EARLY CODE NEWSLETTER

PROJECT NO:2018-1-TR01-KA203-058832

INTRODUCING EARLYCODE

EARLYCODE - "*Developing teaching materials for preschool teaching undergraduates on computational thinking and introduction to coding*" is an European project having the main aim of fostering developing computational and algorithmic thinking in early years.

Goals and objectives

The main goal of the project is raising the preschool teachers' skills and training opportunities to make pupils keen on future's world. The project will build capacity within the education sector to provide high quality computatinal thinking teaching at preschool level in the partner countries. The project will specifically target higher education students studying to become preschool teachers.

Intellectual outputs

Within the project will be produced: a curricullum, teaching materials and linked games for undergraduates to practice with in early childhood settings and teach them how to produce their own materials for children. In addition, a lecturer's manual will be prepared to be used in the training activity.

Training activities

The specific objective of the project will be up-skilling preschool teaching undergraduates on Introduction to Coding Education and make them well equipped to inspire and teach children computational thinking principals utilising effective, innovative and engaging methods.

In the scope of training activity, 40 hours (5 days) intensive programme will be applied to undergraduates from each partner country (5 undergraduates from each partner country and 10 from Italy).

Read more on: www.earlycoders.org

EDITORIAL

Asoc.prof. Erhan Güneş

Dear readers,

We are happy to present you the first issue of EARLYCODE newsletter. There will be three newsletters during this project. In this issue, you can find information about our project, related activities and intellectual outputs.

This project had a very promising start with this project, and already first deliverables are presented here and are ready for dissemination.

We invite you to meet our team and identify focal point for each partner country, for information about the status of the project, activities conducted and support in using intellectual outputs.

We wish you good reading and invite you to contact us if you want to receive more news about the project!

SPECIAL FOCUS ON COMPUTATIONAL THINKING

Computational thinking engages components related to the analysis of the problem situation and the way the subjects organise and model the problem (problem analysis axis), honing formal systems with the use of a certain programming language and the integration of physical systems (systems axis) and the devices of an intermediate solution, its evaluation and improvement (creation axis).

Computational thinking components (Romero, Lepage, & Lille, 2017)

When learners are only engaged in coding they develop knowledge related to the systems, but they do not engage in the full process of analysis, modeling and iterative creation of a solution (Romero, Lepage, & Lille, 2017).

Computational thinking and digital literacy

Digital competence involves the confident and critical use of electronic media for work, leisure and communication. These competencies are related to logical and critical thinking, high-level information management skills, and well-developed communication skills (Ranieri, 2009). Digital competence is one of the eight key competences for lifelong learning developed by the European Commission (European Commission, 2005).

The European Digital Competence Framework (DigComp) offers a matrix to understand the essential competencies need for all citizens to adapt in the digital world.

Understanding where one is located on the DigComp index can provide guidance to improve citizen's digital competence and to achieve goals related to work, employability, learning, leisure and participation in society. (European Commission, 2019; European Union, 2016). It describes 21 learning outcomes in 5 areas: 1) Information and data literacy; 2) Communication and collaboration; 3) Digital content creation; 4) Safety; 5) Problem-solving. (read more here: https://ces.to/nNNBhJ) The use of this framework means that identifying citizens with a basic level of digital competence means that citizens should have competencies in all areas of the DigComp framework.

Beyond the DigComp framework, there is also an European Framework for the Digital Competence of Educators (DigCompEdu). This framework gives guidance to educators and teachers on what it means to be digitally competent. It describes on six areas of core digital competencies for educators, professional engagement, digital resources, teaching and learning, assessment, empowering learners and facilitating learner's digital competencies.
(https://ec.europa.eu/jrc/digcompedu)

Read more www.earlycoders.org

CURRICULUM FOR PRESCHOOL TEACHING UNDERGRADUATES

The curriculum for preschool teaching undergraduates is the first intellectual output of the project, being developed for the course "*Teaching Computational Thinking and Coding for Pre-school Education*". Based on the curricullum, in the next stages of the project, adequate educational resources and teaching materials will be developed, and a manual will result. More, the training session for undergraduates, planned in March 2020, in Genoa, will be designed based on this curricullum, testing, in the same time its effectiveness.

After the implementation, the curricullum will be made available for interested universities to be used in courses, and adapted, can be included in the core courses of preschool teaching. It will be adapted and translated in national languages of the consortium, ensuring transferability.

It aims to develop the competences in Preschool Teaching Students to raise technology builders of future. They will learn how to: motivate preschool children to learn algorithmic and computational thinking; to illustrate basic algorithms, sequences, loops, conditionals; make Coding subject funny and engaging for children; teach children to make meaningful collaboration with others; develop critical thinking, decision making and problem solving skills; where to find and how to develop engaging (ER) educational robotics at preschool level; apply code teaching games without using computers; find more information sources.

The curricullum is structured in sections, with course objectives, length, target audience, teaching and evaluation strategies and topics. The content is focused on computational thinking, with basic theory and practical aspects to foster children very basic computational thinking skills.

NEXT STEPS

Needs analisys report

This report will offer a clear picture on the undergraduates training needs. It will also serve many researchers by providing reliable data for their further studies in the field.

The report is build on the results of the needs analisys questionnaire. In order to obtain valid and consistent data, the questionnaire will be filled in by at least 40 students in each partner country.

This will be made availible online, translated and distributed by each partner. After the data are gathered and analysed, we will prepare a report and an infographic giving statistical results of the need analysis.

Dissemination plan

Within the project, a dissemination plan will be prepared in order to ensure the disemination of the project results. A database with contacts and interested institution will be created. This list will contain organizations and institutions at local/regional/national/EU level.

If you are interested in project results, you can send us contact details at:
earlycoderseu@gmail.com

NEXT INTELLECTUAL OUTPUTS

EDUCATIONAL RESOURCES FOR FOSTERING COMPUTATIONAL THINKING AND INTRODUCTION TO CODING.

The training resources address all preschool teaching undergraduates who will teach preschool children all over the world. The training resources will be designed to facilitate information transfer during the course delivery.

MANUAL FOR THE COMPUTATIONAL THINKING AND INTRODUCTION TO CODING

The training manual will guide lecturers to implement the developed curriculum. This manual will provide core teaching strategies for computational thinking along with links to relevant educational resources.

EARLY CODE

PROJECT MEETINGS

Kırşehir, Turkey
Kick of meeting, 29th-30 Janyary 2019

The EARLYCODE kick of meeting took place in the Ahi Evran University. All partners had attending representatives. The meeting enabled us to establish the detailed work plan, as well as all the activities to be conducted within the project. Moreover, all relevant administrative issues were clarified.

Bucharest, Romania
2nd project meeting, 9-10th May 2019

The EARLYCODE second meeting took place in the Botanical Graden of the University of Bucharest premises. During two days meeting discussions all aspects of project implementation have been discussed and adopted. In the first day the discussion was focused on the curricullum development and the questionnaire for undergraduates. Also, the innitial project activities have been discussed and reviewed in order to reach project's objectives. In the second day all a training session for robotics was organized.

Next project meeting

The next EARLYCODE project meeting will be held in Riga, on September 17-19th, 2019.
The consortium will discuss the further steps of the project, development of intellectual outputs and prepare the forthcoming training scheduled in Genoa, Italy in 2020.

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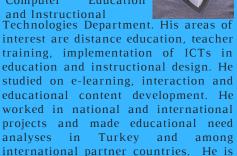
MEET OUR TEAM

Erhan GÜNEŞ is PhD graduate on Education Technology. He is Assoc. Prof. at Ahi Evran University, Computer Education and Instructional Technology Department. His areas of interest are: distance education, teacher training, implementation of ICTs in education and instructional design. He participated in many courses about project management and ICT in education. He studied on e-learning, interaction and educational content development. He has many scientific publications and participated in various projects regarding technology and education.

Mutlu ÜSTÜNDAĞ has PhD in Education Technology. He is currently working in Gazi University, Computer Education and Instructional Technologies Department. His areas of interest are distance education, teacher training, implementation of ICTs in education and instructional design. He studied on e-learning, interaction and educational content development. He worked in national and international projects and made educational need analyses in Turkey and among international partner countries. He is a member of Turkish National Commission for UNESCO.

Mary O'Reilly is the International Professional Lead for EARLY YEARS and has over 27 years' experience providing EARLY YEARS Specialist services, training and mentoring to early years educators. Her involvement in a number of International projects has reflected the Northern Ireland experience and enhanced mutual learning and sharing opportunities. Her work focuses on identifying and meeting the needs of early years services, promoting quality in early years settings and improving outcomes for young children in partnership with other agencies.