

PERFORM

Performing and Responsive Social Sciences

Social Science Research in Support of Digital Learning in Elementary Schools



Online courses are expected to be introduced in Serbian schools by September 2018, complementary to existing textbooks. Ahead of this, textbook publishers need to develop interactive materials for online use and adjust the existing textbooks to meet the new quality standards. Publishers, however, lack the expertise and experience to do so. Their cooperation with educational psychology experts is crucial for developing high quality digital learning materials for schools. PERFORM has supported a first ever scientific research project in Serbia on developing and testing e-learning materials for pupils, resulting in a high-quality digital learning materials.

Background

Digital learning is a relatively new concept in Serbia. Relevant online courses are expected to be introduced complementary to existing textbooks by September 2018. Digitalisation of the educational system is one of the priorities of the current Government, who has allocated 70 million EUR for this purpose, in its 2018 budget. The independent development of digital teaching content and its implementation in the process of learning and teaching is the final stage in the evolution of the education system.

Ahead of this, textbook publishers need to develop interactive materials for online use and adjust the existing textbooks to meet the new quality standards. However, publishers are lacking expertise and experience to do so. Their cooperation with educational psychology experts is crucial for developing high quality digital learning materials for schools. Psychologists are the ones to match these new educational standards with cognitive abilities of children of different ages.

Recognising the need for a better collaboration between the research and private sectors, PERFORM supported the Institute of Psychology to design a pilot project with “Creative Centre”, the leading publisher of children’s books in Serbia, on developing e-textbooks and courses (in Mathematics, Serbian language and Science) for elementary schools (2nd and 4th grade).

The Pilot Project

The first challenge faced by the pilot project was providing skilled editors for e-textbooks.



“We have difficulties in finding good editors for textbooks, as well as for books for kids. We do not have formal education courses that teach editing, i.e. that provide you with editorial skills. Usually some people end up in publishing and learn from there. In my opinion, there should be a separate course on editing and publishing textbooks”.

– Representative of the Creative Centre

To answer this industry need, the focus of the first phase of the pilot project was on developing skills and competences of graduate students of educational psychology for textbook editing and the development of e-learning courses. To achieve this, Institute of Psychology developed a new training module on textbook development, editing, and didactics of e-learning. For the first time, psychology students had a chance to undergo this type of training, using the new module.

In the second phase, the publishing company provided internship for three newly trained students, giving them a rare opportunity to put the newly acquired knowledge into practice. Their task was to adjust content of existing textbooks and convert them into a new, digital format. As a result, Creative Centre developed new e-textbooks and online courses, consulting closely with students and experts of the Institute of Psychology on the structural and functional quality of textbook components from the perspective of educational standards and cognitive capacities of children from different age groups.

The collaboration between the publishing company and the Institute was beneficial in one other aspect as well. Prior to publishing, the Institute of Psychology was able to test the newly developed e-textbooks and online courses in 5 elementary schools, providing valuable feedback to the publishing company on how children use and interact with the new material. Creative Centre was able to use this information and make final improvements and adjustments to the books and online courses, which will be introduced in schools for the first time in the autumn of 2018. The publishing company would have never been able to do this on its own as it lacks internal capacities and the necessary permissions to conduct testing in primary schools.



Finally, PERFORM organised a study visit for the representatives of the publishing company and the Institute to the Swiss publishing company Lehrmittelverlag Zürich. The study visit benefited Creative Centre in providing a better grasp of the process of designing e-learning materials and how to best market them, ensuring their competitiveness on the Serbian market. Students and researchers, on the other hand, got a valuable insight into workings of a publishing company and what it takes to get such a product to market, which will inform their own work on designing e-learning material in the future.



Representatives of the Institute of Psychology and Creative Centre visiting the Swiss publishing company

Impact

The success of this intervention shows the benefits that social science research can bring to the private sector. Without the collaboration with the Institute of Psychology, it would have been very difficult for the publishing company to produce high quality e-learning materials on its own, let alone test them in elementary schools.

This was the first scientific research project in Serbia on developing and testing e-learning materials for primary school children. It provided research evidence on achievements and experiences of children in using digital learning materials, providing valuable information to the publishing company. This has given the Creative Centre a significant market advantage, as it is now the first publishing company in Serbia that has developed e-learning courses and textbooks for schools. Following a successful internship, the Creative Centre decided to improve its capacities by hiring one of the student interns.



“The help we got from the graduate students during their internship in our company was much appreciated, especially their work on adjusting elements from traditional textbooks to a new digital format and harmonising them with children’ cognitive abilities. Thanks to this project, we have also built capacities of our staff, so that they can produce and offer e-learning materials within the timeframe set by the Ministry. This will give us a significant advantage over our competitors.”

- Representative of the Creative Centre

The intervention has also shown that the research institutes are starting to recognise the changing context in the research sector in Serbia and the growing need for producing applicable, innovative and development oriented knowledge.

The excellent cooperation established between the Institute of Psychology and Creative Centre, through the effective facilitation of PERFORM, serves as a good practice model to be considered by other research institutes and private companies.

Next steps

University departments are little aware about developments on the labour market and about new employment opportunities for graduates. The current curricula do not cover issues related to development and editing of textbooks and the design of e-learning courses. Therefore, the Institute of Psychology will advocate for the new training modules on textbook development, editing and didactics of e-learning to be formally adopted in the curricula of the Faculty of Philosophy (Department of Psychology), which should provide the graduate students with skills that are very much sought after in the emerging digital publishing industry.