators, alternative views were identified on the role of meetings. On the other hand, the facilitators interviewed in the projects had different opinions about the roles of facilitator-learner meetings.

Research Question 3 concerned the role of facilitators as group leaders in the online courses. Facilitators believe that groups can empower individual learners and can enhance the results achieved in online instruction. Nonetheless, they need to have a better understanding of how groups work, and how they can act as catalysts in the formation of groups in an online environment. The analysis of the data suggests that groups are not static during the online courses, but constantly develop. Group development, however, is more complex and less predictable than suggested by the models of Salmon (2000) and Moulen (2007). The participation data and the qualitative interviews are not sufficient data to arrive to a full understanding of group dynamics in online courses, but the patterns of participation showed similar fluctuation in all three courses observed.

Research Question 4 was formulates about the roles of interaction in online teacher training courses. The course participants and facilitators in the three courses used both synchronous and asynchronous ways of communication. The results showed that the presence of the teacher promoted student interaction not only with the content, but also among students and the

teacher as well. Similarly, the communication patterns in the courses were evaluated as being useful mostly both by the learners and the facilitators.

Research Question 5 focused on the role of evaluation and feedback techniques offered by facilitators in online courses. Evaluation and feedback techniques varied in the three courses, but were considered to be compulsory elements of online courses as well. Facilitators explained that adult learners were motivated by being tested, but the form of the tests was not appreciated. It is suggested that new types of test taking methods should be applied in online courses that match the methodology of the courses.

Finally, Research Question 6 aimed at describing the role of the training facilitators participate in before starting the instruction in online adult courses. All facilitators agreed on the necessity of special training for online instructors. They found it important to become familiar with the learning management system, the content of the course, and specific facilitating techniques in supporting individuals and groups of learners in online adult courses.

During the analysis of the data another category of facilitator roles emerged. The importance of the learning management system was referred to in the interviews, and it was found that although decisions in connection with the learning management system, course design, course content, and course structure are made by the course providers, facilitator roles are heavily influenced by them. Facilitators either have to spend more time on administration and adjusting course content to the needs of the learners, or decide not to take responsibility and try to cope with learner demotivation. It can be considered by the course providers to receive feedback on these issues from the facilitators and adjust the course to their needs as well.

6.2. Practical implications

The present study aimed at examining the roles facilitators play in online adult teacher training courses based on the quantitative and qualitative data from three courses delivered in Hungary. The results cannot be considered representative of either the Hungarian context or a more general understanding of facilitation. Some practical considerations emerged from the thesis, and these are the following:

1. Facilitator roles should be considered specific to the course characteristics. Consequently, appropriate training can only be provided for facilitators if it contains both the course-specific variables and the practical techniques facilitators can use in the online courses.

2. Facilitators should play a role in creating the online learning environment by either being consulted before the course is set up, or by shifting their roles to creating or recreating some of the elements of the LMS to cater for the specific learner needs.

3. Facilitators should understand and learn how their personality changes with the delivery system. As they act as role models of successful online learners and teachers for course participants, the techniques of the 'online self-creation' could be explored.

4. Regarding the research methodology used in the thesis, it is stated that the analysis of quantitative data regarding online courses does not result in a deep understanding of facilitation. Although activity logs and data mining techniques can applied very well in learning more about the

online behaviour of course participants, qualitative data collection techniques are also necessary to be applied.

In sum, some practical issues emerged from the present research that suggest that due to the complexity of the roles facilitators take in online courses, more emphasis should be given to providing a practical and on-going training for facilitators.

6.3. Limitations of the study

In spite of the findings and practical implication, the present study has some important limitations. First of all, the number of facilitators and courses involved in the analysis, the results cannot be generalized. The validity and reliability of the results could be increased by adding the analysis of participant data to the findings and applying triangulation of data sources. The use of interviews as qualitative data allows subjective interpretation to a large extent.

Furthermore, the findings were largely based on the analysis of reports on facilitator roles. These can be supported by a qualitative analysis of facilitator messages that can be contrasted to the roles described in the relevant literature. The development of groups and facilitation throughout the courses were examined on the basis of longitudinal data collected from the activity logs. The results, however, are unclear and sometimes are difficult to interpret, so further research is needed on the developmental processes of online courses.

6.4. Directions for further research

This thesis provided a number of insights in relation to the practical and theoretical issues of e-learning courses. The theoretical recommendations presented in the thesis deserve further study on both existing online courses and new courses in the future. Addressing these four concrete research questions might bring considerable benefits:

1. How can understanding the roles of facilitators in online courses contribute to the design and implementation of learning management systems?

2. What are the individual and professional characteristics of facilitators that are necessary for successful online instruction?

3. How far can the findings of this study be replicated in different contexts, e.g. in blended courses, or courses offered for younger learners?

4. How will Web 2.0 tools effect the methodology of online courses and the roles of facilitators and learners?

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Appendices

Appendix A: Facilitator interview protocol

FACILITATOR INTERVIEW QUESTIONS (appr. 60 minutes, taped)

1. **The facilitator's previous training**
   1.1. What type of degree(s) do you have?
   1.2. When did you earn it?
   1.3. What are your teaching experiences? (school types, course types, age of learners)
   1.4. Do you have any experience in online training as a participant / facilitator / course developer / course administrator?
   1.5. If yes, what are your experiences?

2. **The facilitator's opinion about his/her groups**
   2.1. How many groups did you teach in this course?
   2.2. How many participants were there in the groups?
   2.3. Could you describe your groups and the participants?
   2.4. Did you experience any problems?
   2.5. If yes, how did you solve them?

3. **The facilitator's participation in the course (self-report)**
   3.1. How often did you log in to the learning management system?
   3.2. How much time did you spend in the system on average?
   3.3. What is your method of facilitation as you visit the system (messages, forums, chats, etc)?
   3.4. How much time did you spend with course work outside of the system (e-mailing, personal consultations, etc.)?
   3.5. How did you give feedback to participants?

4. **The facilitator's role in the face-to-face meetings (self-report)**
   4.1. Did you meet the participants face-to-face? How often? Why?
   4.2. If yes, how did you prepare for the face-to-face meetings?
   4.3. What materials did you use for the face-to-face sessions?
   4.4. If yes, were these session useful? Why?
   4.5. If no, how did you make up for face-to-face meetings?

5. **The facilitator's training**
   5.1. Was your training successful?
   5.2. What was the most / least useful part of the training?
   5.3. What did you miss from the training?
   5.4. What do you think of the training materials?

Appendix B: Facilitator interview protocol (Hungarian)

1. A facilitátor felkészültsége, előzetes tanulmányai

Milyen végzettséggel rendelkezik?
Mikor szerezte azt/azokat?
Milyen tanítási gyakorlattal és tapasztalattal rendelkezik? (iskola típusa, tanított tantárgyak, tanulók életkora)
Rendelkezik résztvevőként/moderátorként/facilitátorként/tananyag fejlesztőként on-line oktatással kapcsolatos tapasztalattal?

2. A facilitátor véleménye saját csoportjáról/csoportjairól

Hány csoportja van az EPICT kurzusban?
Hány tagú a csoport?
Hogyan jellemezné a csoportot?
Mennyire ismeri a csoport tagjait? (egyenként)
Volt-e konfliktus/problémás helyzet a tagokkal? Hogyan oldotta meg a helyzetet?
Mennyire hasznos a csoportnak az EPICT az Ön véleménye szerint?

3. A facilitátor részvétele a kurzusban (önértékelés)

Milyen gyakran jelentkezik be a keretrendszerbe?
Mennyi időt tölt ott?
Mit csinál az oldalon? Milyen tevékenységet végez? Van-e kialakult módszere? (először üzenetek, fórum, chat stb.)
Mennyi időt foglalkozik a kurzussal kapcsolatos teendőkkel a keretrendszeren kívül? (pl. telefonos kapcsolat, személyes konzultációk, stb.)

4. A facilitátor szerepe a személyes csoporttalálkozókon

Mi indokolta a személyes találkozókat?
Hogyan készült fel ezekre a találkozókra?
Mennyi időt vett igénybe a felkészülés?
Volt-e technikai probléma?
Hasznosak voltak ezek a találkozók?

5. A facilitátor tréning

Sikeres volt a tréning?
Melyek voltak a legkevésbé/leginkább hasznos részek a tréning során?
Mit hiányolt a tréning során?
Mi a véleménye a segédanyagokról?

Appendix C: Sample from the interview coding sheet

Code	Variable	Topic	Subtopic	Interview transcript
346	F2F meeting	content	motivation	egy volt kötelező és egy nem kötelező, én az egy kötelezőn megpróbáltam mindkét modult megnézni
347	F2F meeting	content	motivation	a jelenléti nap alapvetően hasznos, de szerintem az eredeti EPICT szerint kéne haladni, ahol csak az elején és a végén tartanak
203	F2F meeting	content	password	szerintem a jelenléti napokra szükség van, csapatépítés, csapatszervezés, informatikai alaphibák, a hagyományos pedagógiából megcsinálta a feladatot Wordben
140	F2F meeting	content	peer evaluation and motivation	minden nap elején végignézik egymás munkáját, hibáját, látták egymás haladását
295	F2F meeting	content	time management	kb 2 hét múlva van szükség egy jelenléti napra, amikor a felmerült problémákat megbesézlik
349	F2F meeting	content	timing	A második jelenléti napon ilyesmivel már nem foglalkozol, hogy csapatot építesz
107	F2F meeting	content	evaluation	nem történik semmi, bejöttek egy előadásra, nagyon tetszett nekik
118	F2F meeting	content		lesz egy bevezető előadás a képzés előtt, aztán a tananyagokkal kapcsolatban elektronikus kommunikáció lesz,
195	F2F meeting	content		mi az oka, hogy nem lépnek be, milyen feltételek vannak
241	F2F meeting	content		valamelyik jelenléti napon írogattak a fórumra és akkor mindeki rékapott a fórumra