RECOMMENDATION PROGRAM

A POLICY NOTE FOR EDUCATION: DIGITAL STORYTELLING, EARLY SCHOOL LEAVING AND ACADEMIC ACHIEVEMENT

DIGITAL STORIES - Reducing Early School Leaving by Increasing Academic Achievement with Digital Applications in Storytelling Techniques

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The Project

The “Reducing Early School Leaving by Increasing Academic Achievement with Digital Applications in Storytelling Techniques” project aimed at contributing decrease in early school leaving and increase in academic achievement through digital storytelling. It objectifies two significant problems in education: i.early school leaving and ii. low academic achievement. These two problems are among the educational priorities of the European Union to reach a more quality, justice, and effective education in the continent of Europe. In 2022, the results of the international achievement test of PISA revealed a fall by 15 points in mathematics and by 10 points in reading for the EU average. Although some researchers advocated the Covid-19 pandemic to be a possible reason for the achievement fall, the results indicate a necessity to support basic skills. Also, TIMSS results reveal only in 3 countries students’ achievement in mathematics and science increased (separately). Other than these 3 countries (Romania, Sweden, UAE for mathematics; England, Hong Kong, UAE for science), the mathematics and science achievement stayed stable or decreased in most of the countries.

The TIMSS results of 2023 also show that the gender gap of achievement is widening in favor of boys. Boys outperform girls in mathematics and science, and the achievement gap between boys and girls is increasing since 2019. Moreover, TIMMS report outline that 10% of the students, internationally, are weekly absent from school. While the level of education is increasing, the frequency of absenteeism is also increasing. At 4^{th} grade, 20% percent of students are absent once in two weeks. At 8^{th} grade, the percentage increases to 22% absenteeism in two weeks.

Eurostat statistics outline that 9.5% of 18-24 year old young people were early leavers in 2023. Among these early leavers, the proportion of men is higher than women. The percentage of early school leaving changes from country to country. In some countries like Slovenia and Poland, the percentage of early school leaving is below the EU-average. However, countries such as Germany, Spain, Switzerland and Türkiye, the percentage of early school leavers is above the EU-average. Among those countries, Poland is a good example for reducing its early school leaving percentage 2% in 4 years.

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In this project, academic achievement raise and early school leaving decrease are aimed through digital storytelling. Stories have always been good sources and techniques of reading and learning. They have been used since the prehistoric times for various reasons and levels of education, and also functioned as cultural and historical transmitters across regions and time. Legends, bravery tales, folk tales, short stories included moral and cultural ideals and norms such as honesty, bravery, helpfulness, brotherhood, love for family, resilience, and positive relationships. These norms were presented and taught to children, adults and elders through a specific context in a way that teaching can be transferred into other contexts.

Stories are effective sources for teaching morals, improving social relationships, increasing self-awareness and empathy. They are widely used in educational institutions in different forms and with different materials. Research suggests that they are effective in foreign language teaching (Berdiyeva, 2023), early child education (Rahiem, 2021), ethics education (Heilbronn, 2023), moral education (Choo, 2024), communication and cultural preservation (Darici, 2023). Also, stories are used in educational research to explain inequalities in education (Ardoin, 2023), educational policies (Tri, 2024), and imagining the future of education (Hrastinski & Jandrić, 2023). The advantages of stories are integrated into Digital Stories project as well as linking the content and outcomes with one of the most significant 21st century skills, digital skills, to improve its effectiveness.

Stories and storytelling are put into the center of the project and upgraded with digitalization. Digital stories function both as traditional stories, introducing a context, conflict and roles to the readers and digital content enhancing digital skills and multimedia sources. Digital stories develop critical thinking, creative thinking, higher order thinking and reading skills. The story plot and characters help readers to engage in, use their critical, creative and higher order thinking skills as well as basic skills. In the project, digital stories are used in a way that would activate these skills along with the project objectives.

Project partners prepared teaching and learning modules integrating digital storytelling. The theme of each module is attentively selected to contribute to the aims of the project, increasing academic achievement and decreasing early school leaving. For teacher training, a digital platform is developed and all modules are uploaded into the digital platform in an interactive way. After pilot trainings with 99 participants in Türkiye, Slovenia, Portugal and Italy, each partner organized small-scale meetings with policy makers, practitioners, educators, academicians, students, parents and representatives of civil organizations.

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This report is prepared as a policy recommendation on the basis of Digital Stories project and its results. Digital stories project aimed at meeting the stakeholders and end-users of education with small-scale meetings in four partner countries: Türkiye, Italy, Slovenia and Portugal. The small-scale meetings included teachers, graduate students, school principals, vice-principals, parents, representatives from non-governmental organizations (NGO), entrepreneurs from small and medium-size enterprises, policy makers, and academicians. Having participants from diverse backgrounds, the modules of the project are evaluated to generate policy recommendations. On the light of these discussion and results, the policy recommendations are divided under three topics:

- Storytelling and Digital Storytelling for Academic Achievement
- Digitalization of Education
- Reducing Early School Leaving

Description of the Participants

Small-scale meetings aimed at reaching to stakeholders and end-users of education to evaluate Digital Stories project modules for their effectiveness in improving academic achievement and reducing early school leaving. In 4 different countries (Italy, Portugal, Slovenia and Türkiye), 121 participants attended small-scale meetings. Participants were primary and secondary teachers, NGO representatives, small and medium-sized entrepreneurs, school principals and vice-principals, academicians, researchers, graduate students, and policy makers.

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Policy Recommendations

1. Storytelling and Digital Storytelling

Stories are rich sources for education in a variety of subjects from morals to science, and they can be used for a wide range of levels in education. The universality of stories makes them rich and dependable sources for transnational projects, such as Digital Stories. Interestingly, there are fundamental similarities among stories from different cultures and languages both in content and style. Sleeping beauty, to-be-married prince, Cinderella, snow white, beauty and the beast are found in 8 to 34 different cultures and languages. Also, story styles such as fables or legends are used in various different languages and cultures such as Turkish, Italian, British, German, Spanish, Persian, etc. While these similarities make stories universal, using them in different cultures and languages become more effective in education.

They transmit the cultural heritage to new generations with their embedded cultural items and preaching. Each story presents a context to the readers, a plot and characters. The features of the characters reflect certain cultural, social and psychological features and dilemmas. Readers are called into the story context through the acts and speeches of characters; find themselves a role or a message to learn. When stories are digitalized, they are more appealing to the readers of new generations surrounded by digital tools and media every day. Digital stories both develop digital skills and literacy and enable reading and comprehension skills. In the project, these skills are upgraded with writing, critical thinking, creative thinking and higher order thinking skills as well as affectionate objectives. Each story used in the project appeals to certain cognitive and affective objectives in relation to improving academic achievement and decreasing early school leaving.

In the project, each story is embedded in what we called “module”, a unit of learning design in 5E model. In 10 modules designed within the project, each story is introduced to learners through the steps of engage, explore, explain, elaborate, and evaluate. Each module integrated basic skills, critical skills and the objectives of the project. Also, each story is attentively selected to engage readers into the module objectives and serve the project goals. Moreover, the stories used in the modules are garnished with digital tools, animations, audio records, or comics.

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When the modules are presented to the participants of small-scale meetings, they were asked how stories and digital stories could be used in education in a more effective way. They were asked to evaluate the way stories were used in comics, and whether they would use these stories and modules in their classrooms, schools, parenting or education. After a careful analysis of their answers, these policies are recommended to teachers, schools and education systems:

Stories should be integrated into school lessons would contribute to develop positive attitudes towards school and learning.

Storytelling is one of the oldest forms of transferring information and knowledge, used in prehistoric times and still relevant in modern education. Participants in six different institutions around 4 countries around Europe stated that stories engage students, motivate them, stimulate their curiosity, empathy, creativity, and facilitate memorization and deeper understanding of the study content. In addition, stories have an important upbringing role, as they help students acquire behavioral patterns, develop critical thinking, and learn about values such as friendship and forgiveness. Participants consider storytelling in education to be a good technique to attract and maintain students' focused attention. Storytelling is irreplaceable because it adds an emotional component to the bare facts or information, which allows for the further enrichment of contextual memories, while reinforcing the mechanisms of memory and establishing a valuable, highly personal relationship between professor and student. Through storytelling, students can express themselves, develop their imagination, reasoning, logical thinking, they learn about the narrative logic, they develop their linguistic and artistic competences. In addition, through stories, students can learn different concepts in an interesting and playful way. Participants pointed out that storytelling is useful and meaningful especially when it is oriented towards active learning and has a long-term impact on students.

Stories provide a context in which roles and characters can be redistributed and attained in a more positive way than before. The research suggest that learning should be contextualized so that it can be transferred into long-term memory. Permanency in learning can be achieved through stories. Also, the European Union aims to foster cultural learning, developing EU values and civic education through European Union funded projects and school curriculum. Through stories in this project, cultural learning is also aimed to be

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enhanced. The stories in each module are attentively selected to reflect cultural roots and contribute to the EU values.

Although the advantages of the stories and storytelling is upgraded in the project, stakeholders of education interviewed in small-scale meetings in four countries revealed that the strictness and density of the school curriculum does not allow teachers to integrate stories into their lesson plans. Teachers commented that they need to plan how to use stories and storytelling beforehand, which they do not have time due to their workload for planning the recommended content with recommended techniques and materials. Moreover, they explained that *"There is so much to teach, our program is heavily full and when we do something like storytelling, we need to rush for further content to catch up"* (Teacher, Türkiye). In Italy, Portugal, and Slovenia, teachers also indicated that they have very little flexibility over structured school curriculum, which is advantageous sometimes but it also hinders them to engage their students into storytelling activities. Thus, it is recommended through this project that the school curriculum would be less structured to enable teachers to use effective techniques and content such as stories and storytelling in their lessons.

Digital stories and storytelling are recommended to be included in diverse courses such as language, foreign language, values education, social studies, history, science, and others.

Stories are comprehensive materials integrating culture, values, geography, history, language, science and other disciplines in a meaningfully structured way. They have long been widely used for education throughout the history. The Odes of Confucius, the folks, legends, fables and even songs and music are drawn upon stories of a certain kind. They present the characters, the message, time and place at the same time, in a meaningful way so that readers can understand them and apply the messages in their lives. The information to be taught is knitted over a context, manner and characters in stories. Stories transmit messages not in a direct way to frighten the readers to apply, nor in an indirect and abstract way for readers to capture. It is transmitted in a most prominent way for readers to grasp the message and apply it in their real lives.

Also, stories present more than singular message at a time. Throughout the Digital Stories project, stories are analyzed for educational objectives for the modules. While

analyzing the stories, the specific attention of the project team paid to the story elements revealed that stories integrate science and myth, culture and faith, relationships and loneliness together. They are a part of real life and reflect it through the characters, the setting, the scene, time, the plot and the message. Thus, they are rich sources for a variety of subjects such as history, geography, values, social studies, language, foreign language, and others. The project team recommends the integration of stories into these subjects to reduce the abstractness of them and to motivate learners.

The small-scale meetings in four different countries and six different institutions revealed that the stakeholders of education also believe that stories can be used in diverse subjects at school. For example in Slovenia, most curricula do not include the active use of stories, but some teachers use them as an introductory motivational activity, for introducing new content or for cross-curricular integration. The participants of small-scale meetings indicated that curricula for subjects such as Slovenian language, history, foreign languages should include storytelling to develop and enrich vocabulary. One participant said "My former teachers, who I still deeply cherish, always told stories".

Stories provide rich information and a comprehensive context that foster memory, emotions, and cognitive skills. However, participants over 4 countries stressed that they are not covered in field courses such as mathematics, science, history, geography or others. The content of these courses focus solely on objectives in the cognitive domain, leaving the affective domain behind. In one of the small-scale meetings in Türkiye (Istanbul), a participant to a small-scale meeting stated: *"In courses we just teach how to multiply or other cognitive objectives. Then, we try to build projects for values education and we see they are not effective"* (Teacher, Türkiye). Thus, integrating stories in diverse courses is recommended through this project to upgrade learning both cognitively and affectively. Stories in courses such as mathematics, science, language, history, geography, etc. can enable learners to build positive attitude towards the discipline. They motivate students and provide a humane context to build connections with the discipline and the subject. Integrating stories in different subjects would contribute to memory mechanisms and establishing a personal connection with the subject and/or content.

Through storytelling and stories in different subjects, students can develop their creativity, critical thinking and literacy skills. Also, stories enable readers to express themselves in a narrative way, which also contributes to the development of literacy skills.

For these reasons, the project team highly recommends stories and storytelling be integrated into various courses and subjects such as mathematics, science, history, social studies, language, foreign language, and others.

Pre-service and in-service teacher education should provide rich and comprehensive sources, techniques and materials for storytelling and digital storytelling.

Storytelling and stories are found effective by teachers and educators when used in lessons. They are easy to find sources that can be found in every culture and language, in various forms such as short stories, fables, folks, comics, legends, etc. However, there are certain disadvantages to this authentic material in terms of abundance. The abundancy of stories in many forms and length make it difficult to determine the most appropriate reading (or listening) material to be found for a specific topic or objective. Also, stories are bendable materials that can be changed over time, people or languages. Although not always necessary, reaching the original form a specific story may be uneasy.

Also, stories and storytelling require certain knowledge and skills to be integrated into lessons. Although most people have experienced reading or listening to stories before, using stories for educational purposes might be challenging. Teachers and educators need to select specific stories that can be associated with the teaching topic and objective, be age and reading level-appropriate, and time efficient in terms of length. Moreover, teachers and educators need to determine how to use the story, with which technique, form and medium.

These challenges of using stories in lessons could be overcome through initial and in-service teacher education for integrating stories and storytelling effectively into lesson plans. In fact, the small-scale meetings in six different institutions in four countries displayed the requirement of teacher education for integrating stories and storytelling into lesson plans effectively. The participants to small-scale meetings in Portugal stated *"Preparation requires mastery of digital skills, platforms, and tools, and this can be demanding for teachers"* (Teacher). Another teacher in the meeting added: *"There should be training for this technique. It is one of many methodologies that can support student success"*.

Stories carry people to different worlds while storytellers are the carriers of this magical transportation. However, most participants to the small-scale meetings indicated that they

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feel they lack the skill of storytelling and they are afraid to use it in their classes. This project fills the gap of teacher education through the digital platform of storytelling education enriched with sources and materials of stories and storytelling. It is recommended through this project to increase the number of projects on stories and storytelling in education. Also, European Union and national ministries of education could provide initial and in-service teacher education for stories and storytelling that would equip teachers with methods, techniques, sources and materials of stories and storytelling.

2. Analysis: Digitalization of Education

While the digital world is enlarging day by day, education has been transformed to a new stage of digitalization. European Union prioritizes digital skills and digitalization of education through web tools, online materials, blended learning and other digital methods and techniques. In Digital Stories project, digitalization has been determined as a target objective to be reached through digital storytelling, and digital platform where teacher education and rich digital sources are presented to teachers and educators throughout the world.

The Covid-19 crises led to a rapid digitalization period in education. All around Europe and the world, most schools needed to be closed to prevent the infection for more people and start online education. Despite the disadvantages, this period led to a rapid improvement in digitalization of education and test the deficiencies in digital tools, methods and techniques used in education. Throughout this real-life test, the digitalization of education has been put more emphasis and priority by many national ministries of education around Europe, private educational institutions and European Union. The European Union highlights the promotion of European digital education ecosystem that would prepare European citizens for a digital transformation. Thus, The Digital Education Action Plan (2021-2027) has been renewed to meet the requirements of European values and citizenship. The Action Plan aims to enhance digital skills for the digital transformation based on these key activities:

- support the digital transformation plans of education and training institutions through Erasmus+ cooperation projects

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- establish the Erasmus+ Teacher Academies to support collaboration and provide professional development opportunities for teachers and cooperation between teacher and educators
- launch the SELFIE for Teachers online self-assessment tool to help (teams of) teachers collaboratively identify strengths and gaps in their digital competences.

In alignment with the digitalization objectives of the European Union, Digital Stories project aims to develop digital stories as sources for teachers and educators, foster digital skills of students and teachers, promote digitalization of education through digital stories, digital storytelling and digitalized modules. Digital Stories project partners prepared 10 modules of teaching content, 7 of them were prepared as digital modules enhanced with digital tools, web tools and interactive materials.

Digital Stories modules are enriched with effective digital tools and online materials. The modules include manuals on how to use digital tools, web tools and interactive materials for further reference. As digitalization of education is one of the main objectives of Digital Stories project, stakeholders were asked to evaluate the contribution of the project to digitalization movement in small-scale meetings.

The participants to small-scale meetings outlined that digitalization of education provides certain advantages and disadvantages for school education. Digital Stories project, on the other hand, was referred for providing rich digital sources for digital tools and materials for school education. However, integrating digital tools and techniques into courses requires policy renovations and improvements in European education systems. The policies recommended in this project are as follows:

Integration of digital education methodologies in national curriculum is recommended in European educational systems and project priorities.

In small-scale meetings in six partner institutions of Digital Stories project, digital educational methodologies and techniques are referred as requirement for improvement in digitalization of education movement. Teachers, educators, graduate students of education, school principals, NGO and SME representatives indicated that they need instruction on

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methodologies and techniques of digital education to integrate digital tools and materials into their lessons.

To make education more digital, participants recommended adopting a range of active and hybrid methodologies. These include techniques such as the flipped classroom, where students study content at home using digital resources and then use class time for practical activities and discussions. One participant (Portugal, Teacher) mentioned the flipped classroom as a method where "students study the content at home using digital materials and use class time for practical activities and discussions". Additionally, participants highlighted project-based learning, which involves students working in groups to solve complex problems using digital tools for research, collaboration, and presentation. Another suggested using station rotations, which divide the classroom into stations for online and offline activities, promoting varied learning styles.

Gamification, the integration of game-like elements into learning, was another method discussed as a way to increase student engagement and motivation. The use of interactive whiteboards, digital content creation through blogging and podcasts, and video conferences with external speakers were also suggested as practical ways to bring digital tools into the classroom. One participant emphasized the importance of using "interactive tools" to engage students effectively. Overall, there was a strong consensus that digital tools should not just be used as supplementary resources, but as integral components of the learning experience.

Participants suggested several steps to increase digitalization in education. Raising awareness of the benefits of using digital tools in a meaningful way and teacher training are crucial, as some teachers still show resistance or lack of knowledge when working with digital technology. Most teachers participating to small-scale meetings outlined they lacked official instructions on how to use digital methodologies and techniques. Digital Stories project provide digital methodologies for teachers to integrate their lessons. Digital Stories teacher education platform provides digital tools and sources to teachers and educators to use in their lessons. Also, Digital Stories project recommends further methodological integration in official curriculum and other European Union projects. Further instruction and projects are recommended to be developed for a more effective improvement in digitalization of education.

Digital tools, methods and techniques require better equipment, more time to plan, prepare and apply in lessons.

Digital tools, methods and techniques motivate students; attract their attention and interest. Also, they provide multimedia sources that address multiple senses. Participants to small-scale meetings saw digitalization as a crucial step in innovating education; as one participant (Italy, representative of NGO) mentioned, *"Digital tools make learning more flexible and accessible,"* pointing out that online resources and platforms allow students to learn at their own pace and revisit materials when necessary. This flexibility was highlighted as a key benefit, especially in supporting students who may struggle with traditional, one-size-fits-all teaching methods.

Teachers should have permanent access to appropriate technology and classrooms should be equipped with the appropriate technological equipment. The gradual introduction of digitalisation, appropriate examples of good practice and the development of curricula that includes the development of digital competences as compulsory objectives are also important. The discussion highlighted the need for a social consensus on the role of digitalization in schools, as current trends such as criticism of the use of screens and phones can be a barrier to its wider implementation.

For digital education to be enhanced, participants to small-scale meetings recommended steps for improving necessary equipment in classrooms. First, investment in infrastructure is seen as essential, as indicated by responses like "*Powerful internet and good resources*" and "*Investment in infrastructure".* Moreover, there is a call for changing mentalities and adopting more active and digital educational methodologies. Despite the potential advantages, the process of digitalization is not without its barriers. Participants to small-scale meetings mentioned "*poor internet access*", "*lack of equipment*", and "*lack of digital skills*" as obstacles to the successful integration of digital tools. FATİH project initiated by Turkish Ministry of Education sets a good example of improving technological equipment in classrooms. FATİH Project aimed to contribute to equal opportunities and address multiple sensory learning through technological improvements, digital content, smart boards and tablets supplied to schools and classrooms. The project is proceeding in 47.722 schools in Türkiye.

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Participants emphasized that technologies and the media are changing very fast and that the Ministry of Education should propose and regularly refresh a set of possible tools that are didactically relevant, safe, data-non-invasive and not in a commercial role of "chasing" the future consumers of the company that produces the tool. Teachers would thus not be left alone in their search for relevant and good digital tools. Several participants highlighted the potential of artificial intelligence tools for use in education, as they allow, among other things, the personalization of learning.

Schools, governments and European Union projects are recommended to invest in digital equipment in classrooms to enable teachers and educators to plan digital methods and use digital tools more effectively. Digital education requires quality equipment and Internet for effective results, and teachers need to be relaxed with better equipment to effectively integrate digital tools and methods into learning process. Thus, Digital Stories project recommends investment into school infrastructure and more investment into digitalization projects by EU to foster digitalization movement in education.

Effective reasons and ways to use digital tools should be enhanced through teacher training and education projects.

Digitalization in education movement has resulted in prosperous advantages in student interest, motivation, cultivation of digital literacy and skills of teachers and students. Students find digital tools more intriguing, attractive and entertaining in learning process. Research suggests that digitalized learning through blended learning or gamification is more effective and permanent in terms of academic outcomes.

Despite the affective and cognitive advantages of digitalized education, overuse of digital tools and techniques may result in ineffectiveness of the learning process. Digital tools are an indispensable part of modern education, as they can contribute to a higher quality of teaching, increase students' motivation and attention, facilitate their understanding and memorization of content, and prepare them for life in the digital age. Participants to small-scale meetings in four countries outlined that it is crucial that digital tools are used in a meaningful and thoughtful way, with the goals of improving teaching and learning effectiveness, better integration of content, saving time and not just enhancing the learning process. *"Digitalization is something that comes from needs"*, so digital technology should not be used *“just to be used”*. A few participants felt that in terms of teaching or education

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in general, the introduction of new and additional tools is not at all crucial and may even be problematic, as it brings a false sense that we have thus ensured digital literacy.

Various projects and trials to improve digitalization of education result in thousands of educational tools, websites and platforms on the Internet, ready to be used by teachers and educators. However, the quality of these tools and content is not always ensured by local or international authorities. Thus, teachers may find it difficult to consult quality materials, tools and techniques for digitalized education. In this sense, European Union and Erasmus+ project fill in a significant gap by providing quality and transnational materials, tools and techniques to be used for digitalization of education. In Digital Stories project, online platform for teacher education is enriched with quality digital materials, tools and techniques ready to be used by teachers. The participants to small-scale meetings indicated they thought it was great that the platform was digital and all the materials were archived digitally. Also, they outlined that the platform can be used both in class and provides a certificate at the end of the training makes the project even more interesting and important.

As the participants to small-scale meetings outlined the significance of effective and meaningful ways to integrate digital tools, materials and techniques into lessons, national and transnational projects aiming at contributing to digitalization of education like Digital Stories are recommended to be funded more. Through these projects, teachers can easily reach effective digital materials, tools and techniques to use in their classes, improve their and students' digital skills and literacy, which in turn contribute to the movement of digitalization in education.

3.1. Analysis: Early School Leaving

While schooling rates are targeted to be improved around Europe, early school leaving has appeared as a significant problem after the Covid-19 and economic crises. In 2023, 9.5% of 18-24 year olds in the European Union did not continue in further education or training after lower secondary education. Although the overall percentage of early school leavers has dropped by 2.3 percentage between 2013 and 2023, there are still countries where early school leaving percentages are increasing. Among EU countries, Portugal and Spain are the two countries have dropped their early school leaving rates while in Austria, Cyprus,

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Slovenia, Denmark and Germany early school leaving has increased more than 1 percentage point.

Digital Stories project provides a strong consortium for preventing early school leaving as it includes representatives from both increasing and decreasing rates of early school leaving. While Portugal and Italy present positive improvement in decreasing early school leaving rates, the rate has increased from 4% to 5% in Slovenia. Although the early school leaving percentage has decreased since 2013 in Türkiye, the rate has decreased from almost 40% to 20%, displaying the highest rate of early school leaving in the EU data for 2023.

Early school leaving has various reasons in and out of school environment. In Digital Stories project, early school leaving is aimed to decrease through improving academic achievement with digital storytelling. The project employs the advantages of stories in motivating students and improving social relations in the school, digitalization in increasing student interest and entertainment in learning processes, upbringing basic skills of literacy and cognitive domain to improve academic achievement. The modules designed in the project involved both cognitive and affective domain objectives to address students, especially at risk ones. Student-student, student-teacher and student-school relationships are aimed to be improved through the modules, teachers were provided with tips and recommendations to apply the aimed activities more effectively.

Digital Stories project aims to contribute to decrease in early school leaving rates in European countries. However, early school leaving is a broad problem having factors in and out of school, most of which can be solved through strong policy improvements. For this aim, the project recommends policies as such:

Strong policy improvements based on authentic data should be employed to prevent early school leaving.

Early school leaving is a complex problem that has both in and out of school factors. Student-student relationships, student-teacher relationships, academic achievement of students, the place of the school, the security of school can result in early school leaving. While these factors happen mostly in the school site, the statistics reveal that most young who leave school early start working to earn money, which indicates economical factors. The socio-economic status of students' family, the welfare in the country, religious beliefs,

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cultural roots and rituals may result in early school leaving, which are mostly unrelated to school or learning processes.

As early school leaving is a broad problem of and out of school, single projects such as Digital Stories are referred as *"possible ineffective"* by the participants of small-scale meetings. One participant (Türkiye, graduate student) outlined, *"Most of high schoolers start working and earning money. When they earn money, they see no use of education, because it is not for sure that they will earn more after graduation. Education has proved that it doesn't earn more money anymore".* Although statistics outline that graduates of higher education earn more money than high school graduates or less, participants highlighted that students do not believe that they will enter higher education already. As socio-economic status and parental education are highly effective on students' educational aspirations, outcomes and possibilities of getting a higher education diploma (Bernardi, & Valdés, 2025; Lawson, & Farah, 2017; Dubow, Boxer, Huesmann, 2009), this segregated belief in poor achievement seems logical.

Participants also highlighted the effect of social media on early school leaving. They outlined that social media presents an imaginary world where people can earn easy money by posting and creating digital content, students see half-fictional characters living luxurious life and they lose their faith in education in leveraging their life conditions. One participant said *"Students see their clothes, cars and houses. They are rich and they don't go to school, they didn't finish college. They are affected, they want to be one of them."* (Türkiye, school principal). For the economic reasons of early school leaving, one participant explained *"this project cannot help to decrease the numbers of early school leaving unless it creates job opportunities."* The macro reason of early school leaving, economic reasons, cannot be handled through this project in short term.

Participants also outlined the possible positive contribution of the project to prevent early school leaving. As the project addresses both cognitive and affective domains, improvements in social relations between teachers and students is expected as a result of the project. The small-scale meeting of Slovenia reported: *"digital storytelling allows the content to be personalized to individual students, stimulating their reflection and creativity, which contributes to a greater personalization of learning. If students feel more accepted and positive in the school environment as a result, it can reduce the factors that contribute*

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to dropping out of school". As objectified in the project proposal, the project serves to prevent early school leaving through its content and method.

For the macro reasons of early school leaving, participants to small-scale meetings highlighted the significance of following early school leavers and understanding the reasons for their dropping out of school. School principals and teachers in Türkiye, for example, highlighted that they cannot reach those students and the ministry of education does not ask for the reasons or numbers of early school leavers. It is also recommended by European Union to identify the factors behind early school leaving to decrease the rates of early school leavers. When the education system in Portugal as a good example for decreasing early school leaving rate is analyzed, high track system of students seem to be effective. Thus, following students and identifying the reasons behind early school leaving with authentic data is recommended by Digital Stories project to prevent early school leaving. When the factors are identified, policy improvements for dropping the rates of early school leaving must be targeted with a consortium of teachers, parents, community leaders, and students. The democratic decision making process is crucial in preventing early school leaving to better target the real problems and offer effective improvements for the disadvantaged groups.

Storytelling and digital storytelling could be used as educational materials to prevent early school leaving.

Although early school leaving is a complex problem that cannot be solved over a single step, participants to small-scale meetings emphasized that integrating storytelling into education could be particularly beneficial in fostering student involvement and making lessons more engaging. One respondent (Portugal, teacher) highlighted that storytelling is *"a fantastic way of developing narrative skills"* and could be used to *"motivate students"*, which in turn could help prevent disengagement. This suggests that storytelling can act as a powerful tool to enhance student engagement, even in cases where early school leaving is not yet a widespread problem.

Also, digital storytelling has the potential to contribute to reducing this phenomenon by offering opportunities for more engaging, inclusive and collaborative lessons. Participants pointed out that digital storytelling can help make connections between school content and real life, which is key for motivating the students. Participants noted that digital storytelling

encourages the expression of feelings and experiences, which contributes to improved managing of emotions, developing empathy and understanding others. This can improve relationships between students and teachers and create better learning communities. Research also suggests that positive school relationships contribute to educational attainment as students feel accepted by the school community (Wilkinson, Bryson, & Stokes, 2018).

In addition to building better relationships at school, digital storytelling allows the content to be personalized to individual students, stimulating their reflection and creativity, which contributes to a greater personalization of learning. If students feel more accepted and positive in the school environment as a result, it can reduce the factors that contribute to dropping out of school. Participants suggested that through storytelling, students could be introduced to the life stories of different people, highlighting the importance of schooling and how a lack of formal education can make it difficult to acquire knowledge. Although it is possible to acquire knowledge on one's own, this path is often more difficult than attending school regularly, especially for students who have learning difficulties or face personal challenges. Organized education provides more than just subject knowledge; it helps students to develop several skills that are important in their lives and thus importantly affects their future lives.

Digital storytelling combines traditional narrative with multimedia elements, allowing students to express themselves and interact with the curriculum in a personalized, relevant way. One participant (Italy, teacher) noted, "*Digital storytelling can make learning feel relevant and personal, which is crucial for students who may feel disconnected from traditional teaching methods."* By empowering students to create their own stories—often related to course content or personal experiences—digital storytelling fosters a sense of accomplishment and ownership over learning, which can be crucial for students at risk of early school leaving.

This approach also aligns well with regional adaptability. In most countries such as Italy and Türkiye, certain regions are disadvantaged in terms of physical conditions of school, families' socio-economic status and other educational feasibilities. Schools in under-resourced areas could leverage digital storytelling as a low-cost, impactful method to tailor lessons to local realities and engage students through relatable, real-world contexts. *"When students see the impact of their learning on real issues, they become more engaged,"* one participant (Italy) explained, underscoring that digital storytelling could help bridge the gap

between academic content and students' everyday lives, particularly in areas where traditional resources may be scarce.

Storytelling and digital storytelling provides interpersonal, motivational, academic and affective advantages that can contribute to decreasing early school leaving. Thus, it is recommended national and international curricula to integrate storytelling and digital storytelling to reduce the rates of early school leaving. Moreover, national and transnational projects on storytelling and digital storytelling to reduce early school leaving are recommended to be supported by European Union.

Conclusion

Digital Stories project aims to (i) integrate storytelling and digital storytelling to improve academic achievement, (ii) contribute to digitalization of education, and (iii) to prevent early school leaving through improving academic achievement. The project has reached its objectives via the results and outputs created as learning modules, teacher education and dissemination activities. Moreover, it has surpassed its objectives and targeted affective domain objectives to more effectively reach its objectives through the educational modules created with transnational cooperation throughout the project.

The small-scale meetings with different stakeholders in 4 countries (Italy, Slovenia, Portugal and Türkiye) highlighted the value of storytelling and digital storytelling as impactful tools to enhance the educational process. Storytelling fosters students' focused attention, motivation, empathy, and deeper understanding of the subject knowledge, while digital storytelling adds engagement and enables developing of students' digital skills through multimedia elements. However, challenges such as time constraints, insufficient teacher training in the use of digital tools, and the need for a thoughtful integration of digital storytelling into the curricula were also emphasized. This document presents policy recommendations to overcome those challenges to better foster European education through storytelling.

As a significant objective of European Union, digitalization of education was discussed in small-scale meetings heavily to highlight the strengths, challenges and possible solutions to these drawbacks. Key steps include raising awareness of teachers and general public, goal-oriented teacher training, presentations of best practices, and reforming curricula to include

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digital competences as mandatory objectives. This recommendation program introduces policy recommendations for a more effective integration of digital tools, materials and techniques into education. Individual, school, nation and international level policy recommendations are presented for better equipment, teacher education, and effective integration of digitalized tools and content.

The small-scale meetings also covered the long-term target of Digital Stories project, preventing early school leaving, a complicated and complex problem of schooling process. Although early school leaving is multifaceted problem having factors in and out of school, participants highlighted the possibility of Digital Stories project in improving relationships at school, affective domain improvements and contribution to academic achievement to prevent early school leaving. Although it was clearly noted that Digital Stories project cannot address all causes of early school leaving, it has a high potential to make learning more inclusive and personalized, helping students feel more connected to school. Policy makers are provided with suggestions to integrate into decision making process as integrating multiple voices of stakeholders and relying on authentic data in responding early school leaving.

In conclusion, the small-scale meetings highlighted a strong interest and commitment from participants towards educational innovation, particularly through the approach of digital storytelling. The discussions emphasized both the advantages and challenges of digitalization in education, with a focus on the need for interactive content and proper teacher training to enhance the effectiveness of digital tools. There was also broad consensus on the importance of addressing early school leaving, particularly for disadvantaged groups and at-risk students. Digital storytelling was recognized as a promising tool for engaging students, personalizing learning, and tackling early dropout, due to its ability to create emotional connections and make learning more accessible and meaningful. Overall, Digital Stories project has been addressed as an effective project in reaching its objectives and targets, creating a synergy in the meetings for future projects and collaborations.

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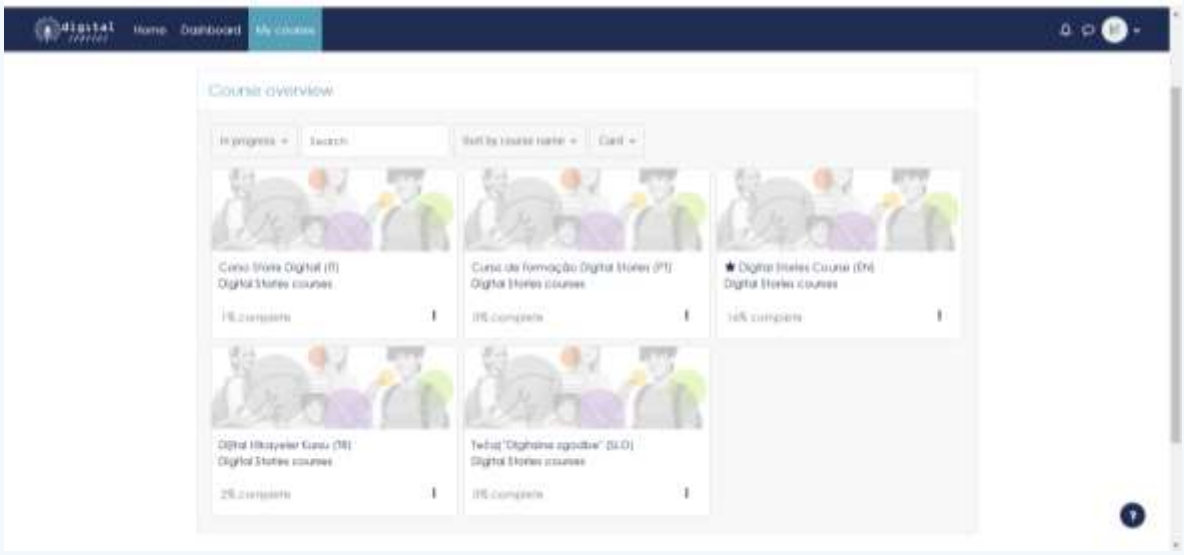
ANNEXES

Digital Stories Web page

https://www.digitalstories-project.eu/index.php

Digital Stories Platform

https://www.digitalstories-project.eu/platform/my/courses.php



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