

Development of Web Application for Inclusive Education

Zrinjka Stančić, University of Zagreb, Faculty of Education and Rehabilitation Sciences Department of Inclusive Education and Rehabilitation
 Klara Matejčić, University of Zagreb, Faculty of Education and Rehabilitation Sciences Education-Rehabilitation Support Unit, volunteer
 Đurđica Ivančić, School Nad lipom
 Lidija Mandić, University of Zagreb, Faculty of Graphic Art



Education

Following the modern changes in the world, in Croatia there is a tendency to achieve collaboration, to achieve inclusive education of students with disabilities and their peers with typical development (Stančić, Matejčić, 2014). Inclusive schooling is more than a method or strategy, it is a way of life that is tied directly to the value system that values diversity. Inclusive education is a practical education approach which strives to respond to individual needs, and is intended to assure equal access for all students with disabilities to individualized education programme (IEP) offered in regular classroom (Ivančić, Stančić, 2006, 2010, Bunch, 2015).

The classroom teacher (CT) is the model for all students in the classroom (Stančić, Kiš-Glavaš, Igrić, 2002). However, the CT does not act alone. Supportive education collaborators (SEC) are needed to provide support as appropriate. Educational assistants (EA's) also are available in a support role (Stančić, Sekušak-Galešev, 2008; Igrić, Kobetić, Lisak, 2009; Bunch, 2015). Parents (PA) and the entire student group in the classroom should be a natural part of the support team (Stančić, Matejčić, 2014; Bunch, 2015). Inclusive education of students with disabilities is achieved by creating and implementing the IEP, which achieves maximization of individual achievement and inclusive progress of students. For the development of IEPs, it is necessary and important good communication, collaboration and team work between PA of students with disabilities, CT, SEC, EA's, and also students with disabilities.

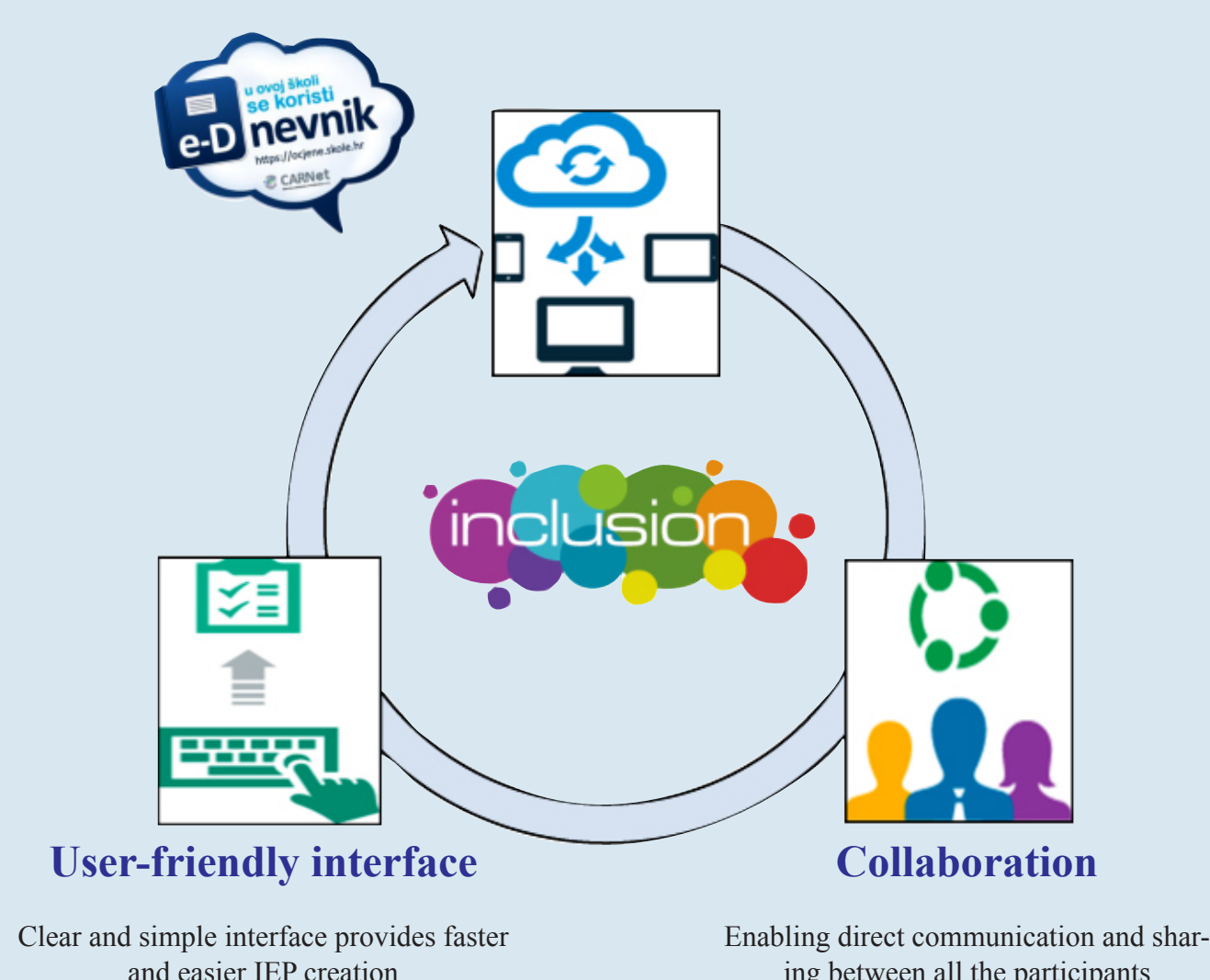
There is an obvious need for promoting and implementing new approaches achieved through the active involvement of all members of the IEP team.

Table 1. The distribution of classroom teachers (CT=76), supportive education collaborators (SEC=8) and parents (PA=25) in separate variables of "Questionnaire of opinions of teachers, school experts and parents about the ways and possibilities of development and implementation of IEPs in working with students with disabilities" expressed in absolute values

SAMPLE	ITEMS	COMPLETELY DISAGREE	MOSTLY DISAGREE	NEUTRAL	MOSTLY AGREE	COMPLETELY AGREE
CT	4. In our school teachers timely develop and apply IEPs.	1	3	7	39	26
	13. Application of innovation, such as Internet application, should contribute to the timely development and implementation of IEPs.	2	2	18	27	27
	14. Application of innovation, such as Internet application, should contribute to the development of cooperation and support between teachers, supportive education collaborators and parents of student with disabilities	2	4	17	28	24
SEC	4. In our school teachers timely develop and apply IEPs.	0	0	3	5	0
	13. Application of innovation, such as Internet application, should contribute to the timely development and implementation of IEPs.	0	0	0	3	4
	14. Application of innovation, such as Internet application, should contribute to the development of cooperation and support between teachers, supportive education collaborators and parents of student with disabilities.	0	0	0	3	5
PA	4. In our school teachers timely develop and apply IEPs	2	2	7	8	6
	13. Application of innovation, such as Internet application, should contribute to the timely development and implementation of IEPs.	1	2	6	6	10
	14. Application of innovation, such as Internet application, should contribute to the development of cooperation and support between teachers, supportive education collaborators and parents of student with disabilities.	1	2	4	7	11

Online web application

Application is accessible anywhere, any-time, on all devices



Research

Aim of investigation

The study had two objectives:

1. get insight of opinions, expectations and satisfaction of CT, SEC and PA of students with disabilities on an IEPs,
2. to develop practical approach based on web IEPs application

The study was conducted in four elementary schools in Zagreb on a sample of 76 CT (14 men, 62 women), 8 SEC (4 education-rehabilitators, 1 psychologist, 2 pedagogist, 2 librarians), 25 PA (2 fathers and 23 mothers).

In the research was used "Questionnaire of opinions of teachers, school experts and parents about the ways and possibilities of development and implementation of IEPs in working with students with disabilities". The questionnaire was designed for research purposes (Matejčić, Stančić, 2014). For the purpose of our PRIDE innovation we extract three items (4, 13, 14) that most describe opinions of CT, SEC, PA.

Innovation

The use of technology in education in terms of improving the learning and teaching process is inevitable in today's educational system, and as such follows the guidelines of education in 21st century. In addition to development of digital content and tools for the use of ICT it is important their application not only in teaching, but also in the assessment, planning and monitoring the progress of students. In order to improve the development of IEPs and their availability to different subjects in the educational process (CT, SEC, PA, student with disabilities), web applications for tablet, smart phone and PC are designed (Kovačević, 2014).. Development of the web application for IEPs enables elementary and high school CT to make data entry update and monitoring of the pupils' achievement. CT creates, with support of SEC, IEPs for each student. IEPs form contains general data about the school and students, curriculum (plan/program) of the support given during educational process and the monitoring of the achievement in certain month of the school year. On the other hand, IEPs monthly form gives the student and PA possibility of having insight in the content (aims) in timely manner and offers possibility of direct communication with the CT.

Functionality of the application

(Stančić, Matejčić, Mandić, Vuger, Kraljević, 2014)

- ❖ User account are withdrawn from the CARNet, instead of the registration
- ❖ There are three levels of user roles: CT, SEC, TAassistant, PA
 - ❖ CT = entry + review + comments
 - ❖ SEC,TA = entry + review + comments
 - ❖ PA, student = entry + review
- ❖ The CT choose course from the predefined list of courses
- ❖ List of students is grouped according to courses (for example: Ivan Ivanic, Tea Babić)
- ❖ IEP is updated on a monthly bases, continuously
- ❖ Data input of the monitoring of the achievement of the student is realized at the end of the half-term (December and June)
- ❖ IEP is interactive web form that gives possibility of text data entry, choice of predefined taxonomies, evaluation of the activities with the help of radio button
- ❖ The entry of the comments of the IEP is provided
- ❖ The completed IEP form can be printed
- ❖ The whole application has to be adjustable for partially sighted (adjustable font size and contrast)

Application is responsive to different devices