EMPOWERING STUDENTS FOR VIOLENCE PREVENTION WITH HELP OF MULTIMEDIA LEARNING RESOURCES

OSNAŽIVANJE UČENIKA U PREVENCIJI NASILJA UZ POMOĆ MULTIMEDIJSKIH OBRAZOVNIH SADRŽAJA

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Abstract

In order to answer the needs for empowering students, teachers and parents in the area of e-safety, NGO “Suradnici u učenju” helped five primary schools in European Union-funded project “Children’s safety on the Internet” developing new school curriculum area for children’s safety on the Internet for students aged 7 -14, their parents, teachers and local community. Curriculum consist of pedagogical-didactical model, acceptable use policies, multimedia resources, textbooks and guides. The project aims were improving students’ digital competences and encourage children to assume responsibility for their own safety with a focus on empowerment, emphasizing responsible behaviour and digital citizenship and to raise e-safety awareness. In this paper we discuss the content and evaluation of school curriculum developed in that project. The curriculum was tested with students aged 7 to 14, their parents and teachers. Results show that the curriculum and learning resources fully satisfied students’ expectations and that the team of authors successfully implemented modern strategies in the curriculum and resources creation. That school curriculum is now used as base for new national curriculum of subject Informatics and cross-curricular topic Use of ICT. Resources created for school curriculum are freely available for further use on project web site http://petzanet.hr

Keywords: e-safety, electronic violence prevention, school curriculum, digital skills, children’s safety online

1. Introduction

European Parliament and the Council of the European Union included digital competence in
key competencies which each person needs to possess in order to adapt to the rapidly changing world. Their definition of digital competence, along with knowledge and skills, include critical attitude toward the responsible use of ICT. In this digital age children are focused on computers and mobile devices from early childhood. It is of utmost importance to teach them how to use those devices properly and appropriately [1].

At the moment, students in compulsory schools in Croatia have a chance to obtain ICT related skills and knowledge only if they choose an elective subject - Informatics in grades 5 to 8, or if similar extra-curricular activity is enabled for grades 1 to 4 [2]. However, the topic of e-safety is not part of actual Informatics curriculum at all. Therefore not even the minimum of children’s knowledge about appropriate and safe use of internet is obligatory at the time. Education Sector Development Plan 2005-2010 [3] considers equipping people with the skills to use information and communication technology in everyday life as one of the prerequisites for active involvement in an information-based society.

According to the UNICEF’s survey in Croatia [4], 85% of children have Internet access at home, their favourite activities on the Internet are seeking entertainment, communication with friends, and use of social networking sites while using the internet for research and learning are less frequent. The same survey showed that 34% of children experienced some form of electronic violence, comparing to 12 % of European children, who say that they have been bothered or upset by something on the internet [5]. Findings from EU Kids Online research “Risks and safety on the internet” suggest that digital skills training needs continued emphasis and updating in terms of training, safety features and applications operation to ensure that all children reach a minimum basic standard and to prevent digitally isolated and unskilled children [5].

In order to answer the needs for empowering students, teachers and parents in the area of e-safety, NGO “Suradnici u učenju” helped five primary schools in European Union-funded project “Children’s safety on the Internet” developing new school curriculum area for children’s safety on the Internet for students aged 7-14, their parents, teachers and local community. The curriculum is designed in a way which gives schools, teachers and students certain autonomy in choosing the content, methods and forms of work. It provides the educational and learning outcomes and standards of their acquisition whilst addressing all key competences of the European Union following violence prevention strategies and guidelines [6] & [7].

2. Project development and implementation

2. Razvoj i implementacija projekta

Project “Children’s safety on the Internet” was a European Union-funded project (October 2013 - December 2014) which NGO “Suradnici u učenju” and Veliki Bukovec primary school developed together with partners, primary schools Popovača, “Mladost”, “Gripe” and “Mato Lovrak”, financed from a grant scheme “Further development and implementation of the Croatian Qualifications Framework” (Europeaid/131254/M/ACT/HR).

The project objectives were:
- to develop learning outcome-based school curriculum area for children’s safety on the Internet which will enable holistic approach involving students, parents and teachers on the same goal;
- to develop and implement appropriate pedagogical and didactical model for student centred learning which will make the most of teachers’ potentials and new technology strength;
- to improve primary school teachers’ educational skills and expertise so they could apply the new methodologies for student centred learning;
- to improve students’ digital competences and encourage children to assume responsibility for their own safety as much as possible with focus on empowerment, emphasizing responsible behaviour and digital citizenship;
- to raise students, teachers, parents and general public awareness and understanding of issues relating to the children’s safety online in synergy with the EU policies [8].

Project facilitated cooperation and experience exchange as well as sharing best practice between
Croatian and EU schools on issues relating to children’s safety online and gives equal opportunities to all students to reach standard learning outcomes in area of safe, legal and ethical behaviour on the Internet and to prevent digitally isolated and unskilled children.

Project Pedagogical team worked on development and publishing of school curriculum area which consist of four courses addressing one of four age groups in primary schools (students aged 7-8, 9-10, 11-12 and 13-14). School curriculum is vertically adjusted in five units: information, communication, content creation, safety and problem solving as recommended in EU Framework for Developing and Understanding Digital Competence in Europe [9]. Some of the topics covered in curriculum are: personal data protection, e-mail phishing and scams, netiquette, online communication and collaboration, risks on social networks, responsible use of mobile devices, sharing and authoring rights, identity theft, digital footprints, e-portfolios and online presence, evaluation of information on the Internet, how to protect computer and family, prevention of cyberbullying [8].

3. Learning resources

3. Obrazovni sadržaji

Each set of teaching/learning materials include textbooks for students, multimedia resources, teachers’ guides and guides for parents. Learning objects within teaching/learning materials were created in form of text, hypertext, pictures, animated stories, videos, audios, computer games, social games, colouring pages, photos, interactive quizzes, learning quests. Along with the classic printed textbooks, students, teachers and their parents can use digital versions in PDF formats, as well as digital e-books. Moreover, virtual classroom provide students with a personalized learning platform. Students are allowed to choose a content themselves – texts, examples, presentations, posters, comics, exercises and quizzes to study, as well as the pace at which they will go through the content individually and learn.

Teachers’ guides provide lesson plans with summary and learning outcomes enriched with suggestions for technology and resources so that every teacher can easily see which equipment and resources are needed and how to broaden their knowledge. Guides for parents accompany each lesson from the student’s textbook with short explanations, additional family activities which parents and children can do together at home.

The characters which illustrate various topics are created specifically for this curriculum. Special attention was paid to gender equality, therefore there is an equal number of male and female characters and it is easy for children to put themselves in the shoes of any of the characters. Multimedia and digital resources were created for all lessons, special attention was payed to creation of 22 computer games and interactive quizzes and 56 animated stories, audio and video clips which give students an opportunity to learn individually, through games and problem-solving activities. Digital materials have a specific design, the content is automatically adjusted to the device display and its resolution which enables students with special educational needs to use them more easily. More than 800 learning resources are organized in a database and freely available on the project website petzanet.HR [10].

4. Curriculum piloting

4. Pilot-testiranje kurikuluma

School curriculum was tested and evaluated by two sides - schools which take part in project and external advisors. Pilot testing was performed with 201 students (aged 7 - 14) - 2 classes from each participating schools. The testing was organized in September and October 2014 in all schools. In every class ten lessons were delivered in the weekly schedule, two lessons each week. Testing of the curriculum was monitored by using the pre-test and post-test questionnaires created especially for this project with age appropriate language and design accompanied with teachers diaries and focus groups with students and parents after the curriculum was delivered. The questionnaire consisted of three groups of questions: general, e-safety and digital skills, and satisfaction with learning resources.

In the pre-testing there were 25 students of the 1st grade; 44 students of the 2nd; 18 students of the 3rd; 18 students of the 4th; 15 students of the...
5th; 34 students of the 6th; 22 students of the 7th and 25 students of the 8th grade. In the post-testing there were 22 students of the 1st grade; 43 students of the 2nd; 18 students of the 3rd and 19 students of the 4th; 12 students of the 5th; 36 students of the 6th; 18 students of the 7th and 20 students of the 8th grade. In the pre-test 49,7 % were male and 50,3 % female pupils and in the post-test 46,6 % were male and 53,3 % female pupils.

The average age of first internet use is 5,6 which means that students start to use Internet before they start 1st grade, and that age is lower than findings in EU Kids Online research [5] which showed that the average age of first internet use is seven.

Research The International Computer and Information Literacy Study (ICILS), conducted by IEA - International Association for the Evaluation of Educational Achievement, 2013 in 21 countries showed that only 1 % of Croatian teenagers are on the highest level of computer and information literacy that includes critical evaluation [11]. Although results from ICILS cannot be compared with results of this question it shows us that young students tend to believe everything they find on the Internet. Considering the fact that 77 % of them started to use Internet before entering 1st grade emphasise the importance of lessons developing critical evaluation of information in the curriculum.

<table>
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<th>I don’t know</th>
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<td>79,1</td>
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<td>4,7</td>
<td>87,5</td>
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<td>3rd &amp; 4th</td>
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<td>0</td>
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<td>5th &amp; 6th</td>
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<td>93,9</td>
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<td>100</td>
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<td></td>
<td>94,7</td>
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In Table 2 you may find some comparison of students answer prior and after pilot project implementation.

The question regarding competences of friends who did not take part in this research also addresses one of the important digital competences - helping others, sharing knowledge and bridging the digital gap [12].

The Last part of the questionnaire contained questions regarding students’ satisfaction with learning resources. In general students were very satisfied with lessons delivered in project (92 - 100 %). Comparing students’ satisfaction with different kinds of learning resources, students mostly liked animated stories and videos than games and worksheets and in the last places e-book and textbooks.
Students in grades 1st & 2nd just answered question with Yes/No and senior grades gave marks 1 - 5. Such high grades show that learning resources fully satisfied students’ expectations and that the team of authors successfully implemented modern strategies in the curriculum and resources creation. Results also show tendency toward multimedia resources in all grades and could be used as recommendation for future creation of curriculum resources. (Table 3).

When asked “Would you like to have lessons about children’s safety on the Internet next year too?” 82.2% of students from all grades answered yes, which is also a significant sign that the curriculum content, learning resources and the way of teaching was set up in the way that suits needs of today’s learners.

5. Conclusion

5. Zaključak

The limitations of this research were the strict timeframe of project implementation, and a small number of students, teachers, parents and schools.
The project timeframe dictated a narrow time slot for the implementation of the curriculum and its testing, so we found out that the implementation was more intense than originally planned. The results of the research were immediately used for improving the quality of the created curriculum and learning resources and after that, all updated resources were published online for free, unlimited use. For measuring influence of this curriculum in prevention of electronic violence, long term research is needed which was not possible in this project.

6. References

6. Reference


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Lidija Kralj je profesorica matematike i informatike, eTwinning ambasadorica za Hrvatsku i voditeljica projekta “Sigurnost djece na internetu” i ENABLE. Dvadeset pet godina predavala je matematiku i informatiku u osnovnoj školi, a od 2016. godine radi na Visokom učilištu Algebra kao predavač i savjetnica za obrazovanje. Članica je Nacionalnog vijeća za odgoj i obrazovanje te stručnjakinja u radnim skupinama za izradu kurikuluma Informatike i međupredmetne teme IKT u obrazovanju. Urednica digitalnog časopisa “Pogled kroz prozor” i portalucitelji.hr. Autorica niza udžbenika i zbirki za informatiku i matematiku za osnovne i srednje škole te znanstvenih i stručnih članaka.

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