

LEARNING GAME

TEACHER TRAINING MANUAL

MULTIMEDIA APPLICATIONS
FOR EDUCATION

Part 1: INTRODUCTION

Chapter 1: Theory of eLearning

Vilnius Pedagogical University (LT)

Introduction

Personalization

Motivation

Responsibility

Interactiveness

Higher order thinking

Life-long education

Informal learning

Blended learning

Chapter 2: The application of multimedia solutions to education

University of Brera (IT)

Chapter 3: Videogames and education

University of Brera (IT)

Chapter 4: Introduction to Programming for education

University of Brera (IT)

PART ONE

INTRODUCTION

Chapter One: Introduction to e-learning

University of Vilnius (LT)

1. Introduction

The technology is improving, and users often feel, that it becomes part of their world. People are realizing that e-learning is applicable to so much more than learning. E-communication becomes part of the life.

Until well into the 20th century most workers were manual workers. Today only about 20% do manual work. Nearly half, 40% of total work force, are knowledge workers. Preparing children, teens, and adults to function in this situation is a top priority of society. The development and expansion of the Internet and distance learning are essential to achieving this goal. The e-learning industry is one of the fastest-growing areas of the high-technology sector and will continue this trend far into the future. Yet there is a great deal of confusion surrounding e-learning for learners, investors and sometimes even for instructors.

Confusion concerning e-learning comes from using the word "e-learning" to describe anything and everything within this very wide industry. E-learning is a generic term that covers a variety of forms of electronic mediated learning. E-learning is more than "e-training." Usually e-learning is defined as "asynchronous or synchronous learning that is conducted over the Internet, intranet, extranet or other Internet-based technologies. E-learning includes a number of different delivery methodologies within it including self-paced content, virtual classrooms, simulations, online chats, threaded discussions, etc."

E-learning has definite technical and pragmatic benefits¹ over traditional classroom training. ***E-learning wins against face-to-face learning because of "better - faster - cheaper" reasons:***

- It's ***flexible***.
- It's ***less expensive*** because of not having to travel or spend excess time away from work. The biggest benefit of e-learning, however, is that it eliminates the expense and inconvenience of getting the instructor and students in the same place.
- It provides a quality product at a lower cost – it's ***less expensive to produce***.
- E-learning provides a ***consistent*** message. It helps to save time and money on not learning of extra material. The objective is to ***become competent in the least time and with the least amount of training***.
- E-learning is delivered in the ***right-sized pieces***. Learners don't have to take a one-hour class for the five minutes' worth of content they are looking for.
- It's ***self-paced***. Most e-learning programs can be taken when needed. It helps to save is time. Speed is a well-known competitive advantage, and not even in business.
- It can work from ***any location and any time***. It serves as an equalizer in terms of access and equity.
- It can be ***updated easily*** and quickly.

¹ Rosenberg M. E-Learning: Strategies for Delivering Knowledge in the Digital Age. -McGraw-Hill, 2000, p. 29-30.

- o It can be easily managed for large groups of students and **use the work of the best instructors.**
- o It can **use an extensive collection of resources.**

Web-based products allow instructors to update lessons and materials across the entire network instantly. This **keeps content fresh** and consistent and gives students immediate access to the most current data. Information can be retrieved just before it is required, rather than being learned once in a classroom and subsequently forgotten.

The Internet provides **new channels** and forums to support learning. These include online mentoring, chat, message boards or threaded discussions, e-mail, synchronous training events, etc. These components make the difference between a flat, one-dimensional learning experience and one that **is rich in diversity and choice.**

Online training is less intimidating, more psychologically “safe” than instructor-led courses. Students taking an online course enter a risk-free environment in which they can try new things and make mistakes without exposing themselves. People feel safer, if nobody sees their mistakes. This characteristic is particularly valuable when trying to learn soft skills, such as leadership and decision-making. A good learning program shows the consequences of students’ actions and where and why they went wrong. After a failure, students can go back and try again. This type of learning experience eliminates the embarrassment of failure in front of a group.

Modern philosopher of education M.Lipman² set two contrasting paradigms of educational practice – **the standard paradigm** of normal practice (mostly performed by face – to – face education) and **reflective paradigm** of critical practice (educational principles of e – learning is based on this approach).

The dominating assumptions of the standard paradigm are:	The dominating assumptions of the reflective paradigm are:
Education consists in the transmission of knowledge from teacher to learner.	Education is the outcome of participation in teacher – guided learners community.
Learners acquire knowledge by absorbing information, and the facts are the main goal of education.	The focus of educational process is on the grasp of relationships within the subject matter under investigations.
Knowledge is about the world, and this knowledge is unambiguous and unmysterious.	Learners are stirred to think about the world, and knowledge reveal to learners as ambiguous and mysterious.
Knowledge is distributed among disciplines that are non-overlapping, and together are exhaustive of the world to be known.	Getting of knowledge is based not on disciplines, but on problems. The knowledge from different science is required to solve the problem
The teacher plays an authoritative role.	Teachers role is supportive and fallibilistic (ready to concede error).

Distance learning can not only satisfy the demand for alternative forms of education. E-learning leads to increased retention and a stronger grasp on the subject, **helps to organize more successful learning process:**

² Lipman M. Thinking in Education. – Cambridge, 1991, p. 14.

- **Learner-centric approach.** E-learning is the shift from instructor-centric to learner-centric approach. For years, training has organized itself for the convenience and needs of instructors, institutions, and bureaucracies. **E-learning focuses on the individual learner.**
- Making the learner central to the teaching process has been long established history - which includes being pilloried under the heading of 'progressive education' by many educators and politicians. What it implies is a respect for the learner as an individual who has different needs and expectations. For example, the need to feel included in the learning process and empowered by the ideas developed. It is a process that aims to facilitate intrinsic motivation in which the learning itself is the main reward. One way of the key differences is the extent to which learners are dependent on the tutor or the learning materials - and there can be good reasons for both approaches.
- Most people are familiar with the traditional education, where lecturer stands in the centre and passes the knowledge all around. People, who are further, find it easier to "catch" what is being passed. But those who are far away, find it more difficult, they "catch" the wrong things or simply get buried. It is however a familiar learning environment for most people.
- E-learning does provide the opportunity to revisit what the style of a learning environment could and should be. Here **people may learn in different ways**, such as individually and collaboratively in small groups - but always on the move in the direction **that best suits them.**
- An e-learning program can boast the latest technology available, but if it fails to meet the needs, it doesn't matter how advanced it is or how much money is saved. A good e-learning experience does not take a one-size-fits-all approach. Instead it focuses on learner and can engage the program and meet everybody's learning objectives.
- The introduction to the course usually takes into account the learners' backgrounds, ability levels, and expectations, including their personal learning goals and objectives, or specifies the attributes of the learners for whom the course is designed.

2. Personalization

There are many different learning styles³. For example, **active and reflective learners.** Active learners tend to retain and understand information best by doing something active with it - discussing, applying, or explaining it to others. They like group work. Sitting through lectures without getting to do anything physical but note taking is for them very hard. Reflective learners prefer to think about it quietly first. They prefer to work alone.

Visual and verbal learners. Visual learners remember best what they have seen - pictures, diagrams, time lines, films, and demonstrations. Most people are visual learners. Verbal learners get more out of words - written and spoken explanations.

Everyone learns more when information is presented both visually and verbally.

Rational and intuitive learners. Rational learners tend to like learning facts, like solving problems by well-established methods and dislike complications. Intuitive learners often prefer discovering possibilities and relationships, like innovation and dislike repetition.

Sequential and global learners. Sequential learners tend to gain understanding in linear steps, with each step following logically on from the previous one. Sequential learners tend to follow logical stepwise paths in finding solutions. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections,

³ Felder R.M., Solomon B.A. Cognitive styles and learning strategies. – London, 2002.

and then suddenly "getting it." Global learners may be able to solve complex problems quickly or put things together in novel ways once they have grasped the big picture, but they may have difficulty explaining how they did it.

One time learners and repeaters. Onetime learners spend more time reading and put more efforts on material analysing. But they do it once – after don't "come back". Repeaters like to re - read parts of content, they many times "come back" on pieces they liked most of all or on pieces they don't understood well enough.

There may be detected more learning styles and strategies. E-learning tries to support all individual learning styles. Whether learner thrive in a highly interactive environment or prefer solitude, learning program should provide components that accommodate individual approach to learning. This allows learner to tap into the resources with which they are most comfortable, resulting in greater knowledge retention.

E-learning accepts and encourages independent thinking, autonomy and initiative. Learners attain their own intellectual identity, and have possibility to become autonomous thinkers, who do not merely parrot what others say think and do, but make their own judgments, form their own understanding of the world. Autonomous thinkers develop their own conceptions of the sort of persons they want to be, and the sort of world they would like it to be.

Many elements are combined in e-learning to reinforce the message, such as video, audio, quizzes, interaction, etc. There is also the ability to revisit or replay sections of the training that might not have been clear the first time around.

3. Motivation

Traditional learning often tries to get students to learn solutions rather than investigate the problems and engage the inquiry for themselves. Learners just have to study the end results of what the others have discovered. Traditional learning neglect the process and stresses up on the results and products. **When problems are not explored, no interest or motivation is engendered**, and education becomes imitation and repeating.

Modern educators propose, that learning process should take as its model the process of scientific inquiry. Then learners will be intrinsically motivated to learn if there is a meaningful nature of the learning environment and activities.

4. Responsibility

Students get higher retention of content through personalized learning. Since they can customize the learning material to their own needs, students have more control over their learning process and can better understand the material, leading to a faster learning curve.

Learner-centric scenario requires people **to take on personal responsibility for their own learning**. It can be a more daunting experience for those whose experience of learning is limited to the expert on the mountain - and they need help and support to make the change. E-learners are responsible for their own learning. E-learning empowers them to manage and implement their own learning and development plans.

Self assessment. Learners should be able to track and evaluate their own progress, using self-tests, similar to the final evaluation instruments. Learning is effective only in circumstances of self-critical practice, which entails the self-correction⁴.

⁴ Chapnick S., Meloy J. Renaissance eLearning: Creating Dramatic and Unconventional Learning Experiences. - Pfeiffer, 2005, p. 36-37.

5. Interactiveness

Most **learning is social**. The coffee room is a more effective place to learn than the classroom. Studies reveal that the majority of corporate learning is informal, i.e. outside of class. E-learning seeks to foster collaboration and peer interaction.

Online learning should not sacrifice the human element that is so important to learning experience. Programs should offer **online communities** for peer-to-peer collaboration and coaching or mentoring from industry veterans and experts. Students should be engaged in dialogue with the tutor/teacher and with each other.

Students are engaged in experiences that challenge and encourage discussion⁵. **Discussion helps students to grow cognitively - adopt new ideas**, enables students to show that they understand. However, only when they feel comfortable enough to express their ideas will meaningful dialogue occur.

Most e-learning is project-based and occur in a group context. Conducting their own projects is much more interesting to students than answering sterile textbook problems. And because they get to define the nature of the project (even if they don't choose the topic), they have a sense of control over their learning which is absent in traditional classroom instruction. The authentic learning context of the project increases student motivation and satisfaction.

E-learning helps to create successful collaborative teams, emphasizes team efforts that involve communication and social skills, encourages respect for each others ideas. Research on collaborative learning suggests that in the process of collaboration, students are forced to clarify and **verbalize their problems, plane, manage and facilitating solutions**. Furthermore, when students work in teams, they often have the opportunity to work with others from quite different backgrounds and this facilitates an understanding of diversity and multiple perspectives.

Distance education can be more stimulating and encourage more critical reasoning than a traditional large instructor-led class because it allows the kind of interaction that takes place most fully in small group settings. Online students had more peer contact with others in the class, enjoyed it more, spent more time on class work, understood and performed the material better.

6. Higher order thinking

Of course, traditional education involved thinking, but the quality of such thinking was deficient. E-learning involves active cognitive processes, such as creating, problem-solving, reasoning, decision-making, and evaluation. Students must connect and summarize concepts by analyzing, predicting, justifying and defending their ideas. Higher order thinking is a term about quality, not about the quantity. Higher order thinking, learners may develop in e-learning process, is conceptually rich, coherently organized and persistently exploratory, resourceful and flexible. Higher order thinking is a fusion of creative and critical thinking, where those two aspects supports and reinforce each other, as when the critical thinker invents new premises or new criteria, and creative thinker gives a new twist to tradition or convention. Such complex thinking is prepared to recognize the factors that make for bias, prejudices and self-deception (it is important in sociocultural, moral, psychological education). It involves thinking not about its subject matter, but about its procedures at the same time. B.S.Bloom (**in Taxonomy of Educational Objectives**) generated pyramid or hierarchy of skills, at the apex of which are **analysis, synthesis and evaluation**. If by "analysis" is meant critical thinking, by "synthesis" is meant creative thinking, and if by "evaluation" is meant judgments, these skills may be called the main components of higher order thinking.

Purpose of higher order thinking is not to help decide what to believe. **The role of higher order thinking is defensive** – to protect people from being coerced or

⁵ Splitter L.J, Sharp A.M. Teaching for better thinking. – ACER, 1995, p. 36- 38.

brainwashed into believing what others want to compel us to believe without having an opportunity to inquire for themselves⁶.

7. Life-long education

E-learning is forever. E-learning is continuous education, the forty-year degree. It is a daily learning. Work becomes learning, learning becomes work, and nobody ever graduates.

There may be many *different forms of e-learning* - Live e-Learning, Instructor-led, Online, Self-study or informal learning, Computer games, etc, and Blended.

Live e-learning (also referred to as instructor-led training through the Internet) is the newest method of presenting training. Many people prefer learning with an instructor but cannot afford the cost or time to travel to a classroom. Other times, people in widely dispersed locations need to be trained simultaneously within a short period of time, with company specifics integrated into the course by the instructor. Live e-learning is a viable solution for these and other training situations. Live e-learning is instructor-led training conducted through the Internet (or company intranet) within a virtual classroom. Live instructor with excellent knowledge of the topic being taught might provide additional insight into the topic based on questions asked by learners in attendance

If you are expected by the instructor and your employer to be in a class all day for three to five consecutive days, you will probably finish the course faster than if you use self-paced e-learning, unless your employer permits you to devote the same work hours to taking a self-paced class. But live e-learning is more expensive than self-paced e-learning. After all, you have a live instructor or the benefits of a live instructor present at all times. Second, live e-learning can require much more network bandwidth than self-paced training because of its audio, video and collaboration capabilities.

8. Informal learning

Informal learning is perhaps the most dynamic and versatile aspect of learning. Unfortunately, it is the least recognized. Learners need for information (and how we intend to use it) drives the search. Search engines (like Google) coupled with information storage tools (like Furl) and personal knowledge management tools like wikis and blogs present a powerful toolset in the knowledge workers portfolio. Peoples usually discover how to do jobs through informal learning -- observing others, asking the person in the next cubicle, calling the help desk, trial-and-error, and simply working with people in the know.

9. Blended learning

E-learning can't replace everything. Solution may be the blended learning format. *Blended learning* is a term now widely used to describe myriad combinations of learning experiences. Blended learning gives permission to combine learning ingredients in new and creative ways to satisfy the tastes of every learner. Blended learning gives everyone the opportunity to shape programs to meet specific needs and goals.

Blended learning provides the best opportunities for learning transition from classroom to e-learning. Blended learning involves classroom (or face-to-face) and online learning. This method is very effective for adding efficiency to classroom instruction and permitting increased discussion or information review outside of classrooms. Learning is a social process, requiring instructor direction and facilitation. Blended learning utilizes the best of classrooms with the best of online learning.

⁶ Lipman M. Thinking in Education. – Cambridge, 1991., p. 19-23.

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