Service e-Learning in Elementary School: Opportunities for Learning, Teaching and Communicating in Social Space

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***Abstract*—** The service e-learning project described in this paper presents the development of the educational corner for the institution of primary education. We aimed to motivate the students of information sciences in the Faculty of Humanities and Social Sciences to develop the educational corner that would provide the elementary school teachers and pupils with greater teaching and learning opportunities through interesting educational activities. Our goal was also to motivate the elementary school teachers to realize the importance of communication with their pupils in the social space and to encourage them to use the multimedia educational materials in order to establish better communication and interaction with their pupils. We also aimed to make our students to practically use knowledge and skills acquired through their studies while meeting the demands of global and diverse educational marketplace. Such a project could be attractive to all elementary school teachers searching for ways to incorporate the e-learning into classrooms on both a short-term and long-term basis, to address individual learning traits and spark teaching and learning excitement.

***Keywords*—**Service e-Learning, primary education, elementary school, educational e-corner

I. Introduction

Service learning (SL) is a teaching method that connects the goals of higher education with the needs of society through student active participation in structured cooperative activities that address community needs [2].

It encourages students to utilize classroom knowledge to improve local communities but also to learn and develop professional and interpersonal skills as well as critical thinking [5].

Furthermore, service e-Learning, a special kind of service learning, additionally recognizes the emerging role of technology in shaping student participation in the community and provides a quality experience while meeting the needs of multiple participants from multiple backgrounds, giving them the ability to make connections across the disciplines [5].

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This paper presents a case study of service e-Learning project: Around the Corner: Service e-Learning in Primary Education (http://www.skola-retkovec.hr/edu-kutak/), designed and implemented by the graduate students of Information Sciences in their final year of study.

This was the first generation of students who enrolled in a stand-alone elective course in service e-Learning at the Department of Information Sciences, Faculty of Humanities and Social Sciences at Zagreb University. To our knowledge, this is the first course of this kind taught at a Croatian university.

Our main goal was to promote the use of educational web corners in elementary schools and to provide pupils and school teachers with greater opportunities for learning, teaching and communicating in the primary school. Also, we wanted to explore the concrete opportunities for our students to learn new skills, to think critically, and to test their new roles in an environment which encourages risk-taking and rewards competence.

II. e-Learning Initiative in Croatia

Integration into the global social and economic system is based on information and communication technology literacy. Since modern technologies facilitate the access to information for formal education as well as for lifelong learning, it is important to promote the use of information and communication technologies (ICT) through the educational system.

Since 2006, all elementary and lower secondary schools in Croatia started to apply the Croatian National Education Standard (CNES). The Croatian National Educational Standard has been created as a basis for the changes in the teaching program in the elementary school system aiming to develop the "school tailored to pupils". The purpose of the CNES is the unburdening of the workload by abandoning redundant educational programs, introducing modern teaching methods based on research-based classes and individual and group work as well as applicable knowledge and skills [20].

Furthermore, since 2007, the Croatian Ministry of Science, Education and Sports (MZOS) together with the Croatian Academic and Research Network (CARNet) started offering access to online content that can help improve ICT literacy and e-learning in schools.

Also, portals containing online learning materials (for example, the Central School Portal or the Nikola Tesla Portal) are developed.

The Central School Portal (http://www.skole.hr/) publishes informative and educational texts for pupils, teachers, elementary and secondary schools and parents. The Portal also incorporates a repository of digital teaching materials created by Croatian teachers.

The Nikola Tesla National E-Learning Portal (http://www.edu.hr/) is a system that allows secondary school learners to access free interactive online teaching and learning materials.

The Portal contains secondary school mathematics, physics, biology, chemistry and English materials intended for pupils to use them for independent study, while teachers can use the same material for teaching.

Multimedia presentation of lessons includes animated examples, audiovisual simulations of experiments and interactive elements to make the coursework more interesting and easier to understand.

Unfortunately, the number of teachers in Croatia (especially in primary education) who use such materials to enhance their teaching and pupils' learning outcomes is still rather low.

According to the survey performed in Croatian elementary schools in 2009, many teachers (88.63%) use computers in their private or personal life, but majority of them never took any form of formal computer education (68.01%). Furthermore, 84.83% of teachers are using internet for research, communication and reading e-newspapers, but rather small number uses internet in teaching [23].

In Croatia, teachers have rather large flexibility and autonomy in using ICT in the educational process. Therefore, their readiness to accept changes in education makes a key factor to implement the new technologies in everyday teaching practice [23].

In order to become promoters of changes in education, teachers need to possess the adequate level of computer literacy. In the information and technology-based society, multimedia and computer literate teachers are responsible for bringing about change through their influence in their schools.

Taking this into consideration, a school teacher has very important role in application of information and communication technologies in schools.

III. Background of Service e-Learning in Croatia

Service learning was introduced in the largest faculty of the University of Zagreb (Faculty of Humanities and Social Sciences) in academic year 2006-07 through the series of faculty workshops and through academic courses, with the goal to transform the traditional ex-cathedra teaching style [17].

Goals and requirements for this teaching and learning method were based upon our U.S. experience, gained at the George Washington University.

The information science curriculum in the United States applies service learning to facilitate students helping local NGO's on projects related to course topics, such as database design [10] or to connect the students of information science courses with the local schools to provide tutoring in the software applications they are using in class.

Benefits of these service learning projects are reciprocal to both the non-profit organizations that lack monetary resources [13] and to the students learning the problems of the organizations and the potential solutions through technology [21]. Benefits to students also include interacting with real clients and learning interpersonal skills critical to their future [9].

Since 2006-07 around 50 SL projects in the field of information technology (IT) in Croatia have been completed and evaluated [6]. Service learning was also added as a regulation of the Croatian National Youth program 2009-2013, approved by the Croatian Government.

Since the academic year 2009/2010, the Department of Information Sciences at the Faculty of Humanities and Social Sciences in Zagreb offers the stand-alone elective course on service learning which achieved remarkable student enrolment in a short time.

The goal of the course is to expose participants to the theory and practice of two educational innovations (SL and e-learning) combined to encourage civic engagement while meeting the demands of global and diverse educational marketplace.

Students find this methodology effective, because (according to their course evaluations) it increases their awareness of the world and their personal values and facilitates their engagement and interactivity in the classroom [16, 6].

Due to the fact that information literacy becomes an important social issue, while the social need for a visual identity (especially in the electronic environment) is constantly growing, information science students truly have a great field for activity where they can meet different interests and apply specific knowledge and skills [4].

IV. Project Description

The aim of the project was to design, develop and integrate the educational web corner for the primary school teachers and pupils that will be implemented in the official school's web site in order to attract more pupils and teachers to learn something new, affirm their knowledge on a familiar topic while browsing through the content and establish communication in such social space.

The benefit of an educational platform is that it may include the aims of education, views of knowledge, the social significance of student's learning, the image of the learner, the image of the curriculum, the image of the teacher, the preferred pedagogy, and the preferred school climate [19].

Such a learning platform should offer quality learning resources on a variety of subject areas at primary level of education, enable pupils to learn their mother tongue as well as foreign languages in an interactive way and encourage self-learning among pupils allowing them to work at their own pace.

A. The Potential of Educational Web Corner

Educational changes can be implemented through different computer-based activities and e-activities. The research findings [12] show that young children at the beginning of the education process perceive the computer as an important source of information, at the same expressing enjoyment of using it.

Also, creative students who are highly motivated to learn prefer to use the computer as part of the process of accomplishing their learning tasks and perceive the high value of using it. These results indicate the importance of using a computer-based educational content to foster creativity in highly motivated students**.**

Furthermore, some authors suggest the use of technology in preschool [8] and early elementary school, since the computer activities designed in a way that is age-appropriate proved to enhance children socialization and the language development. Also, such activities encourage children to explore, to be creative, and solve problems.

Educational technology can also promote the development of attention span in young children. Finally, children with special needs can also benefit from the use of technology.

It should be stressed that a computer can be used as both an interactive learning and a playing tool. That is why it is necessary to highlight the importance of its use at the very early stages of education, so that teachers in elementary schools start learning to integrate computers into their teaching, thus expanding computer usability beyond its entertainment function.

B. Multimedia Instructional Design and Learning

Learning needs of today's elementary school pupils differ significantly even from their recently graduated peers. These learners are digital natives, who have grown up with technology and who live in a world in which digital technology is part of the texture of their daily lives. They have never known a world without technology, it is their native language and they expect to use technology in school [22].

Because they live in a fast paced technological world, they are not afraid to use technology for learning and ICT is almost like a part of their body.

Their learning needs demand a curriculum that includes online learning, e-activities, interactive games, lessons and exercises integrated into one comprehensive, unique system that supports the school program and targets children's strengths. Pupils need to be guided through the activities at their own pace and to their own satisfaction.

Such a curriculum can be developed and implemented taking advantage of multimedia learning.

Multimedia learning can be defined as the delivery of instructional content using multiple modes that include visual and auditory information and student use of this information to construct knowledge [22].

On the other hand, online multimedia puts together e-learning and multimedia, using different formats to teach. There are many advantages of using online multimedia - static and dynamic pictures as well as audio stimulate visual and auditory senses, allow simulation of the reality and encourage pupils' interaction to foster learning. Interactivity and multimedia increase pupils' interest in learning, since different types of knowledge can be conveyed quickly and effectively to the learners.

Interactive multimedia instructional content may include web, multimedia and e-learning materials for different types of learners. Modern interactive multimedia technology offers unique environment for developing different curriculum modes and it has distinct design and instructional requirements.

There are various learning strategies for the design of interactive multimedia instructional content. Learning games represent learning strategy that combines education and enjoyment. Since children benefit from the balance of interesting multimedia teaching activities, the underlying idea is to engage children through such activities while they acquire knowledge.

Finally, Internet-based multimedia educational resources represent a great potential for school teachers and parents. Due to the fact that multimedia resources stimulate and maintain a high level of learner's interest, they have the inevitable role in teaching and learning process.

C. Service e-Learning Project Planning

In the project planning phase, students of information sciences aimed to create an age-appropriate educational resource for elementary school pupils through collaboration with school teachers that will maintain the corner and use it for their curriculum-based activities.

Our first step was to create a list of eligible community partners. Our students prepared a project proposal, presenting their ideas and plans, clearly defining their obligations, the extent to which they were able to involve and the requirements the partner should consider. Our final choice was Primary School Retkovec, since it expressed far more enthusiasm and willingness to participate in the project than other institutions of primary education.

The first meeting was arranged with the school's principal, pedagogue and the information technology teacher to discuss all project details, deadlines and to outline partner's expectations. Due to the school's work in shifts and their work overload, it was difficult for them to find a mentor willing to guide our students through this learning experience and help them to prepare the materials they needed. They decided to do shared mentoring and provide our students with the materials they would like to have available on the e-corner.

As a result, our students were given numerous creative materials made by the school's pupils; anagrams, mental maps, games of logic, quizzes in general knowledge, the Croatian language and literature, history, etc.

Although it took a lot of time and effort to convert these handwritten materials into useful e-activities, our students used them as a mean to attract pupils to learn in interesting and different way, providing them with the e-environment where they feel comfortable to learn.

Students' basic hypothesis in the project planning was that e-activities would look more friendly, interesting and engaging to pupils if their own ideas and materials were implemented in the educational web corner.

The project planning activities allowed our community partner (school teachers) to gain a better understanding of the potential value in using an educational corner in their teaching.

D. Design of the Educational Corner

Each service e-Learning project necessitates good collaboration between students and community partner. We (faculty) encouraged this collaboration during both planning and design activities in order to align partner needs and expectations with the design and integration of the educational corner and to promote the design that would leverage the experiential knowledge of the partner and the theoretical knowledge of our students.

The community partner's request was to keep the design of the existing school website unchanged and to make the educational web corner as an add-on to the current site.

Our students made the background theme colorful and attractive, since the educational corner should have appealed to the project target group – the primary school pupils.

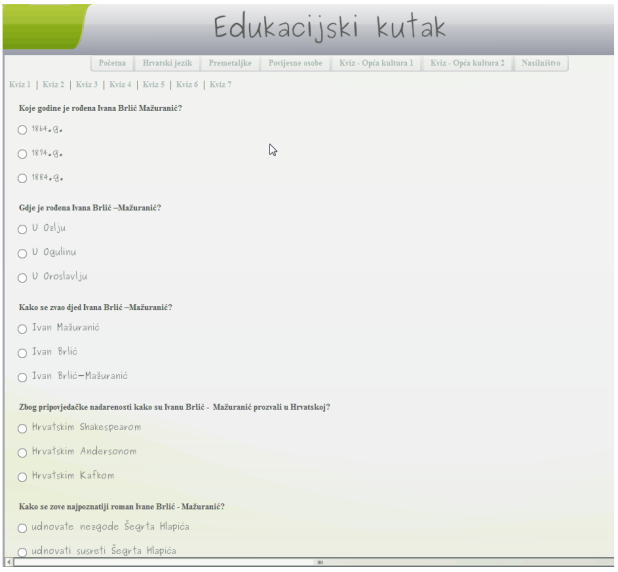

Fig. 1 Quiz on Croatian language designed with Purisa handwritten font.

For this task they used Adobe Flex skin Aeon, since Flex proved to be a highly productive, free, open source framework for building expressive mobile, web, and desktop applications.

The nature of the task (conversion of the pupils' creative assignments into e-activities) required the implementation of a Unicode friendly Purisa handwritten font, since the whole content was in Croatian (Fig. 1).

The application consists of a window with a title bar that was expanded to fit the project name. Flex grouping and navigation components were used to layout the structure.

The navigation links to the specific subpages of the project, each of which represents the specific e-activity: start page, seven quizzes on the Croatian language and literature (covering questions on mandatory reading in elementary school, history of the Croatian language and literary terms), anagrams, notable historical people, two quizzes on etiquette and general culture and an advice list on how to reduce and prevent bullying situations and violence in school (Fig. 2, Fig. 3, Fig. 4).

They also added additional effects to the components: the quiz questions and answers lock and turn grey when the pupil selects an answer. If selected correctly, the chosen answer turns green, if incorrectly - it turns red.

Pupils usually prefer multiple choice quizzes (see Fig. 1), since they find them easier then open type questions. They often think that they can recognize the correct answer when they see it, while formulating a correct and complete answer from memory is judged as more difficult. However, being skilled information science students and future teachers, our students formulated such options of a multiple choice questions so that pupils really needed to show the mastery of the subject in order to select the only 100% correct and complete answer.

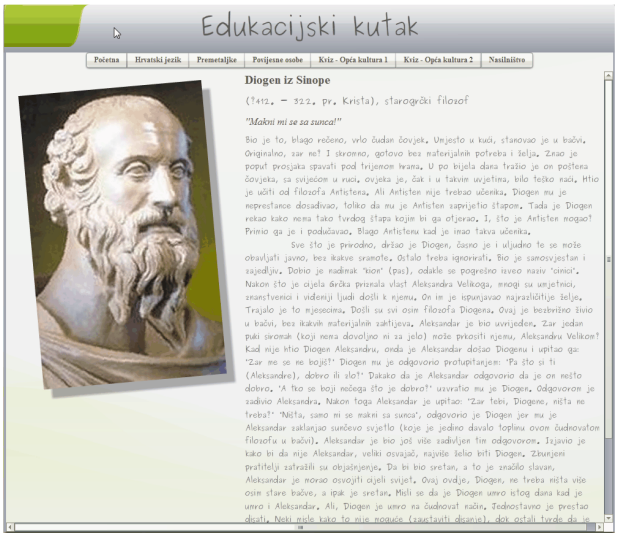

Fig. 2 Example of e-activity on notable historical people.

Fig. 3 Bullying prevetion advice list.

Through these design activities, our students had chance to unify their knowledge in e-learning, programming and informatics and to turn it into hands-on experience that will satisfy at least one community need.

They also had the opportunity to enhance their communications skills and their ability to elicit and critically assess project requirements. Finally, they had to face a challenge of developing a corner in such a way that a non-technical user could quickly and easily update it.

Such a project can be developed at any school, for any subject, with different types of questions. Online quizzes (such as the one shown in Fig 1. or Fig 4.) can consist of both objective types of questions (e.g. true-false, matching, multiple choice, fill-in-the-blank, numeric response, etc.) and subjective types of questions, such as short answer or essay.

One of the main benefits of the online exam is the immediate availability of the results. Physical presence at a given location is not necessary, it is economical (there is no need for printing and copying materials), it can be designed with the use of multimedia, which increases the attention and the motivation of the user and exam can be given to pupils as extensive training even for subjects that are hardly to have the actual examination conducted in an online environment.

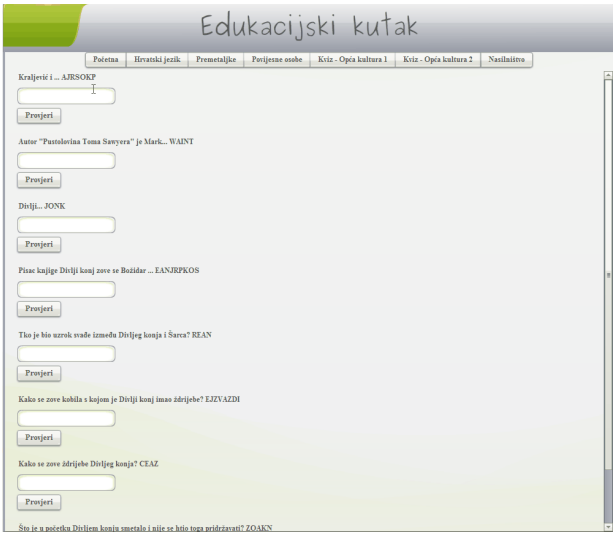

Fig. 4 Example of e-activity using anagrams for Croatian language learning.

E. Expected Results

Our basic aim was to make our students use academic knowledge and skills acquired through their study in a real-life setting and to enrich what they learned in the classroom by extending their learning beyond the classroom into the community through collaboration with a community partner - elementary school.

Our students learned theoretical concepts for five years and applied them to the imaginary or simulated circumstances during their study, but rarely managed to apply the acquired knowledge to the real world. In this project they had time to rethink and implement some ideas they never had the opportunity to transform into "hands-on" experience and observe the results. We believe that such placement in real (vs. theoretical) learning situations could increase confidence and self-esteem our students need once they enter the labor market.

This project can also serve them as an excellent job reference and an indication of their creativity and abilities to engage intellectually, emotionally and socially.

Our second goal was to promote community action and social change, helping the elementary school teachers to present pupils with greater learning opportunities in an interesting and challenging way.

Pupils could use this corner to complete homework assignments and to engage in learning through a set of age-appropriate e-activities selected by their teachers. For example, the pupils can reinforce their understanding of the seven Croatian grammatical cases through e-activities in this educational corner.

We expected that the implementation of the educational corner would result in pupils visiting the school's webpage more frequently and using it for e-learning as well as for informing themselves of daily school news.

The pupils' parents could also access the educational corner of the school to use the e-activities to help their children with homework assignments and to become more connected to the classroom activities and to the education of their children.

Our third goal was to stimulate the school teachers to adapt and appreciate the importance of communication with pupils in an e-environment. Such a project might encourage teachers to transform their educational materials into e-learning materials and thus achieve better collaboration with pupils in online settings.

Finally, one of the outcomes that had not been explicitly stated in our list of objectives was the increased tolerance and patience, as well as the flexibility of our students to work in a human service setting.

F. Project Implementation

The project implementation activities provided the context for our students to gain implementation skills and helped the partner understand the challenges of implementing technology on the school's web server.

The existing school site was made in static HTML. Since the school's technical requirements weren't specified aside that the application should be browser based, our students settled for a static application that uses XML files as a data source instead of the server side programming. They made the application entirely in Flash since Flash player had strong market penetration and the tools were freely available (compiler and Software Development Kit). The application had its data pulled from static XML files on the server and the processing of quizzes was entirely in Action Script [1], the scripting language of Flash.

Each group member who was assigned to prepare the materials for the page made their XML files with the preferred text editors. The only requirement was a UTF-8 code page. Together with image files, the assets were ready to get their data pulled into the application. The XML files were created from the hand-written materials obtained from the school. One

portion was used for constructing quizzes and the other for displaying information about historical persons and preventing bullying situations / violence in school.

Having the application operational, the idea was to get the data while loading the Flash movie. The instance event "initialize" was used to get the data loaded into the application. They also used "creationComplete" and "show" events for additional control. After the data gets loaded, the application is shown to the user. Upon navigating, the application is presenting data almost immediately, the sole exception being the images which get loaded upon request. The quizzes had to be split to even segments and a loop was used to put the nodes on the page. Since the counter remembers the position, it was used to move through the data.

Furthermore, the correct answers were stored in the variable whose value is shown alongside the length of the entire quiz giving the results upon completion.

Anagrams had characters of words randomized to create a puzzle. The answer was made case insensitive in order to be more appropriate for the young users. Finally, the poll (created at the very end of the project) was made with PHP, since the necessary information from the community partner regarding the server that is hosting the website was received very late in the project.

V. Discussion

The purpose of our study is to explore the benefits and challenges of using service e-Learning to develop an educational web corner for the elementary school as community partner.

Our findings demonstrate important benefits to the key stakeholders involved in the above described project. However, we also found that there are social and technological challenges of such projects aimed at solving contemporary issues of the local community.

The project's context was a collaborative development of an educational corner by the group of information science students and elementary school teachers as community partners. The project was supervised by the faculty who was teaching the course on service learning in Information Sciences (the first author of this paper).

The data collection methods for this study were: the review of project documentation, the online evaluation form completed by each student in the project team and by and the community partner representative (school principal), the students' background online survey and the students' personal reflections e-journals on the perceptions of the service e-Learning experiences.

A. Benefits to Students

The analysis of the data brought us to the conclusion that service e-Learning offers students a unique opportunity for recognizing the complexity of the academic knowledge and integration of that knowledge with experience.

When they finish their studies, many of our information sciences students end up teaching informatics in elementary or secondary school, but the majority of them has no experience in preparing curriculum-based activities for elementary school pupils. They usually complete their internship in either for-profit or non-profit organizations, lacking hands-on experience that could enhance their understanding of issues in elementary school teaching.

This project required our students to apply ICT knowledge to address complex situation, to manage a real-life educational project, but also to manage their relationships with clients in a real school setting. Furthermore, the commitment of students to this project made it possible to satisfy the following student expectations: teamwork, fieldwork and work on student's skills, competences and practical implications of gained knowledge.

At the end of the project they showed enhanced communication, interpersonal and project management skills they developed through extensive communication with a technologically challenged community partner.

Finally, they learned to address the complexity and uncertainty of real-life technology implementation issues, to collaborate with a technologically challenged community partner, to develop skills to work effectively in diverse group settings and to develop capacity for higher order thinking that enhances problem solving.

Students found the service e-learning effective, because (according to their online evaluations) it increases their awareness of the world and their personal values and facilitates their engagement in the local community [11, 16].

They also gained a substantial understanding on how teaching informatics in school looks like. Working with teachers, students gained the ability to adapt to their feedback and learned the importance of listening to their voice and to be opened to the ideas of others. They realized that they have to collaborate with school teachers to select strategies that could increase the popularity of e-activities among pupils.

Therefore, we believe that this project makes only the first step towards the collaborative design and implementation of the new educational environment in which pupils can use and further develop their IT skills in a productive and satisfying way.

Finally, apart from the real-world experience and strengthened portfolio, this project gave our students the opportunity to make real decisions, to engage their knowledge and skills and to use them to do something that has impact on others beyond themselves. They gained insight into their strengths and weaknesses and learned more about each other as well.

B. Benefits to Community Partner

Due to the rapid development and advancements in ICT, students no longer rely on teachers as the main source of knowledge. Thus, the role of teachers is multi-faceted and teachers should enhance their professional abilities to provide students with more technology-supported learning opportunities. Being prepared to use technology and knowing how that technology can support student learning must become integral part of every teacher's professional repertoire [14].

Our community partner (elementary school teachers) donated time to student activities and provided them with the additional learning opportunities. In return, they gained free

solution and expertise from our students and benefited from valuable human capital (students). They received a fully-functional, maintainable educational web corner to enhance their curriculum-based activities and motivation to adopt new technology in their work setting.

Also, the community partner expressed interest in future collaboration with our institution and our students, establishing a long term bond with our Faculty.

This project provided the elementary school teachers with a new way for curriculum enhancement and contributed to a social change in the way new technology could be used in primary education.

We also proved that technology can induce changes in the way education is provided [15].

Finally, the end users of this educational corner - elementary school pupils gained opportunities to extend their learning beyond the traditional school day and choose for themselves whether and how they want to extend their learning through this educational corner.

Such a project could be attractive to all elementary school teachers searching for ways to incorporate the e-learning into classrooms on both a short-term and long-term basis, to address individual learning traits and spark learning excitement. One of the ways to do this is by providing pupils with online tests to prepare for hand-written tests [18], but also to adapt to the new conditions in the higher education institutions where the use of online exams, online courseware, tutorials and modular internet-based courses is rising dramatically.

C. Benefits to Faculty and University

Since this was the first university service e-Learning project with elementary school partners, it was quite challenging for us to find an institution willing to participate in a project where our students serve as professionals in decision-making process of planning, design, implementation and project evaluation.

But, once the partner was found and project started, we observed the following benefits for us: taking on new roles, enhanced teaching as we actively mentored students, seeing students excited and effectively grasping the curriculum, building richer and longer lasting connections with students, learning from and about our students and seeing greater student involvement in discussions and the relevance of the subject.

Apart from our own benefit, we believe that such service e-learning projects give us the power to position our universities as service branded, increase our credibility and become increasingly networked and connected.

In times when university budgets are tightening, the implementation of service learning offers our university chance to contribute to the community and enhance university significance to the community. Such a university takes care of its students and their learning experiences. It provides the opportunity for each student to engage, making the SL experience possible.

VI. Challenges and Successes

Our findings show that service e-Learning promotes student learning and facilitates the development of an educational corner for the institution of primary education.

In spite of these benefits, there are challenges of using this strategy that can be categorized into three types – organizational, communicational and technological.

The organizational challenge refers to student team management, interpersonal skills and the distribution of the group assignments. The project demanded a considerable amount of time from the student, the community partner, and the faculty member.

But, although students were busy with other courses, some of the five team members devoted themselves to the project and joint work, while some found it extremely difficult to fit in with the rest of the group. The deadlines specified by the faculty member were not always respected and it was hard to organize face to face meetings with all the team members present. Nevertheless, the entire communication was successfully handled via email and e-discussions.

Our students also encountered communicational problems with the community partner as school was not able to devote enough time to collaborate on the project and to give them relevant support and feedback. Furthermore, we noticed a communication gap between our technically oriented information science students and technically challenged school staff. Collaborating with a real client and meeting the tight schedule of the project were the most challenging tasks for our students.

Regarding the technological challenges, the most difficult were the lack of access to the school's web server to test the educational corner and the lack of the technical support from the school staff. The school's policies on the use of and access to the server side technology on the hosting machine constrained the students' ability to upload the necessary files.
Still, upon the completion of the project, we showed that our students were able to work in a professional and timely manner.

Considering the different learning preferences and the knowledge level of the teammates, our students had to cope with the existing limitations. They succeeded in creativity and adaptability to work with technically challenged and quite busy partner and managed to create an interesting and useful educational corner.

VII. Conclusion and Future Work

The study's findings revealed that having information science students develop educational web corner for elementary school is a simple but effective service e-Learning project.

It also showed that such projects are time consuming, labor intensive and in need of farseeing faculty members able to manage the project throughout its lifetime.

Nevertheless, such projects can help meet information science study objectives for students, while better engaging different learning styles and benefiting elementary school teachers and pupils. This project brought many benefits. The

students had the opportunity to apply what they have learned during their study to "the real world" and further develop their IT skills, while the faculty member enriched classroom lectures with relevant real world experiences and the elementary school established better communication and interaction with both our students and their pupils.

Also, our students became more aware of the needs of their local community and became civically active in mutually beneficial ways.

The aim of this study was to investigate the benefits and challenges of using service e-Learning to develop an educational corner for a community partner.

Previous research on service learning showed that it has already begun to transform education and the lives of many of the students involved [2, 11].

At the end of the project, our students perceived themselves as partners in the learning process (not the objects of that process), able to make a difference in their local communities and we consider that a huge benefit.

We also consider the idea of designing an educational corner for the elementary school as a positive move in further pushing the boundaries of primary education, and as a step towards the development of the stronger relationship between our university and the local community.

The project aimed to address a specific community need while giving students an opportunity to learn and develop professional and interpersonal skills as well as critical thinking through active participation in structured IT activities. However, the limitation of our study is the use of a single case to explore these benefits and challenges.

In spite of that, we believe that this study can be relevant for a future research in revealing the impacts that multiple service e-Learning projects could have on a social change.

Finally, e-technology is evolving at a very rapid pace and the Croatian educational system is at a great disadvantage compared to some other countries. The elementary school's personnel still lacks sufficient motivation and will to develop e-learning activities for their pupils.

Therefore, this pilot project aimed primarily to help the primary education teachers to engage in e-activities for pupils through the educational web corner in order to enhance their curriculum-based activities and motivation to adopt new technology in their work setting.

The real results will be visible after some period of time, when both pupils and teachers learn to use this educational corner and realize that they are largely responsible for its future updates and development as well as being well informed of the ICT trends.

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