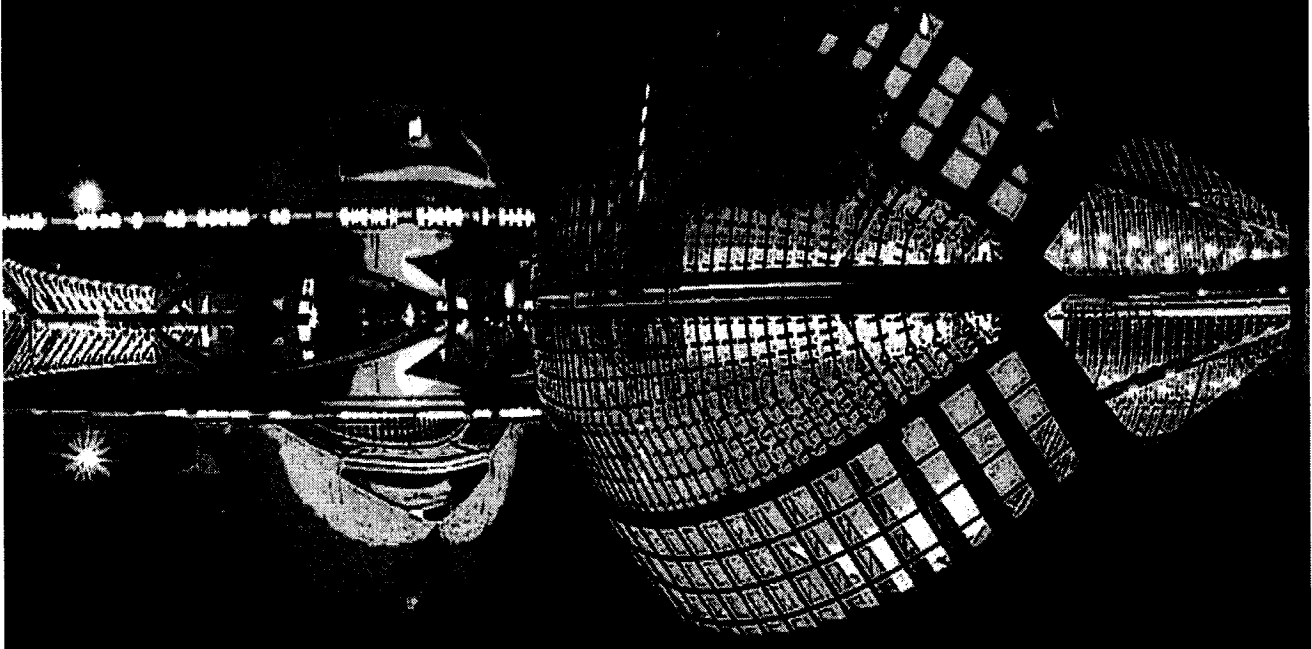




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# E-LEARNING: A TRAINING EXPERIENCE FOR TEACHERS

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## Abstract

The e-learning defines new ways of learning, characterized by the fact that, thanks to the web, it is possible to create collaborative environments and thus encourage interactivity. This is a new training methodology that uses the Internet as the main way of communication. This plan is a report of a training experience for teachers, in particular those of primary and secondary school.

The on-line training has allowed 40 teachers, who wanted to strengthen their skills in creating a personalized way of teaching in the school where they taught, to conduct a series of training activities and learning experiences mainly based on the use of technologies, integrated with moments of self-learning and with on line group meetings, in order to support the exchange, the comparison and the acquisition of new knowledge.

The experience mentioned above appeared as a new training methodology using the Internet as the main channel of communication and training.

The presence of new tools to express and share ideas and to build new knowledge has simply allowed teachers to diversify their work.

Multimedia technologies and information of the Internet contributed to enrich the learning content for teachers, thanks also to the access to multiple communications services and long distance collaboration, such as forums, chats rooms and e-mails. These elements made the course more engaging and attractive, enhancing the quality and effectiveness of the learning process.

To implement a valid educational-didactic action, the teacher was supposed to have a greater knowledge of these technologies that could indeed help him/her out. For each activity that might be useful to propose in class, it is necessary to understand based on the context and the purposes of them, which might be the tools to be used and in which way use them considering how crucial its use might be in relation to the students' learning process.

Many teachers prefer to be trained with this new e-learning method, however the lack of time and the few other commitments in the school afternoon hours do not allow them to regularly attend the refresher courses on campus.

However, the desire to keep up with the times, to improve their own skills, to enhance their own educational work, have led teachers to choose an on line training course, where, 'moving' in the virtual space, each of them has explored knowledge, tested theoretical contents through virtual laboratories and lived experiences with others in shared areas of synchronous and asynchronous communication.

**Keywords:** e-learning, teacher, distance education

Online training is characterized by flexibility, openness and customization of training thanks to the so called virtual platforms. E-learning defines new ways of learning characterized by the fact that, thanks to the network, one can create collaborative environments and encourage interactivity. The presence of new tools which can be used to express and share ideas, to build new knowledge, allows the teacher to easily personalize their teaching on the condition that they spend some time to catch up on the educational potential of new communication technologies.

## 1. THE ONLINE TRAINING AND ITS CHARACTERISTICS

The rapid spread of information technologies has certainly an impact on the school situation and the work of the teacher. «Educational systems relate more and more to the use of technology to better understand the students' prior knowledge and to adapt the teaching practice in order to fill-in the gaps and to take into account new teaching styles» [1]. The school, under the new cultural needs, must change the "old" educational paradigm and base itself on the use of new methodologies and tools to ensure the pupils, citizens of tomorrow, an adequate level of knowledge and skills to meet the demands of the society.

E-learning has offered new instruments to the teacher to carry out their didactic activity and, in particular, it has an impact on the learning environment, related to both class-school environment and the spaces online. In designing a valid educational-didactic action, the teacher must have a greater awareness of the technologies that can assist in this regard. For any task that one wants to bring into the classroom, it is necessary to identify the purpose and the context, what tools to use and how to use them considering how their use will affect the learning process of the students.

Adopting the mode of e-learning "does not just mean the use of synchronous and asynchronous communication technologies to recreate the conditions of educational interaction, but it means designing learning technology environments in which to integrate the three major educational paradigms of formation: rationalist-informationist, systemic-interactive, social-constructivist [2]. Lack of time and other afternoon school commitments hinder the any individual teacher from attending refresher courses available. However, the desire to catch up, to improve their skills and to improve their educational work leads the teachers to selecting training courses online. In this case, the teacher who moves in the virtual space, explores the knowledge, experiments the theoretical content through the virtual labs, live experiences with others in a shared space of communication both synchronous and asynchronous.

As part of the training, information and communication technology change deeply the external and internal world of the subjects, significantly transform both our perceptual landscape and our inner states [3].

Online training courses does not only require adequate technological support, but also particular projectable effort must be put to highlight the possibility of involving teachers and trainers in a single network. We need to ensure maximum interactivity and eligibility, to facilitate the understanding of messages and also the responsibility of using in a critical way the new resources and their effectiveness. In every course provided in accordance with the e-learning methods, it should always be expected to develop the metacognitive skills of the participants if this proves insufficient.

moreover this applies above all to the self-assessment of the participant's learning processes [4]. Consequently, a first level Master "Personalized didactics" was designed so as to give the opportunity to teachers to learn and use different technologies which provided them with the tools to improve teaching activities and enhance their skills, taking advantage of the knowledge already existing and their specificity (cognitive structures, such as the organization of memory, the ability to work in multi-tasking, create new languages, to seek immediate answers) .

The online training is characterized by flexibility, openness and customization of training thanks to the so-called virtual platforms. This type of training method, based on communities of practice, is distinguished by a strong sense of belonging to groups in the network, which strengthens in those who adhere the ability to integrate different social worlds and experiences, such as work, family and study. A community of practice is characterized by the fact that there is a domain of common interest where members interact, collaborate and learn together developing, at the same time, a variety of resources and shared objects [5]. In addition, this type of journey, that is the source of training activities and learning experiences that are mainly based on the use of technologies can be integrated with moments of self-learning, with group meetings which have the aim of exchanging, comparing and acquisition of new knowledge .

## 2. ONLINE TRAINING PROGRAM FOR TEACHERS

As part of the training, information and communication technology represent tools that are changing in depth the world both external and internal to the subjects, significantly transforming both our perceptual landscape and our inner state. One of the valid reasons for the offer of online training to teachers is that they are very likely to decide and use similar techniques with their students if they themselves experience personally the effectiveness and possible difficulties. It is good for teachers to experience the application of information technology in a direct way to assess the effects and try to measure their efficiency [6].

The deep meaning of personalized education lies not in a way or a new and more effective method of teaching, but in transforming the work of learning in a situation of personal training through the choice of tasks and the acceptance of responsibility by the pupil himself [7]. Personalization is not just about the process of learning that takes place in the students, but also, and above all, the practice of teaching. Personalized didactics refers to the educational activity in which the teacher values each student, with their peculiar characteristics.

The teacher who is inspired by the principles of personalization does not only care to adapt their teaching methods to the particular needs of each individual student, but also knows how to go beyond the mere transmission of knowledge and values, to live a dynamic relationship with the student in the learning environment where constant solicitation is generated for the full achievement of the human form [8].

In this way, students are encouraged to reflect about their cognitive processes and developing effective strategies for career decision-making and pursuing specific careers [9].

Before beginning the presentation and the study of the modules of the master, it was essential to activate a familiarization forum with the participants, where, after a brief period of welcoming and familiarization of the participants, we proceeded with a series of appointments in an asynchronous order to facilitate the use of the platform and all the spaces available in it points out, that the students learn to move in a

The educational itinerary that was chosen allowed maximum exploitation of the experience and skills already possessed by the teachers. They, also being eager of a real change and wanting to improve their skills, put themselves in discussion without having fear of being judged or criticized by other colleagues in the course, they were very willing to receive feedback from the trainers. Participation in the online course provided consistency between the study materials provide by the platform and active participation online through the forum spaces, sharing of materials and the availability of video chat.

### 3. THE TRAINING METHODOLOGY

In the planning phase of the research it was assumed that if the educational activities had been well designed every teacher, in addition to what he learned on the subject of study, would obtain significant improvement professionally, with particular reference to the use of new technologies.

The type of proposed research was intended to analyze and evaluate a type of online training for in-service teachers, in order to help them gain aspects of personalized teaching through the use of new technologies. For this reason, some characteristic attitudes of online education was taken into account, such as collaboration and help-seeking among the participant, communication and organization of the learning process and from this we obtained the behaviors expected to observe from the students at the end of the training course.

The master in "Personalized didactics" was a model of an on-line training course that allowed 30 teachers, who wanted to strengthen their expertise in creating personalized teaching in the schools were they taught, a series of training activities and learning experiences that were based mainly on the use of technologies that have been integrated with moments of self-learning, with group meetings in order to exchange, compare and acquire new knowledge. The training was delivered through a platform that was designed following the criteria of ease of access, ease of finding information and content, and the ability to work individually and in groups. A real work of research was done, whose twofold purpose was, firstly, to experiment a modality of in-service training of teachers who wanted to deepen the guiding principles of Personalized didactics, on the other, to collect, analyze and interpret the personalized teaching practices carried out by individual participants.

The study of evolutionary change has shown that with increasing age, in parallel with progress in learning, there is a significant increase in knowledge and metacognitive control [10]. A school may adopt the personalized system of education, when there is unity among teachers to pursue the good of each student and when there is passion for work and collaboration. When there is a climate of trust, fairness, transparency, and collaboration between its different components, when everyone (parents, managers, administrative staff, teachers and students) accept that anyone can make mistakes and be corrected [11].

<p>SELF-CONTROL AND ORGANIZATION OF LEARNING'S PROCESS</p>	<p>COLLABORATION AND SEARCH OF HELP</p>	<p>COMMUNICATION</p>
<p>Know and it respects the system of rules</p>	<p>Participate actively in discussions and activities</p>	<p>Write and it communicates using clear and complete messages</p>
<p>Check the time spent studying</p>	<p>Involve the colleagues in the discussions</p>	<p>Write and communicates according to the object of discussion</p>
<p>Show to attentively have read the information concerning the activities to develop communicating to the group</p>	<p>Help maintain a serene and confidential climate</p>	<p>Use language friendly</p>

The Forum, video-chat and the area of materials sharing are alternative forms of communication that can be used effectively by teachers within the educational activity. Taking advantage of these new methods, teachers can encourage the collaborative construction of knowledge of the students who are invited to express and exchange, in different ways, ideas and work and to reflect on those of others in order to arrive at a constructive confrontation. Under these aspects, the evaluation of the forum, video chat and sharing of the materials was chosen as a way to ensure the ongoing achievement of personal objectives that the training intervention had set out to achieve. To carry out the analysis of the activities related to the above-mentioned areas, three indicators, typical of learning activities on-line and six descriptors that are presented in the following table were used (Tab1):

It was proposed, on one hand, the study of the theoretical content of the module and on the other hand the performance of specific exercises, which form the base for achieving personalized teaching techniques. During the course of formation, weekly meetings were held in synchrony between the participants in order to monitor and periodically evaluate the performance of the course. At the end of each module checks on the degree of achievement of the learning objectives that we had set out to achieve by using some specially selected indicators were done.

After the first phase of getting to know the students, the trainees entered into the heart of the course with the start of the first module. A discussion forum was provided for each module, a discussion forum, in which student, tutor and the teacher could discuss informally various topics related to the single module and related activities that were to be carried out. In this way we have tried to show concretely how certain educational and didactic principles can be pursued in school activities, thus ensuring teachers the opportunity not only to deepen the theoretical assumptions, but also to verify the coherence with their teaching habits. The modules were proposed alternating different forms of education: reports from experts, study and analysis of research work, presentation of instrument's, general discussion, examination of teaching materials, work in small groups and individual in-depth study of documents.

virtual classroom through a series of steps ranging from familiarization with the technology in discussions and collaborative activities.

Video chat  
 Another important virtual area assured the effectiveness of the training course on-line, through which it was granted an intense and constant interaction between students and teachers, this was the video chat. Regarding the indicator concerning communication, every teacher of the theoretical module met the students every 15 days and, with the help of the tutor, recorded the event. Firstly, to present clearly the

group, thanks to continuous exchange and constant collaboration in the network. This virtual space, with the activities related to it, has fostered the growth of the errors and finding solutions, even with the help of the tutor.

Forum  
 It is known that forum is one of the most popular asynchronous communication tool in conjunction with the web sites, e-mail and mailing lists [13]. It is within this space that different forms of collaboration and production of new learning is activate. From the analysis of the messages in the forum of the masters platform, compared to the first indicator, it was found that almost all teachers have written and communicated using complete and understandable messages, reported in a cordial language. The majority of the participants were able to follow the subject of the discussion without going off topic, favoring communication of new content that could broaden the teaching knowledge of everyone. Regarding the second indicator, it was found that the majority of teachers actively participated from the beginning in discussions and activities, which favored the maintenance of a peaceful and confidential atmosphere thus all were placed in a condition of listening and communicating in open discussions. Regarding the third indicator teachers were able to observe the instructions that were given to them for the proper management of spaces and discussion provided in the forum. Each teacher proved to have read and understood the information regarding the study and performance of the activities of each training module communicating it to the group, they reflected on their work, recognizing errors and finding solutions, even with the help of the tutor.

In the evaluation of the data it was determined for each participant the presence or absence of attitudes deemed necessary for the proper conduct of the training program and that have been shown in the previous table.

**4. THE "VIRTUAL CLASSROOM" FOR TEACHERS**

This table (tab. 1) shows the indicators that were used by researcher to analyze the activities of teachers

Use an ironic language	Share what it learns and the jobs that it produces	Reflect on his/her job, it recognizes the possible errors and it reorganizes him/it thinking about the possible solutions
Use mainly a language that testifies to the freedom of communication in the expression	Stand in a position of listening and open communication in the discussions in the forums and in video chat	Know how to compare and classify objects and situations
Write and communicates new knowledge and in-depth didactic	Ask help to the colleagues in the moments of difficulty	Use organizational strategies based on the time you have available in order to address the various tasks in an effective and motivating way

After describing the process of research and presenting the indicators used during the training intervention to assess the validity of online training for teachers, we can find below the data collected and the results achieved by the activities.

The final evaluations of the improvements achieved by the teachers at the end of the online training course were made through a focus group. The focus group was

## 5. EVALUATION OF THE RESULTS

The ability to share materials in a specific space, was an important tool for teachers to sustain their on-line training

individual modules of theoretical reference. assigned and after reflecting on the validity of the latter with respect to issues of directed by the tutor, entered their work in respect of the spaces that had been confronted. In the third indicator, it was found that the majority of teachers, as collaborated and shared materials of public interest, thus promoting moments of within the "virtual classroom", meant that all participants in the training course a clear and complete way. Regarding the second indicator, this type of online tool used as an archive of articles and documents that all teachers were able to deposit in depth didactics. Compared to the first indicator, the area of shared materials was specific module, communicating thus to the other teachers new knowledge and in- special place run by all interested teachers to input their documentation relating to a The above-mentioned virtual space was used, not as a space for discussion, but as a argument.

usually stored in accordance with criteria pertaining to the subject matter of an from the course and from which it was possible to recover materials and information, It was used by teachers as a "container" of information to share with other colleagues which could be accessed by all the colleagues of the online training.

The area "sharing materials" allowed participants to open and name the "folders" in which to place various documents (final papers, worksheets, theoretical insights), Sharing of materials

comparison to the new form of direct collaboration. Through this space for video chat, teachers experienced their interpersonal skills in others their point of view or their specific proposal.

subject of the discussion and intervened to bring immediately to the attention of recorded video conferences, it was found that all teachers focused on the moments' organization of the learning process, analyzing the performance and management of they had produced. Regarding the third indicator, relative to self-control and the and their questions in real time, to share what they had learned and the work that in a serene and confidential atmosphere; it allowed everyone to post their comments, clarification. This type of synchronous event allowed the involvement of all teachers, and the tutor, who managed the order of speakers and responded to requests for online video conferences. All this took place in the presence of the module teacher put in a position to participate personally in the discussions activities during the inside the video chat (file sharing, chat, and ability to write notes), all teachers were Regarding the second indicator, it has to be noted that thanks to alternative spaces absolute freedom.

the course as if they were "present", using a friendly language and speaking in they understood the materials loaded and the arguments contained therein. This gave the opportunity for all teachers to be able to communicate with the teacher of their content and their verification activities, and, later, to ascertain whether or not



particularly useful to detect empirically the opinions of teachers who participated in the online training course, as a valuable learning environment. The confidence of the interviewed and the opportunity to express themselves freely fostered an atmosphere of openness and friendliness within the participating group of teachers. They spoke with interest and said with clarity their points of view with regard to the experience during the training. All of them expressed their considerations and expressed their interest in the evolution of the debate by responding promptly to questions posed by the moderator.

The focus group, in synchronous connection, intended to investigate whether and to what extent the content, activities and tools offered by the course served the teachers to improve in their teaching profession through the following areas:

- Positive and negative aspects of online education
  - What tools (forum, video- chat and sharing materials) of the "virtual classroom" was more effective during the training course
  - Relationship with teachers and tutors
  - Indication of the activity carried out with greater interest
- The following are the most significant comments of teachers.

*Positive and negative aspects of online education*

From the data collected, it emerged that the teachers through the experience of online education could reflect with greater awareness on both the content and their method of teaching. Specifically, they emphasized their enthusiasm was above all for the opportunity to develop a greater motivation to teach, because, doing firsthand experience enabled them to learn how to use new tools that they can reuse for their educational activities.

The teachers highlighted some of the strengths of the online course such as: the ability to express their creativity, greater freedom of expression, the cancellation of distances, overcoming shyness. In this regard, a teacher, said: "I was pretty skeptical at first, but I must admit that online collaboration has been excellent. The cordial and serene atmosphere that was established between colleagues greatly facilitated interaction and confrontation, especially with colleagues of the same discipline as mine." All teachers showed great satisfaction because they had the ability to use the online environment to explore new content related to their profession. Compared to the weaknesses, the participant's focused on the impossibility to have an immediate feedback from the teacher and the tutor of the path to follow to properly understand the assignment. One teacher stated that: "At the end of this learning experience I can say that at times it seems that the virtual classroom space is limited, restricted in respect to the relational skills that I think would have been enhanced in a face to face conversation."

*Which were the most effective tools (forum, video- chat and sharing materials) of the "virtual classroom" were more effective during the training course*

To this question the teachers responded bringing to light different considerations. Some argued that through the forum they had the chance to know each other better and, in particular, they had a chance to reflect on their own educational-didactic strategies. One teacher stated that: "By participating in the discussions on the forum, I got the chance to explore some topics with colleagues. At my school it is impossible to discuss." And again: "Thanks to the material that colleagues shared, I found food

for thought and useful documents that have helped me to improve my educational and teaching activities." Other teachers have, however, shown that, thanks to the sharing-space, materials, they had to reflect on their ability of valuation and self-assessment, in respect to the work of other colleagues and their work, recognizing their strengths and weaknesses. Another group of teachers said, that thanks to video chat they improved their capacity in the management of time available for interventions of each participant and was able to focus on the object of discussion.

The results of the research confirmed the effectiveness of the training course presented online. The detection of features such as flexibility of time, access to the virtual classroom and the innovativeness of the training process corroborate the new

## 6. CONCLUSION

Activities carried out with greater interest. The teachers stated that there was no activity in particular that interested them more than another. All activities proposed in parallel with the theoretical contents of reference, aroused their interest because, not only were they involved, but they acquired new contents and skills, promoting their development. One teacher stated that: "For me there was no activity more interesting than another. Each activity was for me a source of new knowledge and a way to updating new skills." Some teachers have also added that the conduct of individual and group activities, served to test their skills and overcome attitudes of introversion.

**The relationship with the teachers and tutor**

An analysis of the responses regarding this area has shown that teachers had different experiences regarding the relationship with the module teacher and with the tutor. In the first case it was a report based on the availability and friendliness, closely related to the content and conduct of activities under way. In the second case, however, the tutor was for all the main points of support and encouragement, which helped them and oriented the training program from start to finish, showing how to perform a task, making explicit the objectives, outlining various options and facilitating the management of the resources at their disposal. A teacher on the relationship with the teachers said: "With all the teachers I was possible to have a dialogue, not only in video-chat or via emails but I found in each one availability and professionalism, and this helped me to better understand some aspects related to my professionalism." With respect to the relationship with the tutor, a teacher said "Thanks to the tutor it was possible to establish right from the beginning an atmosphere of openness and collaboration, which eventually turned into cordial friendship. In addition to being a good mediator for us, they were a great facilitators especially in understanding and carrying out the activity."

techniques and didactic education. For this reason the possibility to follow a training program enabled the teachers not only to produce new content, but to also think about the most appropriate ways to reuse them in their own classes.

The activation of technological learning environments for the improvement of the teaching profession has presented significant advantages compared to the traditional learning environments. This refers to the availability of materials organized in modules, the possibility to communicate with the teacher and the tutor synchronously and asynchronously and the experimentation of a teaching-learning environment characterized by a climate of collaboration and exchange that has favored the development of autonomy and the construction of shared knowledge and skills.

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