E-Mentor: The Development of the Teachers’ Competences and Abilities Concerning the ICT and the Educational Mentoring of the Disabled

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Abstract: - In this work, we are going to present some important aspects regarding the design and implementation of a project which generates significant results in the life-long learning of the teachers from all levels of the Romanian education system. The „e-Mentor: The Development of the Teachers’ Competences and Abilities Concerning the ICT and the Educational Mentoring of the Disabled” project, is financed with European funds by means of the Sectoral Operational Programme for the Human Resources Development 2007-2013. It is part of the priority axis: 1. The Education and Professional Training in Support for the Economic Growth and for the Development of a Knowledge Based Society”, and also of the Major field of intervention no. 1.3 The Development of Human Resources in Education and Professional Training”. The general objective of the project aims to increase the level of the teaching staff information, competences and abilities concerning the Information and Communications Technology (ICT). It also aims to improve the e-learning interactive methods and the activity with the disabled in order to use them also within the didactic activity, to improve the results of the educational process as well as to increase the disabled access to education.

Keywords: e-mentor, teaching, competences, abilities, ICT, inclusive education, assistive technologies

1 Introduction

The inclusion of the disabled people implies a range of measures whose aim is to offer the basis of the human culture and literature so that all human beings could benefit from all these and could further develop them in their own way.

The inclusive education represents a permanent process in the improvement of the services of the educational institutions with a view to proving the importance of the existing resources, especially of the human resources, in order to support the participation in the education process of all the pupils from a certain community (National Education Ministry and UNICEF) [1].

Moreover, the inclusive education aims to improve the learning activity [2]. As the teaching and training process is intrinsically related to the life and learning context of each person, there rises the need of establishing a partnership between the teaching staff and pupil, between the pupils, and between the family and local community. The teaching-learning strategies at all levels shall be adapted accordingly in order to respond to the children’s diverse and numerous learning and developing styles.

The social and psycho-pedagogical assistance of the persons with special educational needs have in view the social, pedagogical and psychological interventions in order to ensure the diagnose, recovery, education, training, professionalism, adaptation and social integration of the persons with deficiencies as well as of the persons in risk situations generated by different causes [3].

The EU Charter on Human Rights states that, in order to realize the equality for the disabled people, the right to non-discrimination shall also go hand in hand with the right to benefit from measures ensuring the independence, integrity and participation in the community life. The actions carried out in the education and training fields shall constantly be supported by additional socio-economical
measures, such as policies for the improvement of the general conditions of the European citizens, the integration of the immigrants and minorities (especially that of the gypsies) and inclusion of the groups with special needs (mainly the disabled and elderly people) at all levels and in all the fields of education.

2 General Objective

The general objective of the project aims at improving the teaching staff ability, competence and information level (ISCED 0-6) concerning the Information and Communications Technology (ICT), interactive methods of e-learning and the work with the disabled people, in order to expand their use in the didactic activity, to improve the results of the educational process as well as to increase the access of the disabled to education. By means of this project, it is aimed to offer concrete and direct benefits to a target group made up of 1400 teachers of all the existing subjects from the pre-higher and higher education, concerning the improvement of the abilities and competence in using the ICT in the didactic activity and in the activity carried out with the disabled [4].

The ICT training programs don’t imply only basic ICT competences, but also a larger range of competences oriented towards the Web 2.0 (content creation) collaborative, interactive and actual technologies, e-learning (digital learning—both “the use of any ICT in education” broadly speaking and “the use of educational virtual environments” strictly speaking—including the e-learning platforms), “mobile training” (mobile learning—training by means of the intelligent mobile devices, such as telephone, tablet PC), creation of educational means (including multimedia) especially the curriculum adapted to the needs of the disabled. Each person of the target group made up of 1400 teachers will be trained how to use the ICT both within the didactic processes and in the work with the disabled (The Educational Mentoring of the Disabled People). Moreover, the training program will exceed the technical aspects by offering content modules or elements about the teaching methodology (within the frame of e-learning).

Thus, direct benefits are created to the participants by offering them useful and relevant competences which keep up the pace with the changing technological world, a world to which pupils are better connected than their teachers. These competences will allow the teachers to teach in a way which is more attractive to the pupils. They will also allow the teachers to access and create a large diversity of online educational contents and to discover the way in which they would be able to work with the disabled pupils and students. If this project is first applied directly on the teaching staff, the indirect, short term and long term benefits will be observed at the educational system level and especially on its final target group: on the pupils and students, especially on the disabled ones. The e-Mentor training programs will contribute to a more extensive use of the digital technology in the teaching/learning process, to the improvement of the children’s level of motivation and performance in all the subjects to which the e-learning and ICT teaching can be used, and to the improvement of the pupils’ and students’ level of digital competences, especially of the disabled ones. Apart from the objective of training, improvement of the ICT competences, e-learning and working with the disabled people, the project also assumes the interaction with a larger target group by means of communicating informing activities. Thus, by developing the portal and the advertising activities (through media and events), it is aimed to increase the awareness level of the teaching staff as well as that of the interested parties and general public on the ICT role and importance in education. There will also be aimed to strengthen a digital culture and to develop an online community around the portal of the project: due to its role of collaborative platform allowing the teachers to share their educational resources (documents, media, etc), to discuss about them and to evaluate them [5].

3 Specific Objectives

The first specific objective has in view the theoretical and practical improvement of the 1400 teachers in order to develop the ICT general competences (on the basis of the following curriculum: ECDL – European Computer Driving License), the specific competences of online instruction (including Web 2.0 technologies, e-learning platforms, mobile training, curriculum adaptation in e-learning formats adapted to the deficiencies of
the disabled people); it also aims to improve them in the work with the disabled. Due to this objective, the members of the target group gain direct benefits as they are offered certified practical competences while using the ICT and the e-learning platform, and certified competences of mentoring the disabled people.

Another specific objective aims to increase the information and awareness level of the teaching staff, authorities, organizations which play an important part in education, and general public, concerning the importance and the ways of using the e-learning and ICT means in education and in the inclusion of the disabled people in education. By means of this objective, it is aimed to create benefits both for the 1400 members of the target group who take part in the training programs of the project, and for a larger target public who, by means of the informing-advertising campaigns and due to their access to the portal, they will be informed more on the benefits of the digital technologies used in education. Moreover, by using this portal, the public will have access to the collaborative platform of the teaching staff.

By means of the objective directed towards the experience exchange and the transfer of good practice when using the online ICT tools and the teaching technologies in the educational assisting of the disabled people, indirect benefits are gained by the target group through the exchange of good practices and experience transfer with a view to achieving the previous specific objectives.

4 Project Activities

We will present below some of the project activities which point out the novelties of the project.

Within the framework of the activity “Elaboration of studies and analyses with a view of defining the training programs,” there will be done an analysis on the training needs using a representative sample of teachers. The research and questionnaire design, the data analysis and the elaboration of the study report will be made by the experts of the implementation team, while the collection of data will be subcontracted by the Applicant.

Moreover, in this activity, there will be developed and applied questionnaires intended for the participants in the courses with a view of monitoring the training results in order to be able to update/adapt the training programs. There will also be elaborated periodical reports on the analysis of the data contained by the questionnaires applied to the participants, as well as a final report at the end of the courses [6].

Within the framework of the activity “Developing, updating and implementing the software solutions/instruments in teaching staff training” (ICT platforms for e-learning), there were developed, update and maintained the web portal of the project and two distinct eLearning platforms.

The eLearning platforms currently developed and maintained were built in order to instruct and at the same time assess teachers. Our platform is made up of a portal, an email server and two eLearning platforms: a classic eLearning platform, based on Moodle and a novel 3D eLearning platform, built around a bunch of web technologies like php, java, javascript, flash, etc. with outputs in both visual and audio fields.

The portal plays a double role (See Figure 1). As landing page of the project and as a web portal in the classical sense, bringing together pieces of information from various sources. The landing page has extensive information about the project and the activities take place inside the project. It has a registration section, a news section, information about the project activities, links to relevant websites or materials, articles and plenty of other resources. The portal has two a private subsections: one for the management and instructors and a site administrators’ and developers’ section.

The registration section has to subsections. One for preselection of project candidates and another subsection enables selected candidates to submit the required documentation in order to be scheduled for the courses. The news section has various information, both about
past, present and future activities that are going to take place under the project’s auspices. With the aid of a professional news picker agent, headlines relevant to the project’s field are gathered and then posted on the portal’s news section.

The management and instructor’s private subsection allow them to manage documents, monitor, record and replay taught activities, with the aid of monitoring cameras installed in all courses’ locations. The administrators’ and developers’ private subsection enables them to develop, improve and secure the project’s portal.

The email server is built as a subdomain of e-mentorat.ro domain, in order to better express the affiliation of the email users which is a good marketing and advertising tool. The mail server is thought both for the project’s crew, but also for the participants at the courses in order to ease the communication process between the two parties.

"Sitting on the shoulders of giants” isn’t just an aphorism for us, as before starting this project there has been another EU project, from which we inherited a novel 3D eLearning platform built from scratch. The “Educație universitară pentru persoanele cu dizabilități” (EUPD) project was built around a fresh eLearning platform: bibilioteca.eupd.ro, which we reused and integrated into our portal and into our teaching activities. It has 3D visualizations of presentation a novel 3D interface and possibility to have both visual and audio learning materials.

Our customized Moodle eLearning platform enables remote interaction between teachers, students. Apart from the courses’ private chats and forums, the platform has also a forum registration section which allow anyone interested in the projects activities and discussions to register and interact with the community developed around the project. Thus communication goes beyond the project’s members and participants to the whole teaching community regardless of their teaching level, location or interests and even to non-teachers but people which are interested in the curricular area of this project.

The transnational and study visits aim to pay 3 visits to universities/ organizations from Italy, Spain and Great Britain which have good background and expertise in assisting the disabled people by seamlessly including them in the educational process. We have also in view to ensure 1 or 2 participations from the part of the experts from the implementation team and from the part of the partners’ member team, to thematic conferences in each year of implementation. The aim of the visits is to support the other activities, especially those including the analysis/ research, curriculum elaboration/ update, advertise/ inform, organization of a series of courses. Moreover, in the case of each visit, by organizing some competitions, there will be selected, in a transparent way, 15 representatives of the target group who will take part in this activity, as a reward for the remarkable results obtained when applying what they have learned during the training programs of the project.

By means of activities intended for the development and accreditation of the training programs, by using the results obtained in the analysis of needs, the partnership aims to elaborate the curriculum and distance learning methods for the members of the target group. There will be two types of training programs: the ICT and e-learning. They will offer, on one hand, general notions of ICT and e-learning (beginner/ medium level), and, on the other hand, advanced notions of ICT and e-learning (advanced level). Besides, there will also be those for the Educational Mentoring of the Disabled People (EMDP).

The analytical programs will be elaborated both by a team of specialists with experience in the field of ICT training and technologies, and by a team of trainers experienced in the work with the disabled people. The trainers/instructors who will be used in the online/classroom teaching activity, will be attentively selected so that they correspond to the experience criteria in the respective field. The e-learning and training ICT programs will be accredited and will include content elements, such as Web 2.0 technologies for learning; e-learning platforms (Moodle); computer-assisted evaluation and teaching; mobile learning; open-source instruments to create educational objects; adaptation of the learning aids/ didactic materials – in formats accessible to the disabled people (also by using the HEDP Platform – The Higher Education for the Disabled People) [7].
The organization of registrations and the supply of training programs aim to ensure the registrations for the training programs by means of a registration module set up on the portal of the project. At the same time, it is required to send the supporting documents in printed and signed format. The request for data, during the registration process, is done according to the principle: “insert once, use it many times”; thus, the candidates will be asked to fill in only one online registration form which will include all the necessary data, according to the requirements of the organizers, the National Center for the Training of Staff from the Pre-Higher Education and the Authority Management for the Sectoral Operational Program for Human Resources. Out of these data, there will automatically be generated the documents necessary for the registration. They shall be printed and signed (the declarations, registration forms, study contracts, printed forms, etc), as well as the list containing the other documents which shall also be submitted (certificate proving the teaching position, copy of the ID, etc). The selection of the candidates will be done according to the “first come, first served” principle. The distribution of the students to the ICT beginner or advanced program is done at the time of their registration by means of a self-assessment questionnaire. The members of the target group can take part only in one ICT training program. However, all the members of the group will participate in the EMDP training program. Thus, all the members of the target group will be trained both for the ICT/ e-learning and EMDP. Both training programs will have an on-line training (module developed within the A5) in order to make the members of the target group familiar with the theoretical common notions necessary to take part in the face-to-face activities (in the classroom). The classroom activities will emphasize the practical part and will include tutorial exercises and collaborative work. All the activities will form the student’s portfolio for each course, which will be stored on the platform of the project. The A8 activity includes also the planning per training series, timetable and the elaboration of documentation necessary for accreditation [8].

5 Equal Opportunities

The project explicitly subscribes to the principles of equal opportunities and nondiscrimination, regardless of race, nationality, ethnicity, language, disability. By designing the activities, identifying and selecting the people from the target group, the Applicant has in view the social inclusion and the respect of the following principles: equal opportunities, gender equality and nondiscrimination. Thus, when establishing the composition of the Management Team, the Applicant maintains a balance between males and females. The project manager is responsible for building the team members’ awareness of the need to respect the principle of equal opportunities at the project level. These principles will be taken into account in the selection for the positions established in the project and at all the professional levels; incomes and equal working conditions; equal responsibility and working conditions which respect the norms of occupational safety and health, in conformity with the provisions of the legislation in force. Second, the principle of equal opportunities will actively be implemented in the relation with the target group, during its selection and the project activities. Thus, there is ensured the nondiscrimination and equal opportunities in the relationship between the project implementation team and participants. Moreover, it will be aimed to ensure also the promotion of the nondiscrimination and equal opportunities among the participants, and in their relation with the pupils/ students. The phenomenon of “digital discrepancy” (digital divide/ digital gap) within the frame of technology and equal opportunities, represents another important aspect for our project. At European level, there are relevant the special Euro-barometers realized by the European Commission. These studies recorded the existence of a significant digital literacy discrepancy between: men and women; rich and poor; young and old; people from rural and urban areas; people with a high or low level of education. This phenomenon is valid both in the case of the general ICT competences and in the case of the specialized professional competences. Our project contributes to the straightening out of these discrepancies, first in the selection of the participants because it is intended for the teaching staff of all the
subjects from the secondary school, and for those who teach both in the urban and rural areas. The criteria used for the selection of the participants to the training courses, will not take into account their race, nationality, ethnicity, language, religion, social class, beliefs, gender, sexual orientation, age, disability, non-communicable chronic disease, HIV infection, adherence to a disadvantaged category, or other criteria whose aim or effect is to restrain, remove the recognition, use or exercise (on equal terms) of the human rights and fundamental liberties or of the rights recognized by law in political, economical, social and cultural fields or in any other field of the public life. On the whole, it will be aimed to realize the gender balance of the students and the proportionality with the gender distribution in the case of the teaching staff from the secondary education. The project will lead to a better understanding of the phenomenon of digital discrepancy by including this preoccupation in the activities intended for the analysis of the teachers’ training needs, by observing the potential digital discrepancies among the teachers of different genders, age etc. Then, the project promotes the nondiscrimination and the digital discrepancy control in the relation among teachers, and in the relation between the teachers and students. This will first be realized through the training activity, by including this topic in the modules of each course in order to build the awareness of the teaching staff. Secondly, the advertising-informing activity of the project will contain a component dedicated to nondiscrimination and digital discrepancy control. In addition to it, the gender equality is also promoted through a proposed structure of the target group, considering that out of the 1400 teachers, 1000 are females. The structure of the target group promotes also the equal opportunities. Thus, we aim to achieve the target of 400 teachers from rural areas, and that of 200 beginning teachers.

6 Conclusions and Future Work

The activities of this project contribute to the development of Romania on a long term by raising the teachers’ training standards and by adopting new technologies and methods in education. Indirectly, they contribute to the training of the young generation by raising their general level of education and by improving the ability of facing the challenges of a changing world. In addition to it, the digitization of education can bring significant contributions to the future development of the knowledge economy and to the preservation of the environment by reducing the resources consumption. The international organizations, such as the United Nations and the World Bank, recognize the ICT important role in the sustainable development. More than that, by means of a recent official communication, the European Commission confirms the critical role that the ICT sector plays in the transition towards a low-carbon economy efficiently from the energetic point of view, by contributing to the achievement of UE sustainable development aims.

An analysing of the intermediary results of the project, with the aid of questionnaires enabled us to receive valuable feedback. This helped us to improve the learning curricula, in order to be better tailored for the learners’ needs. We have also received feedback about the teachers that present this curricula to the learners. They were made aware of this feedback and they acted according to this feedback by trying to improve their teaching methods so that the message is better passed to the learners. We will continue to assess the learners’ feedback and we will evaluate the improvements that this feedback has led us to.

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