Specific Skill Set Training for Working Professionals by Faculties via e-Learning

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Abstract. The e-Learning concept is a foreseeable tendency in many environments nowadays, with differences in the stage of e-Learning utilization and usage, as well as the paradigm shift that comes with it. In its varieties, it offers fruitful soil for developing systems such as distance and hybrid learning, as well as initiatives such as life-long learning and non-traditional learner education. We are proposing a model of Faculty certification program that trains non-traditional learners with various backgrounds for a specific skill set, needed by working professionals, delivered on demand, at the workplace, with obtained set of competences effective proximately after completion. The model is learner-oriented and specific-skill-set-oriented. It combines the related theoretical backgrounds of several faculty subjects along with practical exercises of what needs to be learned. The example skill set would be Financial Risk Analysis for an Entrepreneur, with brief elaboration of the benefits for the stakeholders in the process.

Keywords: Distance learning, e-Learning, e-Learning utilization, Faculty certification program, Non-Traditional learner, Working professional, Life-long learning, Education, Learner-oriented, Set of competences, Financial Risk Analysis, Entrepreneur

1   Introduction

The distance learning programs, offering complete studying on distance, as well as hybrid learning programs, offering also Face-to-Face activities for the parties involved in the educational process, are widening the access to education in terms of time, space and student profile dimension. With these models available, "students" become "learners", and learning becomes multidimensional activity and experience that overflows the traditional assessment expectations of the educational institutions, but of the students as well. Another aspect that has noted rapid sublimation is the expected timeframe for the learned theory and skills to become implementable in reality, which has reduced to: now, immediately.

  "The social transformations caused by the emergence, development and direction of the new knowledge-based economy have led to multiple changes in the educational system. Most of the institutions concern the introduction of IT technology in the educational envi-

ronment as the main agent of transmission, dissemination and evaluation of information and their level of assimilation."[1]

The proposed model of education in the form of training for qualification and skills by wrapping the education with certification is based on the idea that there is a necessity for a mentality shift of the opinion that people who got employed have finished with the learning process for good. Number of reasons point in the opposite direction – the learning happens and should be life-long. On the working places, it is done for the purpose of certification, upgrade of qualification, change of qualifications or advancement in the career or expertise.

2   The Distance Learning Concept and Characteristics

The distance learning model, as a way of delivering instructions by teachers and learning theory and practice by learners, in different time and place from one to another, has many stakeholders, each of which investing certain inputs and gaining back valuable knowledge, experience and wisdom.
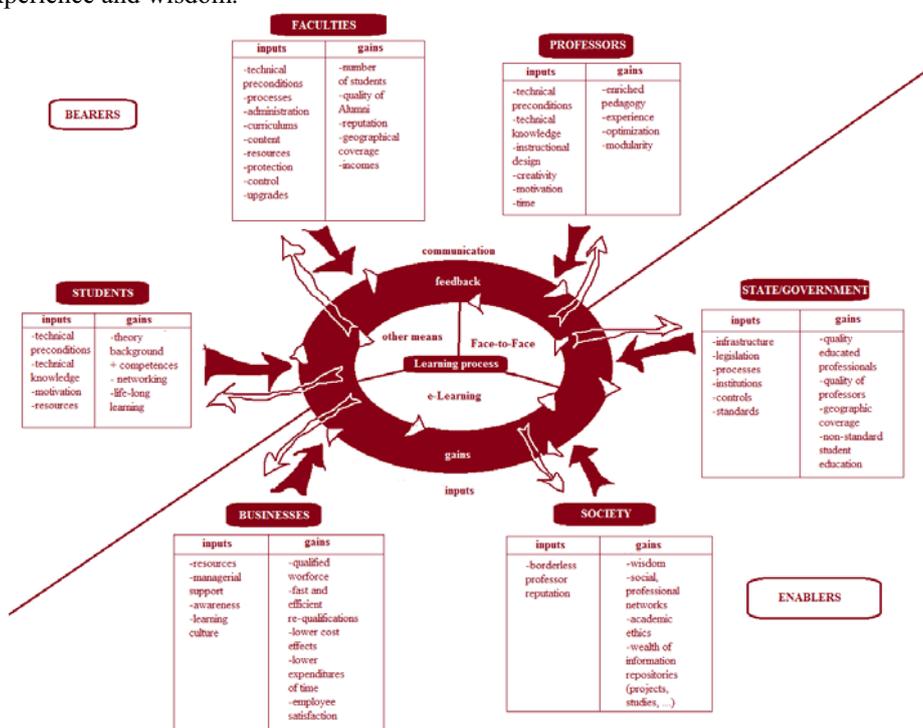

Figure 1. Stakeholder and Relational Model of Distance/Hybrid learning

The stakeholders in the process are categorized as:
-    Bearers of the distance learning model of education
-    Enablers of the distance learning

The bearers are the Students, Faculties and Teaching staff, who have to carry out the whole process of education and verification, while the enablers are the State/Government, the Society and the Businesses, who have the obligation to integrate and produce and support environment for the institutions to deliver distance learning, for the students to deliver results to the businesses, for the professors to deliver optimized knowledge and skills to the students. The investment each stakeholder has in the process, and the gains from it, are shown on Figure 1.

In this paper, for the purpose of condensed elaboration, we will be referring to the distance learning and hybrid learning models as equally applicable to the discussed topic about skill set trainings for working professionals.

In the context of distance learning prospects, we would like to bring up the term and profile of "non-traditional learner". Starting with the latter word, that signifies the major change of the concept of a student, since the "learner" does not necessarily go to Faculty campus, follow face-to-face lectures, but in most cases does the learning after working hours at the workplace, or in the late hours at home; the learner collaborates with the colleagues, is self-organized, proactive; the learner does not learn just for the sole purpose of being graded and assessed upon reproduction of materials, but learns with the purpose of implementing the skill or knowledge in the workplace or in life, considering that valuation as the ultimate assessment of what has been learned and shared. The term "non-traditional" on the other hand, expands the definition of the "traditional" student in diverse ways, different from each other in terms of geographical placement, in terms of age, in terms of professional background and in terms of goal of the learner. The distance learning, before all, opens the doors of education for students unable (from various reasons) to travel and follow face-to-face lectures or exams on a specific geographical location where the Faculty or its disperse office is. At the same time, the age limit of expected students (and learners in the broader sense), now is situated in a much wider range, very much out of 18-20 year old traditional student. This complies with the life-long characteristic of the learning process. The possibility to learn from distance, offers profiling of professions and expertise to working professionals who have been previously limited (by financial or other reasons) for their further education with multidisciplinary dimension. When learning after certain working experience, there are unexpected fruits of a new, more feasible and pragmatic way of viewing, perceiving and thinking about certain issues and problems, which add new quality to the theory. Finally, the purpose and the goal of education, when practicing distance learning model, shifts from getting a diploma and status, to getting a skill and knowledge applicable in practice as soon as possible, if not immediately. In this context, the reputation of the diploma or certificate has meaning more in terms of the quality and reference of the degree, rather than status symbol.

With the model of distance learning, a maximal interrelation among Faculties, Students and Businesses is being achieved. Their mutual relation paths are used for exchange and upgrade of knowledge, experience and theory, and in order for that to function in a proper way, there must be a certain shift in the centers of gravity of the educational programs. Here is brief elaboration of those particulars.

Student contribution: In programs such as this one, the knowledge gets rapid development and acceleration, because of the fact that students and learners of these programs are very often already employed persons, with some life and working experience, and have a lot of practical, theoretical and experiential understanding of the matters, and that is their special input in the educational process, compared to traditional students who have recently finished high school.

Instructor motivation: The threshold of the knowledge and skills expected by the professors and instructors is moving higher, in order to be able to survive in a system of multi-channel creation and distribution of knowledge. The lecturers should have technical knowledge, new instructional design skills, ability to revise and adapt the materials to the goal of having lessons that are sufficient for a learner to learn by individual reading and engagement, as well as creating additional activities and practices that will support the goal of learning. This is far bigger challenge than the one in the traditional learning, where the lecturer presents the topics in the same way for all learners, in front of a wide audience of students, with generally one-way of communication, and assessing what has been learned

by grading the student's reproduction of the same material. In this model, the instructors are motivated to teach the learners a successful applicable skill, not just quotation of theory.

Student motivation: The motivation of the students in distance learning cases is the basic precondition for the whole process's success. Usually, the learner's profile is such that they are proactive to get engaged in a learning process, in order to obtain knowledge or skill, applicable in practice. This denotes that there is a high dosage of self-motivation. On the other side, the qualities coming to surface in this model are more than ever self-initiative, self-organization and self-discipline. In terms of busy schedules and long deadlines for task completion, anyone can be caught in the trap of procrastination and not meeting the expectations. The idea of "active learning" is underlined in every successful outcome of a distance learning program, delivered in various ways. "This is where the active teaching methods are strongly recommended. Experiments were based on innovative approaches to active learning, among others: problem-based learning, project-based learning and the case method."[2]. That is why, the above mentioned qualities, aside from the precondition of some technical knowledge, are the basic requirements for the learner in a distance learning skill set program to maintain his/her motivation on the expected level.

Multidimensional assessment of the learners: The traditional teaching model embodies lectures, seminar papers, home works, colloquia and exams, where the information flow is generally one-way (from professor towards student, in the case of lectures; or from student towards professor, in the case of assignments and exams. The distance learning model imposes engagements and situational environments where the learner is being placed, and where he/she should manifest various skills and knowledge, and learns at the same time. In this context, the student is encouraged to practice with tests, queries, quizzes, to step into communication and collaboration with colleagues, peers, and experts from the whole world, join actively the social, professional or other networks that exist on Internet, to participate in forums, discussions, wikis or glossaries, to collaborate on different projects (learning by doing) and to frequently use virtual data repositories, which are areas of additional (if not main) obtainment of knowledge and skills needed for the real world and business, and points of assessment by the instructors.

Virtual reality of the participants in the educational process: The environment in the traditional education is physical and situational – at the given moment, the professors and learners are in the same physical location. In the distance learning concept, neither the moment in time, nor the geographical position need to be the same. The term "distance" learning itself, specifies geographical displacement of the participants in the process, in the very least between the students and the instructors, and generally among the students themselves; while the term "asynchronous" learning means mismatch of the moment of creation of the lectures and their consumption from the students. This brings numerous advantages and setbacks at the same time. Usually, the same advantage for ones is disadvantage for others, so they should be observed in terms of student segmentation. With the "synchronous" distance learning, there is some similarity with the traditional "face-to-face" learning because the moment of lecturing and listening is the same, only there is geographical distance among the participants. Furthermore in the virtual surrounding, there is no prejudice or reluctance to speak, to compete in oratory skills in front of big auditorium, but everyone is in a virtual world, one can say with "virtual avatar" that is being presented before the colleagues and instructors with engagement in activities, texts, communication, contribution in projects, tutoring and assistance to peers, without the barriers of physical presence and interaction. The virtual environment rapidly enhances a person's technical skills of all involved parties, and also the skills of exploration, collaboration and communication, because everybody has the chance to participate in a discussion, given prior time for thinking, to place a comment or response, to explore the wisdom of the world accessible on the finger tips, and then estimate what of the gathered information is relevant for the topic and what is

not, for his/her specific requirements, and generate process of analysis and decision making upon it.

Communication between professor and student: In general case, the lectures mean one way communication from professors towards students, and in case of exams, it is vice versa. With the distance learning, the way of learning itself, by generating tasks and opinions, imposes questions with the student, and with that comes the need to communicate more frequently and more in-depth with the professors. This means that the professors are expected to be accessible throughout the whole day and night, or in other words, much longer than in the traditional educational system. This way of communication is enabled by direct communication tools such as e-mail, chat, forums etc.

Student **communication and collaboration:** In distance learning, the social, professional, and in this context, the academic networks have strong and sustainable communication links. In the case of traditional education, the students discuss certain related topics prior to the lectures, very rarely during the lectures, or out of the physical space of the educational institution. In distance learning, the communication and collaboration among the students is of immense importance for each one of them, because through sharing the way of thinking and viewing, and discussing viewpoints, is the way things work more effectively for all parties involved. This aspect gains momentum in the hybrid learning, where the students are placed in a setup that enables them to meet each other and the professors, on a few "face-to-face" occasions, and do most of the work on distance. "Individuals continually create and share information according to their interest and get into conversation. They collaboratively craft and animate an innovative "live" space in which they actively participate. Collaboration is the base of Web 2.0 (and e-learning 2.0) technologies."[3]

Networking: communication within social, professional, educational, academic, expert networks: The new "player" in the distance learning system, is the network. Actually, this means everyone present on the internet, as well as all the accumulated knowledge and wisdom from the world, accessible via internet. Every person stepping on the internet, eventually gets skilled in differentiating relevant from irrelevant or truthful from untruthful information coming from friends, colleagues, or experts, or total strangers. As the individual is learning from the networks, the same process is going on in the different direction. "In utilizing various pedagogical models in designing e-learning, however, e-learning leads to pedagogical reengineering, resulting in learning scenarios where students become more active participants in generating new knowledge. They refer to this as a participatory and contributions-oriented approach to learning." [4] Due to every person's communication with a network, every member is learning more too, at that moment, or in the future, when referring to past discussions, projects, repositories and other resources available on the internet.

Simulations and games: Until recently, the power of simulations and games in the process of studying has been, mildly said underestimated. With the development of software applications that can be used for these purposes, there is no limit for application of the creativity of the designers of learning blocks. In fact, the limit is their own creativity in terms of instructional design. From psychological point of view, when a person is playing a game or viewing or making a simulation, he/she is activating his/her brain in regions quite different than the regions used to store information while listening or reading a lecture. That is why, things observed or performed in a simulation or a game, have long lasting impact in the learning process and the memory of the person. Nicely structured game or simulation is one of the essential elements of distance learning. In addition to this, the games and the simulations in this context do not only mean visualization, but also textual quizzes, branching of activities and conditional activities in the learning process.

Virtual Information Repositories: The libraries have been seldom visited places, and when books have been read, this was done by hard working enthusiastic students, which

can't be generalized for the general student population. The virtual data repositories are inevitably accessible by anyone using the internet, with no reluctance, except maybe, due to financial reasons.

Helpdesk: In order to result with success, any distance learning project needs to have remote assistance and prompt troubleshooting of the every-day technical aspects of using the software, accessing resources and other handling needed by the users in order to put aside the technicality and focus on the learning process. This is the reason why any institution needs to keep and monitor log files, error logs, and be proactive in their solving, even before the end users realize their existence.

Mentors, Tutors, Study Partners: In the virtual environment, it is good to offer the student traditional support from real individuals, such as colleagues, assistants, senior colleagues and others who might assist the studying process and advance the knowledge on their side as well. This is world practice in the traditional educational systems, and has even more extensive role in the virtual world, where still real people are the main actors.

Minimum vital blocks for the success of distance learning are: motivation of all parties involved, engagement, hard-work, well comprised presentations, learning materials, exercises, tests, references, existence of final project, follow-up, reminders, deadlines. All of these lead to well used, effective and efficient thirty interactive minutes on a computer, confirming the benefit of withholding travel expenses, daily allowances, work absences, exclusivity in receiving trainings, and all other reasons distance learning is appropriate for business people and employees.

Expectations from the process: The employers are eager to feel the success of the trainings, sometimes even more than the employees. The expectations from this kind of trainings are not for a diploma or reputation, but for theoretical + practical education whose effects can be implemented at the workplace immediately.
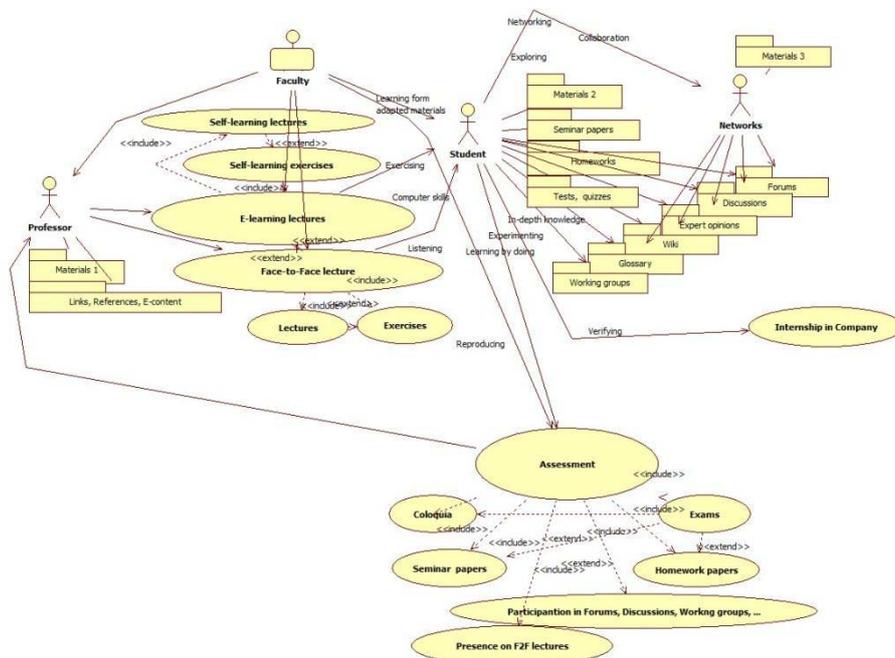

Figure 2. Functional Model of Distance/Hybrid Learning

The functional model of distance and hybrid learning, presented in Figure 2, describes the mechanism of the educational process starting from Professors preparing lectures and practical exercises by revising the materials and shaping them into optimized, self-learning form, as well as performing Face-to-Face, more or less, traditional lectures, and sharing those materials, references and links with the students via e-Learning system. The student is involved in self-learning, practicing, exploring, preparing Seminar thesis and Homework but also joining Discussions, Forums, Wikis, Glossaries, Repositories, Working groups, with the "new player" in today's educational process – the Networks (of professionals, friends, peers, experts, …). The range of skills obtained by the student placed in this setup is much more wider than the traditional, and gets represented in the process of student assessment, where not only reproduction of the learned material is being graded, but also participation in the above mentioned activities.

2.1   Distance Learning with e-Learning for Business Environment

When implementing or using e-learning systems in business environment there has to be a reference to the particulars that are differentiating the business-situated e-learning from the ones in the educational institutions.

For a distance learning program placed on e-learning platform to have a chance of success, what is needed is management support. The management should have comprehensive understanding of the idea, goal, the way the system is functioning, in order to provide the employees with the necessary support, paid attention and time consideration. The traditional way of making trainings means traveling, absences, replacements, exclusivity to receive training to a narrow group of employees, and many other setbacks that are bridged with the distance learning via e-learning system.

Another important component is alignment of the goals of the trainings, topics, materials and lectures in the e-learning system with the goals of the business and the specific employees using it. Whenever one talks about business, it is understandable that the base of the investments is its return, in this case, return on learning. The expected effect can be seen in increased productivity, competency, advanced skills, compulsory training deliverance with least expenses per employee, increased ICT skills, faster and better integration of new employees etc.

The motivation of the employees to learn is important moment also. If not motivated, employees will procrastinate, find excuses, will have reluctance, dissatisfaction and sense of failure.

Approaches of usage of e-learning in the workplace are:
-      "e-learning tightly connected to the personal learning goals
-      e-learning tightly connected to action projects."[5]

In the first case, the e-learning materials are tightly connected to the personal learning goals, and are used primarily for developing specific competences, introduction to a new employee, mentoring, coaching, collaboration, strengthened communication. However, these systems are used by a limited number of employees (e.g. newcomers, trainees, people changing working places etc.). The second model of e-learning in business environment is connected to action projects. In this case, the training needs to be completed with immediate application of the learned in practice. Here, beside the learners, mentors and instructors, is notable the existence of a project, as additional motivation (e.g. migration to a new software, radical change of a procedure, newcomer training, …) In these systems, the instructional design is enriched with tables, procedures, computer Print Screens, forms that need to be filled, all of which enable certain bigger control in the flow of learning, and its completion.

3   Specific Skill Set Training for Working Professionals by Faculties

Acquiring a skill instead of in-depth knowledge of certain topic (Skill Set Orientation): One displacement of the traditional methods of education is that in this certification model, the aim of the instructional design and the entire pedagogy and work of the learning blocks, is towards obtaining a certain skill, which is a combination of several, not necessarily related skills and knowledge. This is different from the traditional educational approach of obtaining in-depth knowledge of a certain scientific discipline.

In our model, the goal is to acquire a skill of analyzing the financial risk by an entrepreneur, without the in-depth background of entire scientific areas such as Risk Management, Financial Analysis, Calculation Software, Financial Reporting, Forecasting, Cash flow Analysis, Advanced Excel etc. In this way, the professors and the instructors put delicate and complex effort in designing the materials, exercises, tests and quizzes, and lectures in general, in a pragmatic way with ultimate goal of absorbing the optimized theory and sublimated practice and attaining a specific skill, possible to be implemented immediately after the completion of the training.

Professors collaborate and merge knowledge for student and training purposes, instead of students learning sole disciplines and expecting to be skilled (Student-oriented): The second difference of this model, compared to the traditional education, is interrelated with the previous one, and means cooperation of professors/instructors from different areas of expertise, towards a multidisciplinary training, in which the student is not interested so much what is the theoretical home of a certain knowledge, but is trying to learn the compilation of the lectures. This method provides knowledge in the form of "tip-of-the-ice-berg", which is segmented and not profound, but yet, covers the "need-to-know" basis and is designed by respective professors. With this approach, the material itself is a well of knowledge for the skill, and the student's side of the work is to try and implement it in real practice.

The specific example that we will try to develop over the distance learning model is training for qualification with earned certificate, that can be applicable in Faculties or Specialized Training Centers, and the skill set to be obtained from the training will be Financial Risk Analysis for Entrepreneurs.

Every entrepreneur has strong need of making decisions based on the financial performance of the company, viewed through its financial statements. These decisions often are accompanied by the ability to foresee and estimate the risk of the company, from third party, from the competition, from the banking system, the currency risk and many others. Some of these risks can be measured and seen in the financial statements of the company. When a business is asking for a loan in a Bank, the Bank is trying to estimate the risk for default of the loan, or collateral market according the financial statements of the applicant, which describe the past, as well as from cash flow and other projections. The banks do this by involving various profiles of employees such as: credit experts, risk analysis experts, collateral estimation, forecasting, ratios, business analysts, client relationship managers, references as well as statistics and reports from external institutions such as NBRM, Central Registry, Cadastre of Land and Property and others. Then, based on all these inputs, a Credit Committee Decision is made, where both sides of each case are reviewed, the business side and the risk side, along with the aspects of loan amount, purpose, ability to repay, and others.

The idea of the proposal for skill set training, is to equip the entrepreneur too, with some ability to overview their business, in a similar way that a bank does, so that even prior asking for a loan, or making a major step in the business, the person in charge can have good understanding of the company's strengths and weaknesses, numbers and capacity. With this step, the decisions have bigger chances of being successful, applicable and sustainable,

because the businessmen are those who know their business the best, and in fact, if they had the skill to make their own financial risk assessment, or at least become aware of what is to be analyzed, the right people would have the tool to use in the real world. This kind of training does not mean entire Faculty in Economics, Finance, Auditing or other, but a compilation of knowledge created by instructors, that functions towards independent financial risk analysis.

The particular areas that need to be incorporated in Specific Skill Set Training Financial Risk Analysis for Entrepreneurs are:
- Financial statements, basic entries and logic
- Auditing
- Collateral estimation
- Past and future cash flow
- Forecasting
- Cross-checking
- Advanced Excel
- Business software
- Risk assessment
- Financial institutions in the country
- Institutions and Credit Lines for development countries
- Basic entrepreneurship
- Mathematical calculations
- Basic financial terms, ratios and calculations (Interest, ROI, ROE, …)
- Capitalization
- Third party risk, Currency risk, …
- Customs and tariffs
- Decision making
- Customer mentality
- Basic computer skills

Only a brief overview of all these different elements that entrepreneurs need to be familiar with for successful financial risk analysis of the company, will draw the conclusion that in such educational process, that is not Business Management Faculty, but only limited training for skill set, there can be only building blocks on a need-to-know basis from the fields of economy, law, management, business, sociology, mathematics, statistics, informatics, quantitative methods etc. However, the skill set obtained, will be more than simple sum of all these areas, but a sublimation assisted by experts from theory, such as the professors, and experts from practice, such as lecturers, as well as various experts on the side of the students.

4   Conclusion

The few words describing the traditional educational systems are: presence, Face-to-Face lectures, reproduction of learned materials, a lot of theory while studying, almost insignificant practice, the student is the one who should gather all the knowledge and try to implement it at work, the student communicates with professors - rarely, with peers – occasionally, and last but not least, libraries are not "the place to be in" for most of the students. The new web era adds expansions to these words: presence is not necessary, Face-to-Face can happen, but not necessarily, reproduction and learning-by-doing, the professors gather the knowledge and combine it with simulations, examples, quizzes and then present it to students, the student communicates with everyone – frequently, and has another "player" the professional, social, academic and other networks, with whose assistance, the knowledge gets recorded and developed with incredible pace. The companies are attracted to the edu-

cational center of gravity, with the offer of flexible, affordable, grounded trainings with immediately applicable skills. And still, it is not a matter of shortcuts and omissions, but condensed, precisely built instructions for learners, so that the whole educational process has redefined goal and approach to its fulfillment.

Observed from the aspect of the society, even though the creation and production of learning materials and building blocks in the e-Learning systems and software are now market goods, not just exclusivity of the educational institutions, the Governments and the State Authorities, have the obligation to be far-sighted and to enable the life of distance learning and e-Learning systems in the educational institutions and businesses, since they are to be guarding the social aspect of the education. The lifelong learning combined with accessible education for as many citizens as possible, are the necessary preconditions for the future of noble definitions and theories to be put into practice. "Widening participation in education is seen by many as a means of including those who have hitherto been excluded from many of the benefits of modern society. "Education for all" is viewed as an imperative for world security, as an unconnected population suffering high unemployment leads to instability. Education, skills, ethics, and values lead to responsible citizens; an educated and competent people are the essential foundation for democratic societies and market economies" [8]

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