

Desenvolvimento profissional de professores - o exemplo do curso credenciado da Wikimedia Sérvia

Professional development of teachers - example of accredited seminar of Wikimedia Serbia

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Resumo

Devido a seu papel social e importância, a vocação docente, apesar de ter sido depreciada e marginalizada na Sérvia nas últimas décadas, ainda tem uma das funções de maior responsabilidade na administração de mudanças em prol do desenvolvimento. Num tempo de mudanças rápidas, a educação é um nexo fundamental nessa corrente. O desenvolvimento profissional de professores é um pré-requisito para toda reforma e melhoria da qualidade do processo educacional. O modelo atual exige que os docentes empenhem-se na modernização do processo de ensino. Por essa razão, a Wikimedia Sérvia desenvolveu um projeto de desenvolvimento profissional credenciado pelo Instituto de Melhoria da Educação, a agência estatal de credenciamentos. O curso "Usando ferramentas on-line

Abstract

Due to its social role and importance, the teacher's vocation, despite the fact that in recent decades has been underestimated and marginalized in Serbia, it still has one of the most responsible functions in managing developmental changes. In a time of rapid change, education is a key link in that chain. Professional development of teachers is a prerequisite for every reform and improvement of the quality of the educational process. The current status requires from teaching staff to focus on modernization of the teaching process. For this reason, Wikimedia Serbia has developed a project of professional development which is registered by the Institute for Education Improvement, the state body for issuing accreditations. A seminar titled "Applying online wiki tools in teaching and learning" prepares teachers for

wikis no ensino e aprendizagem” prepara professores à introdução da tecnologia moderna e recursos informacionais no processo de ensino. Nesse sentido, Wikimedia Sérvia orienta-se pela ideia de que a educação de docentes é uma parte muito importante do aperfeiçoamento da qualidade do sistema de educação e que sem uma reforma da educação de docentes não pode haver uma reforma efetiva da educação.

Palavras-chave: Educação, desenvolvimento profissional, Wikipédia. **Keywords:** Education, professional development, Wikipedia.

1. Introduction

The system of professional development in Serbia is a key mechanism for improving the professional competencies of teachers in primary and secondary schools, while accredited seminars have a special place in this system. This system in Serbia was established more than ten years ago, as one of the pillars of the quality of education. In Serbia, special emphasis is placed on professional development of teachers through accredited programs (seminars), so teachers are obliged to achieve at least a hundred twenty hours of professional training in five years, at least eighty hours through attending professional development seminars approved by the Institute for Education Improvement of the Ministry of Education (Rulebook on Continuing Professional Development of Teachers, Educators and Professional Associates, 2017). The findings of the studies confirm that the progress of learning and achievement of students largely depends on the work of teachers (Sanders & Rivers, 1996; Wright et al., 1997). Moreover, teacher practice is the most important determinant of student achievement, compared to other factors that are under the authority of the education system (Creemers & Kyriakides, 2008; Muijs & Reynolds, 2000; Muijs & Reynolds, 2010; Teodorovic, 2011).

Therefore, the professional development of teachers is a very important link in providing quality teachers, since it is the dominant framework for improving their professional competencies (Stanković, 2011). Teacher training is a very important part of improving the quality of the education system and without reforming teacher education, there can be no effective education reform. The concept of professional development of teachers is predominantly provided in the Basic Laws of Education in Republic of Serbia, but as a legal document and framework, it is materialized in the Catalog of the Program of the Institute for Education Improvement.

In this paper, we will focus on the educational potential of Wikipedia in Serbia, in the context of professional development of teachers. We will also briefly present the theory and practice of accredited seminars for teachers, starting from two basic assumptions - that Wikipedia can improve the skills and learning of each individual, and that Wikipedia is an appropriate tool for teacher training in the context of real learning environment. Considering the challenges and ways of implementing this media in education, a review of the accredited seminar practice will be given.

In this context Wikipedia refers to a website that allows all registered and unregistered users to add, edit, and modify content. On Wikipedia, anyone who wants to be a part of the Internet community can

be an editor, and community members work together to make the content available to everyone. This largest internet encyclopedia consists of interconnected pages based on hypertext and information modification system. Each page can store information that can be easily viewed, along with ease of use, simple technology and an intuitive platform, make Wikipedia an effective co-authoring tool in which everyone can participate, regardless of the level of education.

2. Theoretical framework of professional development and professional training of teachers in Serbia

The professional development of teachers and other teaching staff includes (Institute for Education Improvement of the Ministry of Education, 2017, Rulebook on Continuing Professional Development of Teachers, Educators and Professional Associates):

- continuous professional development,
- developing competencies for better job performance
- improving the level of student achievement.

The needs and priorities of institutions or schools are based on the results of self-evaluation of the quality of work of the institution, personal priorities of teachers or educators or professional associates, as well as on the basis of reports on achievement of the standards, satisfaction of parents and students. Continuing professional development is realized by (Institute for Education Improvement of the Ministry of Education, 2017, Rulebook on Continuing Professional Development of Teachers, Educators and Professional Associates, p.3):

- Discussions and analysis
- Programs and seminars of expert panels with mandatory discussion
- Analysis, presentation of books, didactic materials, manuals, etc.
- Realizing programs of experiments, projects, research
- Attending accredited seminars
- Various activities organized by the Ministry, professional meetings, summer and winter schools, training programs and study tours.

The social context in which education takes place (both global and national) has changed significantly over the last few decades. The problems of education and its non-conformity with the requirements of scientific and technical development are being set up today in the world as essential and predominant tasks of modern education. The Internet is increasingly contributing to the diversity and differentiation of education, and it brings us the use of methods and procedures in the education that encourage the proactive attitude of students towards teaching, self-initiative and self-awareness of students. This changes the place, role and importance of education in the modern world, the attitude of people to it, as well as the value of frameworks and accents of education, teaching and learning.

Overcoming existing problems in educational work is possible by abandoning what has become outdated and by introducing new, contemporary, higher quality and more efficient content, procedures and methods of work. Consequently, education must adapt to the demands and rhythms of modern life and needs, using the innovations and strategies that contemporary society requires.

The practice shows that educational processes, which are realized in a traditional way, are such that the students still have a passive role and that they are required to reproduce facts in a reproductive manner. The basic reason for this situation is the inertia and unwillingness of the teaching staff to accept innovative models as basic and everyday needs of the educational process. Of course, among them there are lonely individuals who apply new methods in teaching in their teaching process.

With the development of a knowledge-based economy, high new demands are raised before education and therefore the demands placed on teachers have changed significantly. New competencies expected from teachers have become an integral part of global, European and national documents governing education policies. In this context of changed and increased demands for teachers, this paper is created with the idea to determine what kind of support for professional development Wikimedia Serbia can provide.

Thinking about these challenges, the team in Serbia dedicated to educational activities proposed the development of a project of accredited seminars for teachers. Since its start, this project has been aimed at developing Wikipedia and its application in the academic environment, as one of the largest collaborative projects on the Internet.

Wikipedia is a relatively new technological tool used in education, which should motivate teachers during the seminars, to continue with its application in teaching students. Addressing this topic is important since one of the basic problems is that there is no reliable data on whether training programs have effects on the ultimate 'users' of educational services - students. In this paper, we focused on the analysis of the connection between the teachers' perceptions of the accredited seminar of Wikimedia Serbia and the results achieved after the seminar.

3. Accredited Seminar of Wikimedia Serbia

The main goal of Wikimedia Serbia is to make teaching in schools modern, using empirically validated methods, to make the teaching more creative and interactive, and to bring students applicable knowledge, skills and abilities from it. The first accredited seminar organized by Wikimedia Serbia in the school years 2014/2015 and 2015/2016 was called the *Application of the online wiki encyclopedia in Serbian in teaching and learning* and was realized in cooperation with Prosvetni pregled, state company founded by the Government of the Republic of Serbia for informing the public about educational processes.

Second seminar titled *The implementation of online wiki tools as didactic resources in teaching and learning* was realized by Wikimedia Serbia during the two school years 2016/2017 and 2017/2018 (Web portal for seminars of Wikimedia Serbia, 2019).

After two successful cycles of realization, Wikimedia Serbia received accreditation for the third seminar. The seminar titled *Application of Online Wiki Tools in Teaching and Learning* is realized by Wikimedia Serbia and is accredited by the Institute for the Education Improvement for the period of three school years: 2018/2019, 2019/2020 and 2020/2021. This seminar is one of 1021 seminars that received accreditation (Institute for Education Improvement of the Ministry of Education, 2018, Catalog of professional development programs for school years 2018/2019, 2019/2020 and 2020/2021)

The main motivation for the preparation of this seminar came from the fact that according to the school curriculum of informatics working with Wiki tools became a mandatory part of the curriculum. Educational reforms in Serbia adopted a rule where it is increasingly being insisted on project teaching, which Wiki tools are particularly suited for. In addition to that, publishing house Klett made a school book for informatics for gymnasiums, introducing a lesson on Wikipedia.

The main objectives are to improve the competencies of teachers in the application of new and open learning platforms based on wiki tools and to improve the quality of the teaching and educational process. The aim of the seminar is to bring together free educational tools and platforms for learning and raising teachers' competencies for their use in teaching.

It is intended for teachers of general and professional subjects in high schools and secondary vocational schools as well as teachers of higher grades of primary school. The seminar lasts eight hours and is divided into a theoretical and a practical part. During the theoretical part, the participants have the opportunity to learn more about the following topics:

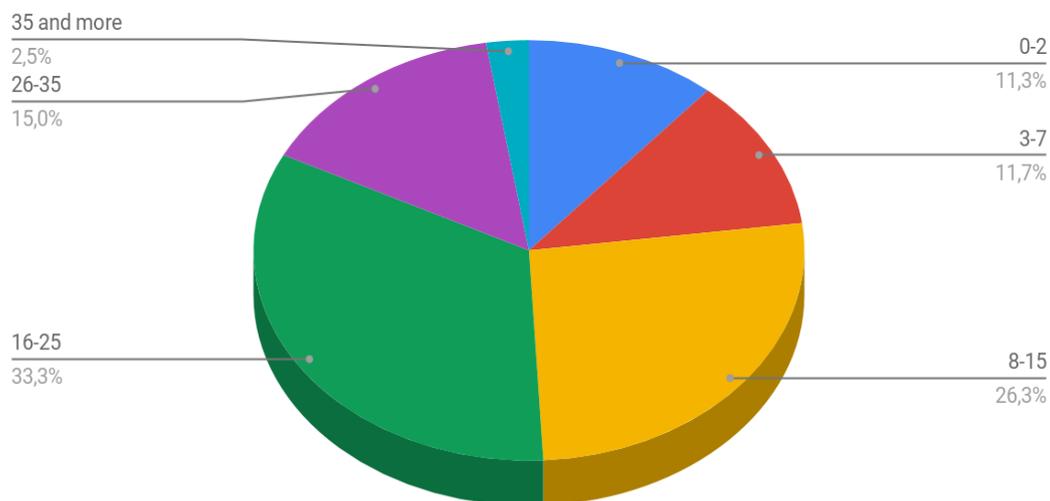
- The basic principles of Wiki projects
- Examples of good practice of using Wikipedia in educational processes
- Wiki tools
- Application of Wikipedia and related Wiki projects of free teaching knowledge

The practical part involves acquiring knowledge and developing skills for creating new or editing existing articles in Wikipedia (by choice of participants) that can be applied in class. The work does not require programming skills and the seminar is designed so that teachers can apply acquired skills in the classroom immediately after completion. The seminar lasts eight hours and carries eight points for compulsory professional development. After the seminar, the participants receive a certificate of attendance in training and further support of the team of Wikimedia Serbia in the realization of the lessons learned. The seminar is free of charge for all participants (Web portal for seminars of Wikimedia Serbia, 2019).

For the purposes of this analysis, we collected data using a questionnaire created for the purpose of evaluation of the seminars by the Institute. The analysis was conducted on a sample of 532 participants from 35 different schools who attended at least one of the 25 seminars held by Wikimedia Serbia between November 2016 and December 2018. We used the method of content analysis to process the collected answers to open questions. Some of the obtained results will be shown below.

Graph 1

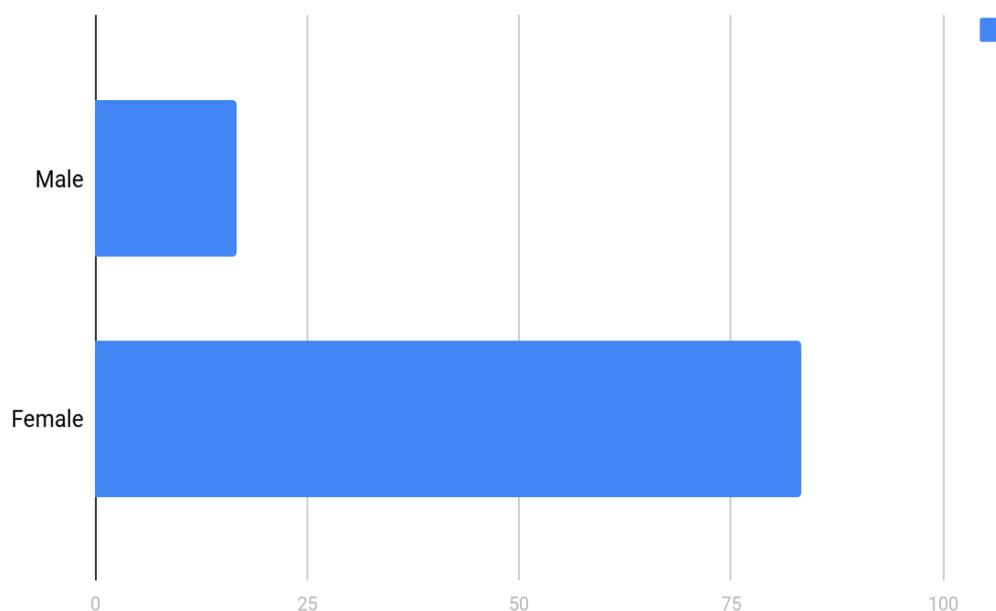
Participants by year of working experience



The data shows that the group that participates most often in the seminars has a working experience of 16 to 25 years, followed by those with 8 to 15 years of working experience (Graph 1). In the notable majority, participants in the seminars are women, while men are only present in 16.67% of cases (Graph 2).

Graph 2

Participants by gender



By analyzing the effects, we concluded that more work should be done to improve the way teachers write articles on Wikipedia. The analysis also found that a greater decentralization of the project is needed in order to involve teachers throughout Serbia to undergo a professional seminar that is realized by Wikimedia Serbia. This was achieved by holding 11 out of 25 seminars outside of Belgrade. Participants should also be more encouraged to use training materials and ideas from the seminars for organizing workshops in their schools.

The general impression is that a seminar is needed. By analyzing the questionnaires filled out by participants at the end of the seminar, the majority agreed that the topics discussed at the seminar are clear, gradually introduced into matter and that they develop awareness for their work to be more innovative and interactive through the use of wiki tools in teaching. We held 25 seminars in the school years 2016/17 and 2017/18 and received an average score of 3.88 / 4.00. The overall impression is that the seminars have been organized in great atmosphere of cooperation and learning and that the teachers will continue their further training in the field of application of new and open learning platforms based on wiki tools.

The seminar focuses on the exchange of experience and knowledge in working with students. During the seminars the participants have an opportunity to talk about possibilities for using online wiki tools in the classroom for active discussion, to ask questions and suggest their ideas on raising information literacy among students. During the seminars, the lecturers checked the knowledge that the participants learned through the practical work, and the participants had the opportunity to present their impressions about the seminar. Their comments were more than positive and mainly focused on the organization of seminars, lecturers and the effects of the entire project of professional development of teachers.

Participants of the seminar are satisfied with the cooperation with Wikimedia Serbia and believe that Wikipedia can be used in teaching at various levels. They have come to the conclusion that the dramatic lack of information literacy can be replaced by creating content and articles on Wikipedia, and that Wikipedia encourages students to develop technical and communication skills, as well as forming a neutral point of view. It is particularly positive that it has been noticed that students are approaching the creation of their own work with much greater responsibility and more motivation when they know it will be public and accessible to everyone. Therefore, it can be concluded that the result of the seminar are many and that they are related to the field of knowledge and the field of skills and teaching.

It is very important that all teachers who are interested in applying the learned in practice have the freedom and the ability to adapt their practice to the various circumstances that exist in the institutions in which they work, as well as the challenges they face during the implementation process. From this we have concluded examples of good practice that consist of the following:

- All individuals who want to apply learned in practice should be familiar with the recommendations for the implementation of the project. In practice it has been shown that it is good to hold at least one additional meeting so that the participants can get acquainted with the procedures.
- Participants should receive maximum feedback and materials from the seminar immediately after its completion.
- All the conclusions reached during the seminar should be recorded.

- Maintaining a meeting with the management of the institution is always a recommendation and can be of great value, especially when the project is being implemented for the first time, because it makes a significant contribution to the entire process.

3.1. Successes and challenges

Wikimedia Serbia received in 2016 funds from the Ministry of Education, Science and Technological Development for the realization of four seminars in 2017. The funds were allocated on the basis of a public call for participation in the use of financial resources of the Ministry of Education, Science and Technological Development for donations to non-governmental organizations important for education (Ministry of Education, Science and Technological Development, (2016) Decision on the selection of programs of national significance for education and training that will be allocated financial funds for realization of activities in 2016). Of particular importance for the development of the seminar are the experiences that the participants had after the seminar and the application of what students had learned in practice. That's why we were especially impressed by the news that Zorana Matićević, a teacher of sociology at the 15th and 3rd Belgrade high school, won the second place at the public call "Found out at the seminar and applied in practice 2016" for work "Making articles from the field of sociology, what can I do?". The competition was organized by the Institute for Education Improvement, and her work was selected in a competition of 80 works. (Institute for Education Improvement of the Ministry of Education, 2017, Results of the competition "Found out at the seminar and applied in practice 2016")

In addition to this example, a Serbian language professor at the Mathematical Gymnasium in Belgrade was ranked second in the same competition in 2016. Students of Andjelka Miladinović created an article on Wikipedia devoted to the folk epic poem *The Beginning of the Revolt against the Dahijas*.

An example that, in our opinion, positively reflects the realization of the program's effects in practice is from the elementary school "Jovan Sterija Popović" in Belgrade. After two seminars held in this school, teacher Sanja Ječmenica showed great interest in implementing the project Wikipedia in schools. After the seminar, we held a meeting together with school director in order to plan activities and arrange cooperation. Training about editing Wikipedia was held for the 6th grade students. The activities were realized within the timeframe, and the students wrote articles in pairs or in groups of three. For this activity, Sanja won the third place for Digital Class at a competition organized by the Ministry of Trade, Telecommunications and Tourism of the Republic of Serbia in 2018. The prize is awarded to those professors who profusely use modern information technologies in their teaching practice.

We analyzed the effect and noted the number of recommendations we received from the participants for the realization of seminars in other institutions. We also continued cooperation on the Wikipedia in Schools project in 9 out of 25 schools where we held seminars.

For Wikimedia Serbia, the process of preparing for a seminar is very important. It includes clear communication with the school management about the conditions in which the seminar would be held and on technical aspects such as computers and internet connection. In addition, the preparation phase of the seminar includes the preparation of teachers for the seminar, primarily in terms of

registering on Wikipedia before the seminars, but also the preparation of a text that will be published on Wikipedia during the practical part of the seminar. This is done for a number of reasons, first, to see how many teachers know the rules by which the articles are published, second, to make the seminar more efficient and third, because of the selection process in order to make a good selection of teachers we can cooperate with on the Wikipedia in Schools project. We have managed to get 544 articles in Wikipedia in Serbian language so far.

Regarding this, there are certain challenges we are trying to overcome, particularly in terms of choosing articles to be written by teachers and the choice of literature, which we strive to overcome by giving clear guidelines, and for this purpose we have created a special form that teachers need to fill in. This has proven to be an excellent mechanism because the texts are more systematic. Of the other challenges, we highlight poor technical knowledge of teachers, and poor quality of internet connection in schools. Slow computers and sometimes insufficient motivation of teachers are something we have to invest our additional efforts to get the expected results.

4. Conclusion

In this text, we focused on understanding the potential of a new resource for increasing digital competencies of teachers - Wikipedia. Considering the heterogeneity of the teaching structure, regarding the education level, age and sex, as well as personal affinities, habits and motivation, it is a very complex task to draw up a plan and a program of professional development that would include all structures equally and give satisfactory shorter term results.

A comprehensive and systematic assessment of the implementation of the accredited Wikimedia Serbia seminar has shown that the project meets the needs of teaching staff. The application of Wikipedia in education develops the capacities of teaching staff in the projected direction and increases their competence for the application of new technologies in education. Seminars are a way for teachers to focus on using new technologies and to take advantage of all the potentials that the Internet provides them. One of the goals of the project is the use and application of new technologies as modern didactic tools in the process of learning and teaching. This includes the advancement of professors in the field of digital competencies in order to acquire new knowledge and skills in order to increase the quality of teaching. In this way, the role of a professor becomes not only pedagogical, but also organizational, because students are no longer just objects in education, but also formulate it themselves.

Based on the results so far, we can confirm that editing Wikipedia and creating articles on it during the seminar represents a significant impact on teachers' perceptions of the use of new technologies in education. Also, it has been proven that the writing process of articles in Wikipedia is an interesting and challenging process and has influenced the improvement of their skills. Therefore, the starting point, that Wikipedia can improve teacher skills and the learning process is confirmed as true. The inclusion of Wikipedia in a classroom as pedagogical tool also proved as successful.

The use of Internet in teaching in the developed world has long ceased to be a novelty, while in Serbia it is still a matter for ambitious individuals. What is encouraging is that in recent years there has been noticeable efforts to create conditions that would make students feel more comfortable and relaxed during the teaching process.

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