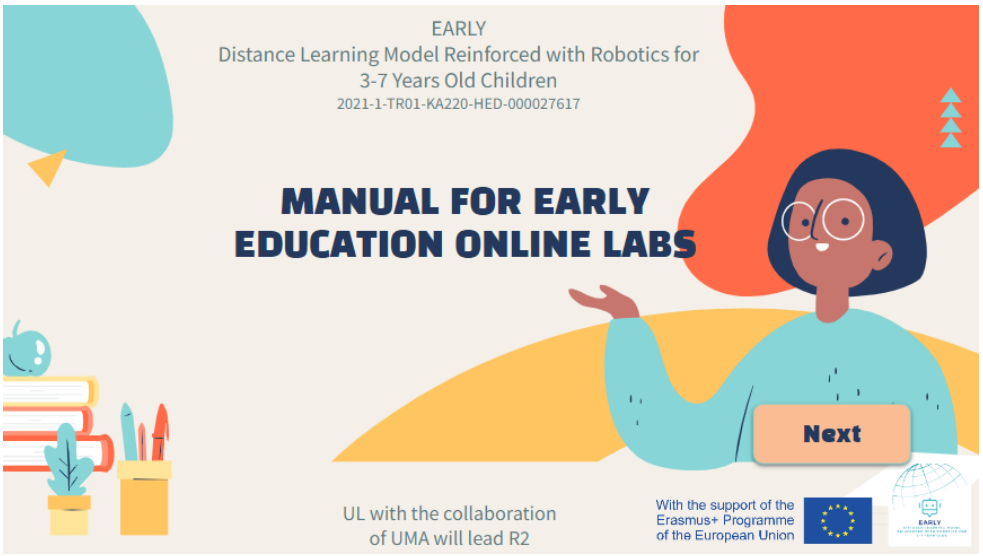
ISSUE 3
1.11.2023

EARLY

Distance Learning Model Reinforced with Robotics for 3-7 Year Old Children



Welcome to **the third EARLY e-newsletter**. In this issue, we present the **curriculum and modules** of the EARLY project "Distance Learning Model Reinforced with Robotics for 3-7 Year Old Children". Also in this issue **we interview the project partners about their views on preschool education, distance learning and educational robotics**. Finally, this e-newsletter offers you the opportunity to **take a look at the interactive online handbook** also under development.

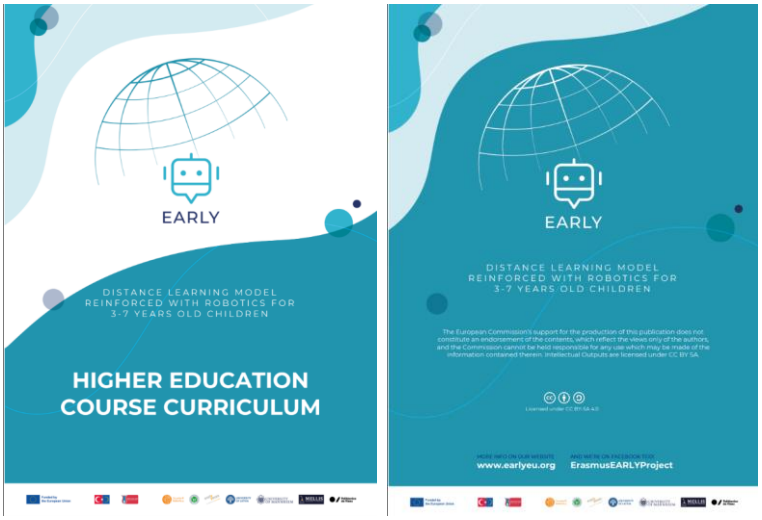
Funded by the European Union

This project has been funded with support from the European Commission. This publication / communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

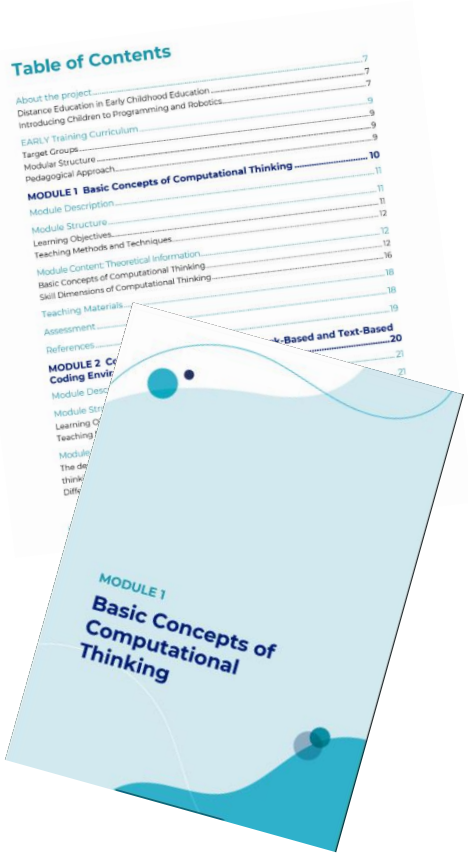
Funded by the European Union

CURRICULUM AND MODULES

The project has developed a higher education curriculum that addresses a number of topics related to the development of different skills in the preschool years, implicitly looking for new ways for children to collaborate and share regardless of physical distance (i.e. distance learning). The curriculum contains essential theoretical information in 5 modules, which bring together key information on various topics related to the preschool phase, distance learning and technology enhanced learning. The module titles can be found in the table below.



The curriculum also includes a 5-module course programme with lesson plans, handouts, presentations, a structured assessment system, etc., covering a range of topics. The lesson plans are suitable for preschool teachers/training teachers and parents/caregivers.



The curriculum contains 5 modules:

MODULE 1 - Basic Concepts of Computational Thinking

MODULE 2 - Computational Thinking with Block-Based and Text-Based Coding Environments

MODULE 3 - Fundamentals of Physical Programming and CT with Robotic Activities

MODULE 4 - Designing Activities and Learning through Distance Education

MODULE 5 - Building Partnerships for Learning

Funded by
the European Union

ASSOCIATE PARTNERS – info about their collaboration and an interview

The first newsletter of the Erasmus+ project EARLY "Distance learning model including robotics for 3-7 year old children" gave you the opportunity to get to know all the associated partners working together to achieve the objectives of the project. All the project partners are interested in innovative education and the responsible use of digital technologies in the learning process. The partners cooperate and implement a variety of national and European projects - however this project provides them with the opportunity to create an innovative approach to early childhood education using distance education supported by digital tools.

This newsletter is an opportunity to get to know the partners' involvement in this project and to explore their responses to various questions related to early childhood education, distance learning and robotics.

TURKEY - Kocaeli University (KOU)

General info about your collaboration.

Kocaeli University (KOU) Faculty of Education is a teacher training institution at the university level. In addition to pre-school and primary education, it also trains teachers to graduate level for secondary school education. At the Faculty of Education, prospective teachers undergo an education blended with pedagogy, content knowledge and technological knowledge and they graduate equipped with up-to-date knowledge.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

KOU Faculty of Education offers technology-integrated courses to pre-service teachers focusing on both the infrastructure of its classrooms equipped with technological tools and the instructors using these technological tools. In addition, during their undergraduate education, students take courses such as information and communication technologies and instructional technology (both compulsory).

They also have elective courses such as open and distance learning and material design & development. It should not be forgotten that there are also courses for technology integration on a branch basis.

Why do you think it is important to use technology in the learning process for young children?

Technology contributes at different stages in the teaching-learning process. For young children, the use of technology is especially important in terms of concretization.

Technology can motivate them to explore and learn new concepts and adapt content to suit each child's individual needs and abilities. It also can help children understand abstract concepts and reinforce their learning through different senses such as visual, hearing, movement, touching etc....It's important to note that while technology can be a valuable tool in early childhood education, it should be used in a balanced and age-appropriate manner. Careful selection of educational content and supervision by adults are essential to ensure that technology is used as a beneficial learning tool rather than as a passive distraction.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)

Our institution provides education at a higher education level. In Turkey, both the use of technology by teachers and the use of technology by their students has been increasing in recent years. The increased familiarity of parents, students, teachers, and institutional stakeholders with technology-based tools during the pandemic process has made a significant contribution to this.

Introducing technology-based tools to children at an early age with interesting / fun activities for learning objectives contributes positively to children's motivation and learning. It is common to use technology-based tools, especially those which focus on repetition and practice, to reveal and reinforce learning challenges.

In addition, plugged and unplugged activities within the scope of computational thinking have been popular in recent years. It is worth noting that educational robotics applications are another popular application area too.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?

Especially in private education institutions educational robotics are included. In fact, these activities, which started more for advertising and visibility purposes, have gained a dimension that aims to provide students with knowledge and skills supported by the dedication of teachers.

Here are some types of technologies and robotics kits that are being used or considered for use in Turkish preschools:

- Educational Apps
- Interactive Whiteboards
- Educational Software
- Educational Websites
- STEM Kits
- Coding Toys
- Digital Storytelling Tools
- Online Learning Platforms

Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

Distance education for the early years needs to be very well structured. Situations with and without parental support should be analysed and planned in advance. Activities should be planned to consider the attention/focusing characteristics of children in this age group. Training should also be planned to increase the theoretical and practical knowledge and skills of the teachers for distance education.

Distance learning can be challenging to implement effectively in preschool education due to the unique developmental needs of young children. However, there are situations where it may be necessary or possible to incorporate elements of distance learning for preschool-aged children. Benefits may be accessibility, flexibility, supplement learning, and individualized content. Situations or conditions which can make distance learning necessary may be a pandemic, health crisis, geographic isolation, parental preference and special needs. While distance learning can be challenging for preschool education due to the social and developmental needs of young children, it can be a valuable option in certain situations when implemented thoughtfully and with proper support structures in place. However, in-person interactions and hands-on experiences remain crucial for the holistic development of preschool-aged children, and distance learning should ideally complement, rather than replace, traditional preschool programs.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

Technology contributes positively to educational environments if it is used in a purposeful way, taking into account the learning objectives and within the scope of an instructional design.

Teachers need to consider the following questions when planning to use technology:

What is the contribution of the technology I use to the learning environment?

This contribution could be:

- saving time,
- contributing to the quality of students' learning,
- engaging / motivating students, etc.

The contribution of the technology planned to be used for the students or the teacher should be prioritized. Pre-service teachers should be aware of the concepts related to technology integration, such as tpack, which has been on the agenda in recent years. It is important that they are aware of the expectations of them as future teachers. To achieve this, they need to increase their knowledge and experience in terms of theory and practice.

Remember that technology should enhance the learning experience and support the holistic development of preschoolers. It should not replace the rich, hands-on, and social learning experiences that are fundamental to early childhood education. Keep the well-being and individual needs of each child at the forefront of your teaching practices when incorporating technology into the preschool classroom. Here are key points to keep in mind:

1.Balance is Key.

2.Developmentally Appropriate.

3.Purposeful Integration.

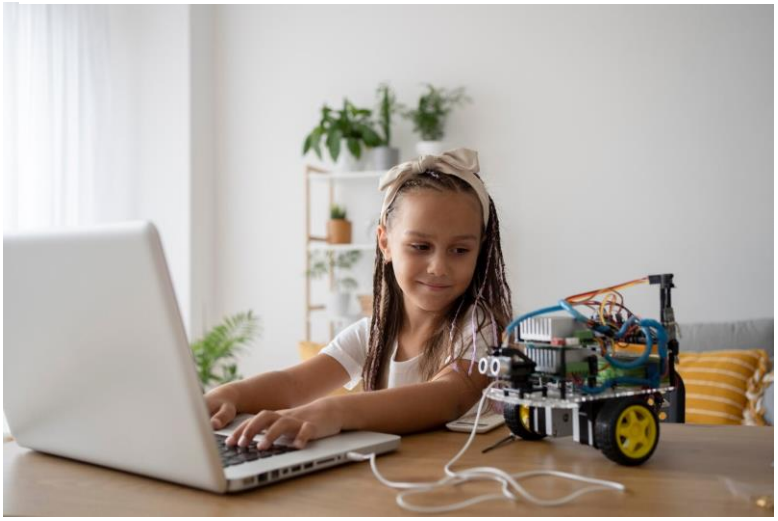
4. Active Engagement.

Funded by
the European Union

EARLY
DISTANCE LEARNING MODEL REINFORCED WITH ROBOTICS FOR 3-7 YEAR OLDS

ITALY – Scuola di Robotica (SDR)

Answered by Luca Gilardi
Researcher and trainer



General info about your collaboration.
Scuola di Robotica is a non-profit association founded in 2000 on the initiative of a group of robotics and human science scholars with the aim of promoting the conscious use of robotics and new technologies. We aim to reach students of all ages from early childhood and their teachers.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

We believe that technology can totally support learning, but I think that our main goal is that we do not focus directly on technology, that is not our objective. Instead, we use technology only as an instrument to convey ordinary and classic subjects, in a totally cross-disciplinary way.

Why do you think it is important to use technology in the learning process for young children?

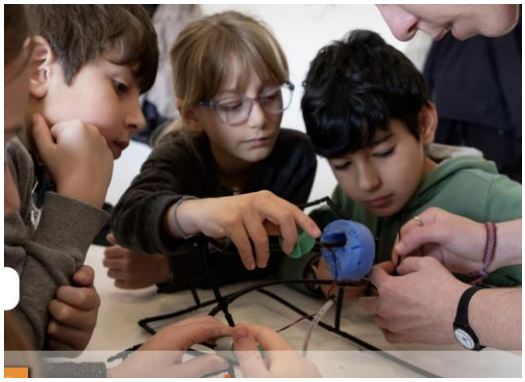
Technology is a tool, like books, paper, pencils and so on. Therefore, it can be used to have a wider approach and point of view in education. Furthermore, if you use a digital tool to teach something different - so as to teach curricular subjects - the use of that tool enables students to learn more than the actual classical subject by learning also how to use digital instruments. Moreover, usually technology is quite appealing to students, and this may help gain students' attention.

This will be useful for the future, since we live in an increasingly technological world, and we can be aware of our digital lives only if we understand technology.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)

In Scuola di Robotica we use a very wide range of digital tools to teach, especially educational robots. At the ECE level the most common ones that children really like are Bee/Blue Bot and mTiny.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?
Yes, especially Bee/Blue Bot, mTiny, cubetto or other similar robots. In ECE unplugged robotics is also widely used.



Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

If correctly adapted distance education may be used, and may be useful especially in case of school closures (i.e. lockdown, meteorological alert, …) or to reach students that cannot attend schools (i.e. if they are sick), also online resources can support learning for everyone. A lot of support must be given by the adult at home, to allow the activities to be correctly carried out, and families also need to own adequate technological tools and have the skills to connect with teachers.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

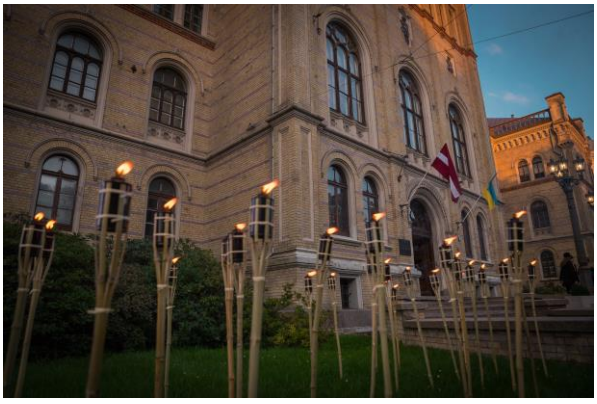
As stated before, we do not need to "teach technology", but to use it as a tool, to support our teaching.

LATVIA – University of Latvia (UL)

Answered by Ketlīna Tumase
Research assistant at the Scientific Institute of Pedagogy of the University of Latvia

General info about your collaboration.

University of Latvia (LU), located in the capital of Latvia, Riga, is one of the largest comprehensive research universities in the Baltic States. It has educational and research potential in the humanities, social sciences, and natural sciences. LU is the only higher education institution from Latvia, ranked in the QS Top Universities ranking. The degree of internationalisation of LU has been recognised as high in several rankings, such as QS Top Universities, Multi-rank, Interfax rankings.



UL offers study programmes at different levels - college level studies, bachelor level studies, master level studies, doctoral studies and residency.

The Faculty of Educational Psychology and Arts offers students, who want to become teachers, the opportunity to study at both - level 1 and bachelor level (later continuing their studies at a higher level).

In cooperation with other Latvian universities, the Faculty of Education and Psychology also runs the Teaching Workforce programme, which offers work-based pedagogical studies that help professionals in various fields to become teachers of general education subjects.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

The Faculty of Educational Psychology and Arts is optimally equipped with various technologies - virtual reality room, 3D printers, various robotics kits, etc. - which provide opportunities for students of pedagogy to get acquainted with the use of technologies, their integration in the teaching process, their role, and possibilities in education, both from theoretical and practical aspects, during the study process. During their studies, students learn how to work with a variety of technologies, and how to integrate them into the learning process to achieve the pre-set goals.

In 2020, the Faculty of Educational Psychology and Arts also licensed the Master's degree programme "Technological Innovation and Design for Education", where students acquire both the knowledge of the organisational principles of the pedagogical process to facilitate learning, as well as knowledge of the psychological phenomena that affect learning and what regularities need to be taken into account when working in a digital environment, how to facilitate the development of media literacy and digital competence. Students learn the basics of programming, how to work with educational robotics, how to use virtual reality, how to work with 3D printers, how to build websites and develop learning platforms, and other exciting knowledge to be tested in practice in an educational environment. After graduation, graduates not only become competent 21st century educators, but also work in other important institutions in Latvia's education sector, such as the Ministry of Education and Science, the University of Latvia, school principals, methodologists, etc.

Why do you think it is important to use technology in the learning process for young children?

In recent years, the world has witnessed a relentless technological evolution, with artificial intelligence gaining in popularity, leading the European Commission to declare this the "Digital Decade". Society's digital skills are sometimes not keeping pace with the speed of technological development, so digital literacy should be promoted at all stages of education. From preschool onwards, the beginnings of digital skills can be fostered through the development of computational thinking, which can be complemented by the integration of educational robotics into the learning process.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)

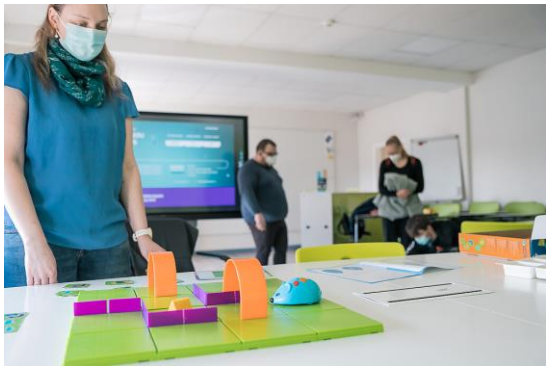
The University of Latvia prepares teachers to work with preschool children, but there is no direct teaching with young children.

In Latvia, preschool educational institutions mainly use interactive whiteboards with interactive learning materials, as well as educational robots appropriate for the preschool age.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?

Yes, educational robots are available in several Latvia's preschools, such as Photon, BeeBot, Code and Go Robot mouse, mTiny, etc. However, not all pre-school educational institutions have such facilities, both due to a lack of funding and due to teachers' lack of experience in working with educational robots.

Often, preschool children have the opportunity to learn robotics in a more interest-based educational context, i.e. robotics clubs, where Lego robotics kits etc. are also used.



Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

Yes, the distance learning model can be extremely important in various situations where it is not possible to attend face-to-face learning in a preschool. The Covid-19 pandemic highlighted such situations and the unpreparedness of the education system when general institutional closures were introduced. This experience has made it possible to realise that in various situations one must be prepared for distance learning - including long-term health problems of pupils, etc.

In situations where conditions are favourable for face-to-face classes, they are naturally preferred, as face-to-face contact is an invaluable experience and provides interaction in the learning process, both for the teacher with the children and for the children with the other members of the group.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

Today, for individuals and society to successfully seize the opportunities of our times and at the same time cope with the challenges they face, digital literacy is becoming increasingly important, requiring high-level thinking skills, including computational thinking.

Already at the preschool stage, there is an opportunity to develop in pupils the beginnings of computational thinking, technology use habits, understanding of the role of technology, principles of operation, etc.

In preschool, robotics is one of the tools that can enhance the learning process, including technology literacy, and which can serve as a tool to promote computational thinking skills. In addition, educational robotics has the potential to foster students' competences in different areas - not only in programming, but also in mathematics and other areas.

Educational robotics creates active learning experiences and offers both physical and cognitive active participation in the learning process. Students are engaged, motivated, satisfied, cooperative and not afraid to make mistakes. These are skills that are essential for people in the future, both in the work environment and in society.

Funded by
the European Union

TURKEY - Mellis Eds. Tech

Answered by Caner Anda
Education Technologies Company Executive

General info about your collaboration.

Mellis Education Technologies is located in Yalova, Turkiye and develops innovative tools and methods such as informatics, technology, design, user experience analysis, virtual reality, augmented reality, robotic coding, non-computer robotic applications in the field of education, organize workshops, seminars and training events for this purpose, and also prepare and carry out educational projects by making use of national and international funding sources.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

Mellis Education Technologies stands as a pioneering institution in the realm of technology-enhanced learning. Our strengths lie in our unwavering commitment to innovation and our holistic approach to education transformation.

One exemplary practice is our integration of cutting-edge technologies such as virtual reality and augmented reality into educational methodologies. By doing so, we create immersive learning experiences that transcend traditional boundaries, allowing students to engage with complex concepts in ways never before possible. For instance, our virtual reality modules have enabled students to explore historical landmarks, deep-sea ecosystems, and even outer space, all from the confines of their classrooms.

Furthermore, our dedication to user experience analysis and design ensures that our tools and methods are not only innovative but also highly user-friendly. This approach fosters a seamless transition for educators and students alike into the realm of technology-enhanced learning.

Another noteworthy strength is our commitment to sharing knowledge. We regularly organize workshops, seminars, and training events that empower educators with the skills and insights needed to harness the full potential of technology in education. Through these events, we foster a collaborative ecosystem where best practices are shared and refined.

Our ability to secure both national and international funding sources showcases our dedication to expanding the horizons of educational possibilities. We've successfully initiated and executed educational projects that transcend borders, benefiting learners worldwide.

Mellis Education Technologies stands at the forefront of technology-enhanced learning, continually pushing the boundaries of what education can achieve through innovation, user-centric design, knowledge sharing, and strategic funding.

Why do you think it is important to use technology in the learning process for young children?

Using technology in the learning process for young children can offer valuable benefits when implemented thoughtfully and responsibly which is one of our considerations.

Technology often captivates the interest of young children. Interactive apps, games, and digital activities are highly engaging and motivate children to learn and explore. Since they are digital natives and technology is currently the future of education more than ever, we need to teach how to produce and benefit from technology resources effectively starting from an early age. In this way, we can prevent exploitation of technology for time-wasting activities and use it for profound purposes.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)

Mellis Education Technologies primarily focuses on education technologies for students of various age groups, but if we consider popular technologies for preschool-age children in Turkiye, it typically includes a mix of interactive and educational tools. Our enterprise's primary focus isn't preschool education, but we can provide insights into what is generally popular for young children in Turkiye:

Educational Apps

Interactive mobile and tablet apps designed for children often incorporate games and activities that promote early learning. These apps cover subjects like maths, language skills, coding in part, and basic science concepts. In addition, since ECE children are not involved in literacy as in primary school and later educational grades, many educational apps developed on a global scale address these areas easily.

Tablets and Smart boards

Many preschools and kindergartens in Turkey have adopted the use of tablets and smart boards in their classrooms to make learning more engaging. These technologies display interactive content, videos, and games that support early education.

Educational TV Programs

Educational television shows and channels designed for young children are quite popular. They often teach basic concepts, encourage creativity, and promote early literacy. There are some TV channels like TRT ÇOCUK dedicated to children's learning while having fun.

Robotic Kits

Some educational institutions introduce young children to basic robotics kits though these are relatively few.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?

The use of robots and robotics kits in Turkish preschools is not as widespread as it might be in some more advanced countries, but there is a growing interest in incorporating technology, including robotics, into early childhood education.

Some progressive preschools and educational institutions in Turkey have begun introducing basic robotics kits designed for young children. These kits typically include age-appropriate robots that are easy to use and could be controlled through simple interfaces, such as buttons or block-based coding platforms. The aim is to introduce young children to foundational STEM (Science, Technology, Engineering, and Mathematics) concepts and encourage problem-solving skills and creativity.

An Erasmus+ KA2 project, Algolittle's workshop results in Turkey also shows that many mainstream preschool teachers are eager to use educational robotics in their learning activities. Mostly preferred robotics were stated as Beebot, Matatalab, and MTiny besides Lego kits.

Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

Distance learning in preschool education is a complex topic. What we have experienced during the Pandemic process taught us that we need to plan distance education activities precisely considering many parameters by carefully listening to what teachers, parents and children have to say about it.

As we all know, preschool-aged children have unique developmental needs. They may not have the cognitive, emotional, or physical readiness for extended periods of screen-based learning or remote instruction. Their learning primarily occurs through play, social interaction, and hands-on experiences. Thus, educators and program developers designing distance education for ECE need to consider this reality and work on readiness.

Preschoolers often require significant guidance and supervision, which places a heavy burden on parents or caregivers if distance learning is implemented. We believe that the parents should actively participate in facilitating the learning process.

With well designed distance education programmes for ECE, children in remote or underserved areas will achieve better learning. Also, this type of education can be a good tool for reinforcement practices. And in ECEC, distance education can be mostly considered complementary to the learning in presence. However, in case of situations like a pandemic, diseases, disabilities or other circumstances which require us to stay at home, distance education can be lifesaver and should be designed wisely.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

The most important message to pass on to teachers and prospective teachers regarding the use of technology in preschool education is to approach technology as a valuable tool to enhance, not replace, the traditional methods of teaching young children.

Technology should be used in moderation and as a supplement to hands-on, play-based learning. It should not replace the essential interactions, social experiences, and physical activities that are critical for preschoolers' development, so they should be age appropriate.

IRELAND - Early Years (EY)

Answered by Noletta Smyth
Senior Early Years Specialist

General info about your collaboration.

The mission of the Early Years organisation is "To lead and innovate to ensure high quality shared early education and care services that support resilience for children, families and communities." The organisation's strategy is underpinned by the Child Rights Ecology Model which demonstrates how the child contributes to his or her social environment while simultaneously being affected and served by it; thus, highlighting the inter-connectivity of child development and societal well-being.

Early Years has over 58 years' experience of supporting and mentoring Early Years practitioners, trainers and specialists and their work focuses on identifying and meeting the needs of early years services, promoting quality, and improving educational outcomes for young children in partnership with parents.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

Early Years, through an extensive training programme implements and cascades the guidance issued within the Preschool curriculum and encourages preschool staff to match the use of ICT to each child's needs, interests, and individual preferences.

Adults scaffold and support child-initiated interaction through exploration and act as positive role models by regularly modelling the value they place on their own use of technology in relevant ways.
We train our practitioners to support children to develop skills and concepts related to ICT through the NI Curriculum aspect of The World Around Us, and in ROI, the Curriculum aspect of Exploring and Thinking. Opportunities are provided for children to engage in interesting activities that provide them with first-hand experiences to explore ICT.

We ensure that children are immersed in active learning environments, while we support them with their learning and the provision provided through Early Years specialist mentoring and support.

Why do you think it is important to use technology in the learning process for young children?
Children are growing up in a digital age surrounded by devices which influence their daily experiences and learning. Computers and other technology are tools preschoolers can use to carry out their play ideas, acquire knowledge and skills or to solve problems. Using tools and technology is interesting and fun and requires flexible thought and action within a problem-solving context. Technology can enhance educational opportunities when used in an age -appropriate way. Children need to see technology used in meaningful contexts and for real purposes with an emphasis on exploration.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)
Despite the ongoing discussions about the appropriateness of technology use with the under 6s, advances in accessibility and affordability of devices have ensured that children now engage routinely with a wide variety of digital devices and are developing the associated skills and competencies much earlier. Ipads, computers, cameras, microscopes are all quite popular within the preschool environments alongside interactive whiteboards.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?

The use of technology in Early Years settings is sporadic mainly due to a lack of Early Years practitioners' knowledge and understanding of how to use technology and digital devices effectively within the preschool curriculum. The use of robots/robotics kits would be rare. However, the use of iPads, microscopes, cameras, and some software applications would be quite common. More recently a lot of preschools acquired interactive whiteboards.

Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

Now, after our experience during the COVID 19 pandemic, we can state categorically that the distance learning model can be used in preschool education. However, this is not to underestimate the many challenges that distance education can present to children, parents/carers and teachers.

Distance education for preschool children needs to be fun, child-centred and flexible to meet the individual needs. Parents/carers need support in setting up appropriate activities and environments for their children at home. This requires active participation from teachers over video calls either recorded or in real time. Information leaflets - using a variety of visuals can be extremely helpful to parents/carers. Distance education can mean that some children who would be totally marginalized from the preschool experience can now be actively involved.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

Try it out! Experiment! Learn alongside the children through the various challenges you will no doubt encounter. Children are curious about tools and technology in their own right as well as resources to help them carry out play ideas, gather information and solve problems. Follow their lead!

PORTUGAL - Instituto Politécnico de Viseu (IPV

Answered by Maria Figueiredo, Associate Professor

General info about your collaboration.

The creation of the Polytechnic Institute of Viseu (IPV), in 1979, as a public higher education institution, is framed by a philosophy of cooperation with the surrounding community, on a reciprocal basis, aimed at promoting innovation in close contact with the regional scientific and technological community in the context of an increasingly globalised and international society. The IPV strives to fulfil that ambition with the high technical-scientific and humanistic training of its students; the development of research connected to the surrounding context; and cultural exchange and cooperation with other institutions, national and international. IPV is a member of EUNICE, the European University for Customised Education, and together with its 9 partners across Europe strives to solve social and economic challenges, both globally and locally. The IPV comprises five schools: Education, Technology and Management, Agriculture, Technology and Management (in Lamego), and Health.

What are your institution's strengths and examples of positive practice in the context of technology enhanced learning?

All education in the IPV, across the several schools, is digitally enhanced. Several programmes make use of technology in their teaching.

Notably, several recent projects aimed to expand the use of technological solutions for learning: MOOC on audiovisual competences, Virtual Microscopy, Stepping up to global challenges. The School of Education, in particular, has extensive experience with the use of technology in teacher education. An important part of this is the CCTIC-Viseu that serves as an interface and catalyst for the use of technology in schools.

Why do you think it is important to use technology in the learning process for young children?

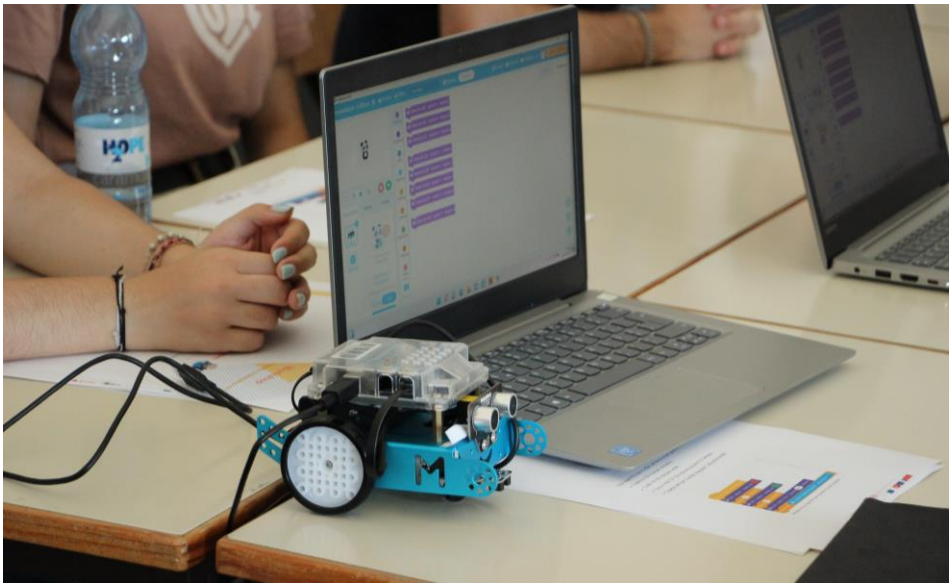
Technologies are part of children's everyday life which makes them part of the world children are getting to know. According to the curricular guidelines for Early Childhood Education in Portugal, technology should be acknowledged in that way. Children will construct meanings about technology through the way they are presented and used in every setting. Making technology play authentic, and having a meaningful role in the education setting is therefore important.

Which technologies do children like most in your institution? (If your institution is not involved in the education of young children - perhaps you can name the most popular technologies in your country at the preschool stage?)

In Early Childhood Education centers in Portugal there are several technologies available, and children use them according to their own interests and projects. This is true for educational robots, computers, laptops, digital recorders, or tablets. There is also a strong emphasis on unplugged activities that support computational and algorithmic thinking.

Are there robots/robotics kits or other technologies available in preschools in your country? What kind?

Educational robotics has been very strongly promoted in Primary Education for a decade, in Portugal. For Early Childhood Education, there isn't as much investment but there is a lot of enthusiasm. Many Early Childhood Education Centers use robots as part of their educational provision and combine them with unplugged approaches.



Do you think the distance learning model can be used in preschool education? If so, what are the benefits of such learning/what situations make it necessary or possible/under what conditions?

As with other age groups, there is a need for distance education to be offered for Early Childhood Education. Some children and families don't have access to centers on a regular basis. Distance education can support learning and socialization in situations such as traveller families, prolonged illness, hospitalization, or lockdowns. It can also complement existing provision. If the in-person center does not have provision in terms of computational thinking, for example, existing programs that focus on this can be used by families in the home context with ease. Two main conditions stand out: existing adult support during the activities and a focus on play and relationships in terms of the provision.

What would be the most important message you would like to pass on to teachers/prospective teachers regarding the use of technology in teaching in preschool education?

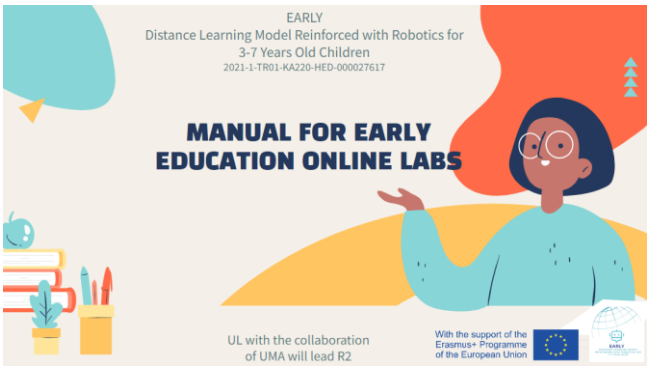
Children need play to understand the world so technology should be part of their play world. They also need to be in a context that uses technology in meaningful ways, so adults need to be intentional in their use of several devices and services, as well as introducing them as teaching tools.

Funded by
the European Union

DEVELOPMENT OF AN ONLINE GUIDE

What?

The second result of the project, NR 2., is an interactive online manual, the "Manual for Early Education Online Labs". This manual is comprised of two versions, both of which will be translated into the national languages of all project partners. One version of the manual is a set of materials in a PDF and the other is in the form of an interactive presentation with dynamic content that will allow the user to choose their role – either teacher, student or parent/guardian and then choose the custom content accordingly.



Who for?

The manual is primarily suitable for lecturers who conduct courses for preschool educators, both in higher education and further education, and the content is also tailored to parents/guardians of preschool students.

Aim?

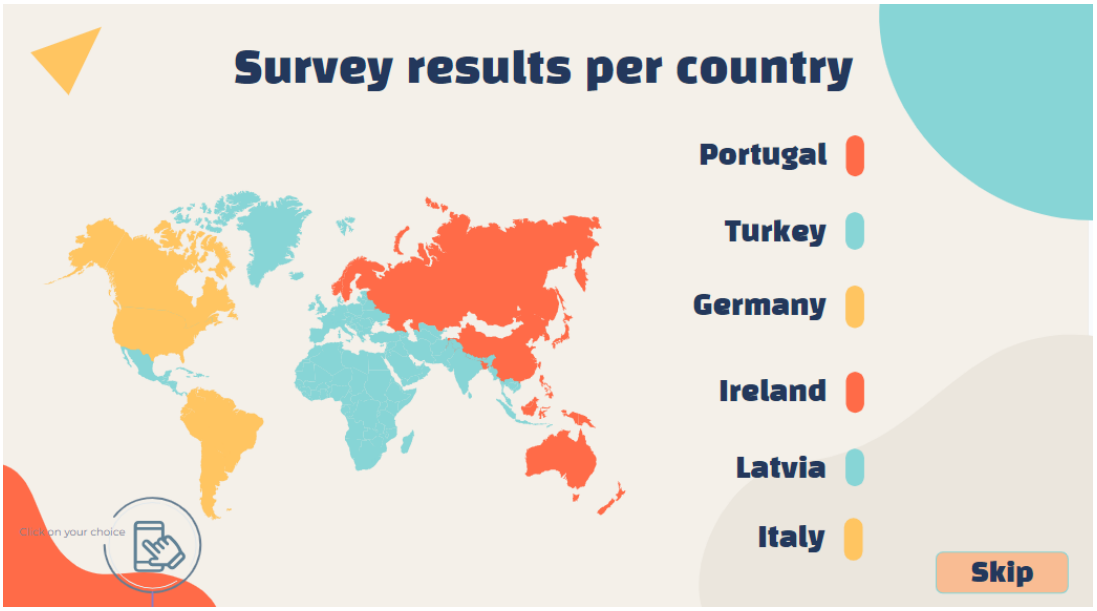
The introduction to the manual describes the need to introduce elements of mixed learning (blended learning) in pre-schools to ensure continuity of support during forced or optional remote learning (such as in cases of COVID-19 outbreak, prolonged health problems or other extended absences). The materials developed also offer information on how to better integrate digital tools into the pre-school learning process by introducing children to them, their shapes and functioning, and potential challenges.

Funded by
the European Union

EARLY
DISTANCE LEARNING MODEL REINFORCED WITH ROBOTICS FOR 5-7 YEAR OLDS

Content?

The theoretical information in the manual is presented in 8 chapters. The results of the SURVEY targeted to project member states in Europe, which was carried out to gather up-to-date information on the project topics is also presented, with a total of 508 respondents. (Latvia 225, Turkey, 110, Germany 68, Portugal 57, Italy 33 and Ireland 15). The contents of the manual on blended learning and remote learning methodologies will also be suitable for families. The design of this guide was developed using formal and informal styles, including theory, real examples, case studies and examples of good practice, so that universities can implement it in the form of a course or use it as a professional development/further education content guide.



TÜRKİYE ULUSAL AJANSI
TURKISH NATIONAL AGENCY

Politécnico de Viseu
UNIVERSITY OF MANNHEIM
early years
UNIVERSITY OF LATVIA
Scuola di Robotica
MELLIS
KNOWLEDGE TO PRACTICE

Kocaeli Üniversitesi
Address:
Umuttepe Kampüsü
Kabaoğlu, 41000 İzmit/Kocaeli
Tel: (0262) 303 10 00
Web: https://www.kocaeli.edu.tr