

Vocational Teacher Training in Online Course Design and Tutoring: Motivating Teachers to Participate in the E-training

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Abstract: *The professional development of teachers is carried out for the sake of continuous progress in the level of their professional, pedagogical and technological competencies. In contemporary conditions, it is considered that technological competencies of teachers are their capability to prepare and realize teaching in an online environment, which can be an addition to or an option of teaching in the classroom. The School of electrical and computer engineering in the Academy of technical and art applied studies in Belgrade is one of the partner institutions of the Erasmus+ program "Professional Development of Vocational Education Teachers in Russia and Serbia with European Practices Pro-VET" (2018-2022) with the goal to develop the training program "Online course design and tutoring". In this paper is a short overview of the above mentioned training program, which was developed (2018-2019), redesigned based on results of alfa and beta testing (2020-2021) and realized twice (2022). In the paper is a brief presentation of the following: an overview of the training program, methods used to motivate teachers to enter the program, work on it and successfully complete it, teachers' achieved success in the program and their grades for the quality of the training program.*

Keywords: *teacher training; vocational teacher; online course; course design; course tutoring;*

1. INTRODUCTION

The professional development of teachers in today's conditions is considered to be a development of the level of their competencies for designing and tutoring online courses [1]. It is considered that teachers today should be familiar with contemporary program environments and tools, the possibilities of developing online teaching material and activities and all segments of preparing and realizing online courses. In the area of higher education, online teaching is present in many forms: from online learning activities that are assigned and realized before lessons in the classroom over the ones in the actual lessons in the classroom, to online learning activities that are assigned after lessons. No matter the area of teaching and learning and the form of online teaching, it has become a regular occurrence to prepare an online course, which can be an addition, an option or possibly in some cases also a replacement for the traditional course in the classroom, depending on the conditions for realizing teaching. In order for the teachers to understand their online course attendants as well as possible and have as much success in developing these kinds of courses as possible, they need to finish at least one online program in the role of a

beginner [2], [3], [4], take into account received suggestions and experience and adjust them to the conditions of realizing their online program. The teachers' training program for designing and tutoring online courses should firstly motivate teachers to access the program and work on it and only after that to prepare them for working on all segments of developing online courses. Vocational teacher training "Online Course Design and Tutoring" was developed in the period between 2018 and 2019 at the Academy of Technical and Art Applied Studies in Belgrade, in the department of The School of Electrical and Computer Engineering, Belgrade (ATUSS-VISER), Serbia, as a part of the Erasmus+ Pro-VET program. This program has the goal to train vocational teachers in Serbia to design and tutor online courses by applying current methods and technologies. The program is realized exclusively online and is 6 working weeks long. It requires individual and team work from the teachers and does not ask for their previous experience in designing or tutoring online courses. The program offers teachers a theoretical base in the form of interactive lessons, video tutorials for working with recommended program environments and tools, tutor instructions and administrator and media designer support. Practical work in the

training program is based on developing online courses in the teachers' specific areas of work.

In the period from 2020 to 2021, alfa and beta program testing levels were prepared and realized in order to check their quality before putting them to work. Testing on every level consisted of its own teacher team. The alfa testing level was carried out in October/November 2020 for 15 vocational teachers, vocational associates who are employed at ATUSS-VISER. Remarks and suggestions were received from teachers on this level of testing, which mostly referred to rearranging the tasks within the working weeks, were used to redesign the training program and prepare beta testing. The beta testing level of the same training program was realized in April/May 2021 for 21 vocational teachers. In addition to the vocational associates, vocational professors also employed at ATUSS-VISER were included as attendants on the beta testing level. Results of the beta testing level showed that the developed training program was ready for realization.

Applications for the online training program "Online Course Design and Tutoring" for vocational teachers were published on the ATUSS-VISER website in January 2022. After completing the teachers' applications, the program was realized twice in 2022, in February/March (for 23 teachers) and April/May (for 21 teachers). The teachers of this program were vocational high school teachers and vocational college professors, who are not employees at ATUSS-VISER. Considering that, the attendants needed to be informed about the beginning of the program on time, much in advance and to get detailed information about the program. Providing necessary assistance as well as regularly updating the table with a track of acquired points for completed tasks was necessary during the program.

Further in the paper is a short presentation of the following: an overview of the training program, methods used to motivate teachers to access the online course regularly as attendants, to work on learning materials, activities and tasks. Analyzed teachers' results from the programs realized up to now as well as their feedback are also presented.

2. ONLINE TEACHER TRAINING OVERVIEW

Vocational teacher training "Online course design and tutoring" consists of a course on the LMS Moodle platform [5], it lasts 6 working weeks and is realized exclusively online. The program provides teachers with a theoretical base in the form of interactive online lessons, which cover the following topics:

- Modern teaching strategies;
- LMS learning environment;
- Video teaching materials;
- Instructional design;

- Online course tutoring;
- Online course evaluation.

In addition to the lessons, the program offers teachers a developed e-laboratory which is equipped with recorded video tutorials for working with recommended program environments and tools on the following topics:

- The use of e-learning platform;
- Adjustment of LMS environment for online courses;
- The use of Screencast tools for creating video teaching materials;
- The use of Google tools for team and individual work on online course materials;
- The use of LMS and Conference tools for the work on online course tutoring scenario;
- The use of LMS tools for work on online course assignment.

An important segment of every online program is managing the process of its realization. Therefore, it is very important to question which environment to choose for the program [6], [7]. The training program "Online Course Design and Tutoring" was prepared and realized on the platform of the LMS Moodle system, which is widely accepted in the area of high education, considering its free installation, large number of services, simple administration and use. After configuring the training program course on the LMS platform completed by the program administrator after applications by the participants with the role of tutors and media designers, the structure of the training program was defined along with all the predicted topics and the teaching resources and activities for each topic were defined. An interactive unit was prepared for each topic earlier mentioned. Each of these lessons simply leads you through its contents, explains terms with easily understandable text segments with illustrations and also, after each of these segments a test is given to review the covered curriculum. It is necessary to correctly complete this test to continue covering the unit. For each training program topic, a compilation of video instructions for using current program platforms and tools provided for working on designing and tutoring online courses [8], [9] is prepared. This is uploaded to a reserved Google Drive folder and is accessible to the teachers via links on the LMS Moodle course program.

During the entire course of the training program, the teachers are provided with assistance via forums and video conference meetings by the:

- Tutor – defines the teachers' goals, the program contents and activities, leads them through individual and team work, provides information about tasks and monitors the teachers' improvements in completing tasks;

- Administrator – provides teachers with instructions and help on how to access and use the resources and activities in the LMS;
- Media designer – provides teachers with instructions and help with using the recommended program environments and tools for working on the program.

Evaluation of the training program, which is prepared during its development, is also realized during the entire course of the program. Team and individual tasks for teachers, as well as getting feedback about the quality of the program material and activities and the quality of cooperation with the tutor, by conducting a final anonymous survey are provided as part of the evaluation.

Training evaluation team activities include:

- At the beginning of the course: creating teams for practical work;
- In the first part of the course, starting online team course design: a syllabus, learning guide, course topics and video material for one of the course topics;
- In the second part of the course, defining online team course tutoring scenario: a calendar of teaching activities, a calendar of assessment and evaluation and knowledge test for one of the course topics.

Training evaluation individual activities include:

- Two discussions via LMS Moodle forums, one in the first part and another in the second part of the training;
- Working on the video learning diary at the end of the training.

Training evaluation also includes getting feedback from attendants, creation and distribution of attendants acquired points, through:

- Final questionnaire and final report.

3. ACHIEVING TEACHER MOTIVATION FOR ONLINE COURSE DESIGN AND TUTORING

Considering that teaching prepared in an online environment is becoming imperative in every area of teaching and learning, it is necessary to motivate as many teachers as possible to get involved in developing and realizing online courses. In order for them to gain competencies for this, what is necessary, among other things, is for them to successfully complete at least one online course as an attendant. Further in this chapter of the paper suggestions for motivating the teachers before and during the training program are presented based on experience with teachers who are attendants of the alfa and beta testing, as well as the teachers who are attendants of the two realized training programs.

In order for the teachers to get interested in the online training course in the first place and accept it what is necessary is:

- To explain the importance of working on developing online courses for improving teachers' careers;
- To explain the importance of using the training program in practice in the process of designing and tutoring online courses;
- To provide necessary information about the online training program on time: the beginning of and duration of the program, which program platform is being used and how to access this platform for work, which type of certificate/confirmation is achieved for successfully completing the program.

In order for the program to be ready for teachers' work from the very beginning of the program, it is necessary to complete the following much before the start of it:

- Materials and program activities need to be prepared so that they are available via mobile devices (for more program attendants' access) if possible;
- The materials and program activities need to be prepared so that they are summarized and understandable and the program tasks need to be clearly defined (to avoid unclarity when working on them);
- The course should be made to be flexible and always available, that the teachers can work on the materials and tasks whenever they have time, considering their obligations at work.

In order for the teachers who apply as attendants to be interested in working on the program the following learning activities are recommended:

- Sending a message for the beginning of the program on the forum, announcing and holding the first video conference meeting for the program attendants to meet each other and understand the working methods;
- Welcoming the attendants to the program at the very beginning and explaining the rules of working on the program to them (so that there are no doubts about the beginning of working on the program);
- Opening a "Training overview", "Training calendar", "Acquiring points" and "Initial Questionnaire" to get to know the attendants at the beginning of the program;
- Informing attendants on time about posted material, activities and tasks (they should be familiar with what is being done in the program at every moment);
- Providing forums and a video conference room (plan regular asynchronous and occasional synchronous communication) for communication between participants;
- Providing continuous support by tutors, administrators and media designers (answering questions about the program, LMS platform and program tools regularly);

- Continuously providing teachers with feedback about their work on the program (update the table with points which contains team work and individual work results regularly);
- Announcing and holding a final video conference meeting for comments and suggestions as well as for reporting to the teachers about their work on the program;
- Opening an anonymous "Final Questionnaire" to get feedback from teachers: remarks by teachers about training program, at the end of the program.

4. TRAINING EVALUATION RESULTS

The first training program for a group of 23 teachers, vocational high school teachers and vocational college professors, was realized in February/March 2022. Out of the mentioned number of teachers, 17 teachers actively participated in working on the program and successfully completed the training. From the initial survey information about the teachers' previous experience with online teaching was received and what was received in the final survey was feedback from them about the quality of interactive lessons and video tutorials as well as the quality of cooperation with the tutor, administrator and media designer, as well as teachers' preparedness to apply the experience from the training program in practice.

The second training program for a group of 21 teachers (before the beginning of the program 30 teachers were signed up but 9 of them backed down because of obligations at work), vocational high school teachers and vocational college professors, was realized in April/May 2022. Out of the mentioned number of teachers, 16 of them actively participated in working on the program and successfully completed the training. This time around feedback was received from the teachers in the final survey as well. Fig. 1 shows the data received from the teachers at the beginning of every realized program.

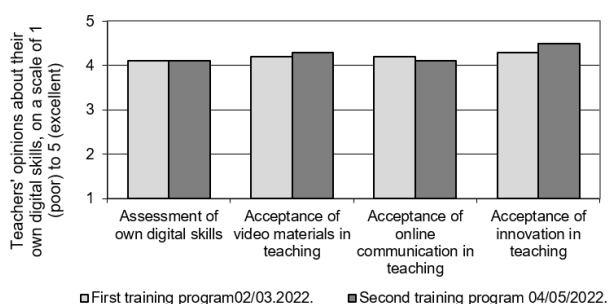


Figure 1. Teachers' opinions about their own digital skills, at the start training

Fig. 2 shows teachers' participation in certain team and individual activities, as well as their success in the realized training programs.

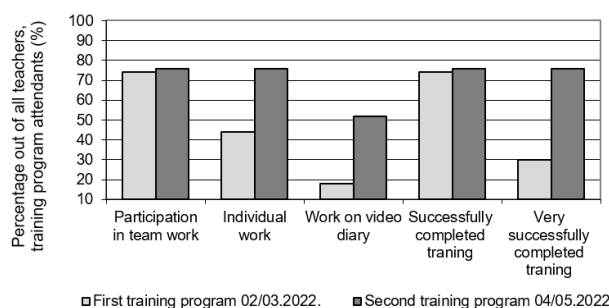


Figure 2. Teachers' work and pass rate in two realized training programs

In the previous figure we can see that in each of the realized training programs, the largest percentage of attendants was involved in working on team tasks, a somewhat lower percentage in discussions (both types of activities were assigned continuously during the course of the program) while the lowest percentage of program attendants worked on a video diary of the program (this diary was a task in the final working week).

Fig. 3 shows the evaluation of the program quality by the teachers of the realized training programs.

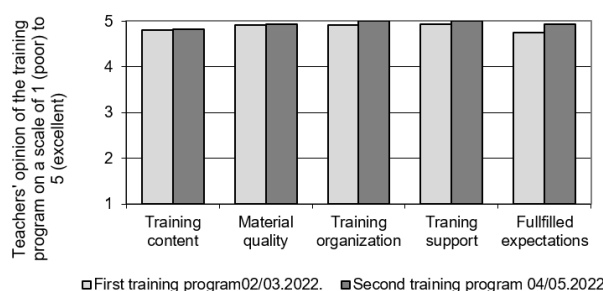


Figure 3. Teachers' feedback about two realized training programs

From the previous figure we can conclude that the teachers, attendants of each realized program evaluated the content, material quality, program organization support as excellent and also that the teachers' expectations of the training program were fulfilled.

In the final survey the same teachers' comments about the first realized program were received. According to the words of the teachers:

- The training program topics are clearly defined;
- Concrete examples were shown with posted videos in the program and they were excellent;
- Lectures and video instructions were very clear;
- Program support was very effective;
- The tutor, administrator and media designer supported the attendants in every step of the course.

The teachers' comments about the second realized program from the final survey were the following:

- The course is available 24h and the tempo of the program is adequate, in accordance with work obligations;
- By creating your own online course, the current program tools were tried out;
- The program atmosphere was pleasant and the deadlines for the tasks flexible;
- All praise for complete support which was available non-stop during the program.

What we can see from the results of the programs realized until now, which have been briefly demonstrated and commented in this paper, is that the program received excellent evaluations from the teachers, attendants of the program. The majority of teachers who evaluated their acceptance of online teaching with mostly very good evaluations in the beginning, managed to successfully complete this program and accept their role as designer and tutor in their online courses.

5. CONCLUSION

The development of online courses has become common, no matter the area of teaching and methods of realizing it. Taking this into consideration, programs for teachers' professional development also consist of training programs for designing and tutoring online courses. Every training program of this kind should introduce the teachers to the basic principles of online teaching, the principles of choosing and methods of using program platforms and tools for developing teaching materials and activities. The training program "Online course design and tutoring" was developed as a part of the Erasmus+ program PRO-VET as an exclusively online program with the goal to enable the professional development of the biggest number of vocational teachers in Serbia in the area of preparing, realizing and evaluating online courses as possible.

Testing the mentioned training program was carried out in two stages, and after that the program was realized twice. The training program is realized in the LMS Moodle program platform and provides continuous support to the teachers from the tutor who leads the teachers through the training program, from the administrator who helps with using LMS resources and activities as well as the media designer who helps with choosing and using recommended program tools.

At the training program beginning, after the program guide and program calendar, the initial program survey was realized. The paper presents the results of this survey, the questions and answers of teachers regarding their opinion to what extent they accept the methods and technologies of online teaching. From the responses of the teachers, it can be seen that at the beginning of each program, there was a very good basis for the teacher-attendants to accept the tools used for video teaching materials, for the development of these materials, for working on methods of online

communication about the material with students, as well as for accepting other digital skills needed in the modern teaching process. It can be concluded that, regardless of previous experiences, the motivation to prepare and implement online courses is present among today's teachers, considering that online courses are becoming an inevitable addition to the traditional courses.

The six-week program consists of teachers going through six topics, six interactive units and the same number of video tutorial compilations for recommended program platforms and tools. They complete the required team and individual tasks and start with developing a concrete online course in the area of their work. The paper shows the extent to which teachers participated in certain activities of the training program. In team tasks, they could distribute parts of the tasks among themselves, and therefore it is not surprising that their participation in these tasks was generally higher than in individual tasks. It should also be noted that a significantly smaller number of teachers worked on the video diary task in the last week than on the tasks in the previous weeks of the program. The mentioned results lead to the conclusion that programs of this type need team tasks, as well as larger tasks as early as possible in the program, rather than at the end of the program, in order to have the opportunity and time for their realization. In the paper, it is shown that greater participation of teachers was achieved in the second realized training program. This is expected, considering that after the completion of the first training program, the received feedback was analyzed and presented to the teachers, attendants of the second implemented program, in order to make a better organization of their work on the program in time. Based on this, it can be concluded that the analysis of feedback from the attendants is very important for the redesign of the training program.

In the final week of the program the final survey is realized when teachers evaluate the completed training and give their comments, suggestions and remarks regarding the realized program. From the final survey of the program, the results of which are also presented in the paper, it can be seen that the attendants of the implemented training programs are very satisfied with the clearly defined tasks of the program, support from tutor and administrator, as well as communication with them during the entire program. These results lead to the conclusion, which was expected, that in order to realize the most efficient training program of this kind, it is necessary to prepare each of its segments on time, well before the start of the program.

Based on this paper results, it can be concluded that the timely teacher training program preparation, regular support and communication during the entire course of the program, are very important for working on motivation of teachers to

access the online training program, to work on the program and completing it as successfully, as well as to be trained to use in practice what they learned and to improve their teaching.

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