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Tipologia dell'ente/Kind of organization: SME Nome dell'ente che lo ha realizzato/Organization-institute presenting the project: Smarted srl Regione/Region: Campania Paese/ Country: Italia Città/City: Napoli Descrizione del progetto/Describe the project : Once upon a time there was a big arrow, blue-painte

was in a shop window with other toys. And... during t live of its own to reach the children that needed each was the affinity with each worthy child. This is not Dis tale (Blue Arrow/La Freccia Azzurra) written by Gianr in 1996 by an European coproduction between Italy, ARROW project borrows the name starting from the to be in memory of Gianni Rodari, in the centenary of author of children literature famous all over the Europ biennial Hans Christian Andersen Medal in 1970 for project works on the metaphors that starts from the F improvement of the teacher education of pre-primary institutions Initial Teacher Education (ITE) and Contin by providing new tools and new methodologies. Duri sector exposed its fragilities and its adaptability. Euro provide sufficient and better-quality education and ra pandemic has come suddenly and brought several in million people who are directly related to education s affected (Gabriel, 2020) and many of them have been face (f2f) education into digital one. The new approace lockdowns have a huge impact on the education in k particular in the range of age 4-7, where children nee manipulating things without writing and reading skills disruptions caused by COVID-19 to everyday life me worldwide have missed out on early childhood educa is problematic because "they thus missed a stimulating opportunities". Declaratory learning, based on tradition exported in distance learning: MOOCs and videocon the case of children that are not able to read and write, the procedural learning that refers to experience and laboratorial activities involving the senses is fundamental and is needed a rethinking when schools close and lessons are in front on a screen. Theis rethink should start from the new competences for the teachers, through the teacher education in HEIs. The BLUE ARROW project is funded by an Erasmus+ Project, a Strategic Partnership Key Action 2 in Higher Education, Grant Agreement 2020-1-IT02-KA226-HE-095644. The BLUE ARROW project aims to create an innovative pedagogical approach for teacher education that involve the development of a MOOC and the implementation of these practices in higher education courses for teacher education for the new challenge of distance learning: - including new ways to teach applying digital creativity, - proposing user-friendly tools and secure platforms which respect privacy and ethical standards, - developing new innovative educational methods for pre-primary and primary educators applying Tangible User Interfaces. A synergic and complementary Partnership was built: BLUE ARROW includes 3 pedagogical HEIs (Università di Foggia (Leader), University of Barcelona and Reald University College) in teacher education (Initial Teacher Training and Continous Professional Development); a SME expert in TEL ground-breaking devices (Smarted srl that submit in this call) and an association of HEIs in distance learning (EADTU). Four countries are represented (Italy, Spain, Netherland and Albania) BLUE ARROW will produce the following outcomes: 1. A pedagogical framework in the field of teacher education aimed at the improvement of competences of pre-primary and primary teachers about distance teaching, also a response on COVID-19 situation. 2. A MOOC with lessons held by teacher educators in HEIs (O2), with an International presentation . 3. An ICT platform that will be embed in the MOOC, based on Tangible User Interface paradigm, that allows the management of laboratory activities in teaching for children between 4 and 7 years old, including a multisensory approach based on exercises co-created with teacher educators and other learning experts. 4. A report that will show the results and the impact of the BLUE ARROW methodology and technology and the guideline for a reapplication in other contexts. 5. A series of co-creation events in 4 countries with experts where they will evaluate and propose new laboratory exercises with TUIs for distance teaching and valuate the implementation 6. An annual international conference on distance and blended learning for pre-primary and primary teachers (E10). OUR INNOVATION In particular in this call for GJC we present the third point: the multisensory exercises with tangible objects and connected with the digital interfaces. Each kit that will be created will include: 1. An NFC antenna, it is a hardware, namely an active board (an NFC antenna covered by plexiglass and connected via USB to PC or tablet) that can "recognize" tangible materials (tagged with NFC sensors) to allow the digital environment (stories interface on tablet or computer) to give feedback. (see that prototype delivered by SM for children education https://youtu.be/58RyzCDUsdU and Annex I). 2. A set of specific tangible objects for the kit based on the exercises delivered and co-created with teacher educators and teachers. All exercises will exploit Tangible User Interfaces (TUIs) allows the children (and teachers) to interact with tangible and multisensorial objects, then physical objects could be recognized by a digital component. The objects will be based on well known psychopedagogical practices as logic blocks, number cards, tangram, teaching tiles, everyday objects. The tangible objects could also foster a multisensory approach, in some previous experiences (Ponticorvo et al. 2017 see Annex II). 3. A software empowered with adaptive artificial tutors (IA competent) that will orchestrate the interaction between the learner and the platform, providing feedbacks, corrections, suggestions, and proposals of some in-depth study. It has a high degree of transferability because each teacher or child could use independently, and the difficulty of the exercises will be personalized and adapted on the learner's previous performance. The Consortium estimate that the BLUE ARROW Kit will have a relevant impact in the teacher education, providing a new solution for laboratorial activities in children education. This is a new approach for contrasting the consequences of

COVID-19 lockdowns or the needs to sustain a blended or a distance learning. In addition, the provided solution has an excellent grade of inclusion because promote a learning/teaching based also to a sensory approach that is tailored for children with special needs (deafblind, sensory impairment, autism spectrum disorder, etc.)

Link al video di presentazione/Link to the presentation video: https://youtu.be/0DYZd_XvgqM Categoria del progetto/Project category : Educazione fino a 10 anni/Up to 10 years

Uso delle tecnologie / Use of technologies: An innovation follows in the TUIs application for inclusion between the virtual environment of most learning tools ar real objects. The hybrid approach allows an interaction b interface (PC, tablet, smartphone), through the mediation sensors, thus involving all the senses, including touch, he human ability to grasp and manipulate physical objects a TUI tool is composed of a board that can "recognize" tan sensors) to allow the digital environment to give feedbacl https://youtu.be/58RyzCDUsdU). Physical objects sensor of different materials, animals, jars with odors). These ob interface; allowing an experiential learning approach for t has extensive experience in the development and application prize as the best "People Centered Smart Learning Ecos conference https://video.ilmattino.it/innovazione/lavagna_ in 2017. BLUE ARROW will exploit the hardware compor a kit of objects aimed at a laboratory approach. Each kit t NFC antenna, it is a hardware, namely an active board (a plexiglass and connected via USB to PC or tablet) that ca (tagged with NFC sensors) to allow the digital environme computer) to give feedback. (see that prototype delivered https://youtu.be/58RyzCDUsdU and Annex I). 2. A set of based on the exercises delivered and co-created with tea exercises will exploit Tangible User Interfaces (TUIs) allo interact with tangible and multisensorial objects, then phy a digital component. The objects will be based on well kn as logic blocks, number cards, tangram, teaching tiles, ev could also foster a multisensory approach, in some previ 2017 see Annex II). 3. A software empowered with adapt will orchestrate the interaction between the learner and the corrections, suggestions, and proposals of some in-depth transferability because each teacher or child could use in exercises will be personalized and adapted on the learne

Indicare gli elementi di innovazione del progetto / What are the innovative aspects of The innovat the project?:

between the real objects. interface (Pe sensors, thu human abilit

Con quanti utenti interagisce il progetto?/How many users does the project interact The project a with? : running but w

Di quali mezzi o canali si avvale il progetto?/Which media or channels does the project The BLUE use?: Action 2 in

Il progetto è già stato replicato? /Has the project already been replicated? : No

Quali sono le aspettative future?/What are future expectations?: The target groups of the project ar

teachers. The teacher educators represent the main target of the project, because the BLUE ARROW project aims to innovate the teacher education programme. The secondary and consequent target groups are the teachers that will be involved in project activities. The BLUE ARROW project is based on the active participation of end users, that will participate having multiple roles: • Teacher educators o Co-creators of OERs. o Evaluators and contributors of development and selection of the BLUE ARROW kit. • Teachers o MOOC's learners o Users of the BLUE ARROW kit. o Evaluators of the BLUE ARROW ki

Durata progetto/project duration: 30 months

Risultati ottenuti/Results: On going project started on March 2021.

Cognome del coordinatore del progetto/project coordinator surname : Di Fuccio

Nome del coordinatore del progetto/project coordinator name : Raffaele

Il Progetto ha contribuito ad affrontare la pandemia da Covid-19? / Has the project The Consortiur helped facing the emergency of Covid-19? : education, prov

new approach sustain a blend grade of inclus that is tailored

spectrum disor

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