Social Inclusion – I want to be your friend. And you?

Manual of the Intervention program developed under the DIGIT]ALL[- A new approach to digital education and inclusion - project

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DIGIT ALL

A new approach to digital education and inclusion - project

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Introduction

This manual results from the collaboration of researchers from Universidad Católica Portuguesa (UCP), University of Vienna (Austria) and University of Paderborn (Germany), under the DIGIT]ALL[- "A new approach to digital education and inclusion" project, funded by the European Commission - Erasmus+ Program, Reference: 2021 1 PT01 KA220 SCH 000032818.

One of the main outputs is the development of this manual, that presents the DIGIT]ALL[intervention program. It is an educational intervention, to be universally driven by teachers of primary education and teachers of special education, with children from 8 to 10 years old, in the classroom, with or not special needs, to promote social participation and inclusion while using digital technologies. Particularly, in each more digitalized context, we intend to explore how educational technologies can promote the inclusion of children with special needs in a pluralistic context. Participation in this program should therefore simultaneously contribute to the development of personal socio-emotional and digital skills, helping interaction with other peers.

The DIGIT]ALL[intervention was designed in 8 sessions, from 90 to 120 minutes. Each session will be divided into two shorter sessions, each lasting a maximum of 60 minutes, to be held within the same week. This procedure is better suited to the children's stage of development, given their age, and will allow them to be monitored more systematically and frequently.

Based in socioemotional learning models, it is assumed that students must play an active role in their learning and, using technologies in group activities, they could develop their personal but also digital skills to promote interaction with other colleagues in the class. With this manual, we aim to support teachers in their implementation of the intervention, with instructions and a step-by-step process toward successful administration.

To promote it, the manual is organized in three parts:

- Inclusion and Social Participation – main concepts involved in the program, namely inclusion, participation and social inclusion; theoretical model SEL (Socio-Emotional Learning) and best practices to promote inclusion and social participation.
- How can educational technologies and digital education make the difference – a review of frameworks but also tools to promote socioemotional and digital skills in the classroom, considering the specificities of each child.
- DIGIT]ALL[Intervention program – the developed intervention to promote inclusion and social participation in the classroom.

1. Inclusion and Social Participation

The subject of inclusion has undergone significant changes, both from a theoretical point of view and in the strategies for implementing it in the different contexts of the child's life, particularly in schools.

These changes are the result of studies that have been carried out in this area, which have shown that, despite the conceptual and empirical evolution, there are still considerable barriers to understanding the concept, demystifying beliefs and inclusive practices.

A systematic review of the literature (Woodgate, et al, 2019) carried out between 2006 and 2017 showed that, despite efforts to promote social inclusion, children with significant limitations continue to feel excluded, perceiving the context outside the home as continuing to present many barriers. These studies also show that, despite schools' efforts to implement inclusion development programs, situations of bullying and discrimination continue to hinder children's development, learning and well-being.

In this reflection, it is necessary to distinguish the concept of inclusive education from the concept of education for the social inclusion of children. While the first is related to the conditions that schools provide for children with significant limitations so that they can participate in the learning process, the second focuses on children's participation in society in general. Inclusion must therefore be promoted in all contexts of the child's life if it is to have an impact on development and learning (Mannion, 2003).

Social inclusion has been defined as a process that enables the participation of all citizens, namely those who are disadvantaged, through the creation of opportunities, access to resources, and respect for human rights (UNRISD, 2015).

Social participation, on the other hand, can be seen as both an effect of social inclusion and a tool for achieving social inclusion (UN-Habitat, 2013). In fact, studies on these two processes have shown a very strong relationship in both directions (Nwachi, 2021). In a study carried out by Vetoniemi and Kärnä (2019) in Finland, it was concluded that students perceived social participation in relation to their experiences of this kind in their school learning context. The results indicate that collaborative learning environments, whose pedagogical strategies are centered on the students, their differences and specificities, promote social participation for all and make schools inclusive.

According to Quick and Feldman (2011), participation and inclusion are different processes, with inclusion being the process by which conditions are created for everyone to get involved, while participation reinforces the way in which everyone gets involved or can get involved.

1.1. Socio-Emotional earning (SEL) Model

Social and Emotional Learning (SEL) refers to the structured development of cognitive, emotional, and interpersonal skills that enable individuals to form a strong sense of identity, manage emotions effectively, set and achieve meaningful goals, demonstrate empathy, establish healthy relationships, and make ethical and constructive decisions. SEL fosters both personal growth and collective well-being and is increasingly recognized as essential for academic success and positive life outcomes (CASEL, 2015; 2023).

According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), SEL is organized into five interrelated domains of competence. These competencies are not only essential in educational settings but also crucial for lifelong personal and professional success (CASEL, 2023):

a) Self-Awareness

   Self-awareness involves the ability to accurately recognize one's own emotions, thoughts, and values, and understand how they influence behavior. This competency includes recognizing personal strengths and limitations and cultivating

a well-grounded sense of confidence and purpose. Students who develop self-awareness are better equipped to assess their emotional states, reflect critically on their actions, and engage in goal setting with clarity and intention (Denham et al., 2012; Schonert-Reichl, 2017).

b) Self-Management

Self-management refers to the capacity to regulate one's emotions, thoughts, and behaviors in various situations. It includes skills such as managing stress, controlling impulses, motivating oneself, and setting and working toward personal and academic goals. Effective self-management allows individuals to persist through challenges, adapt to change, and demonstrate resilience. It is especially relevant in helping students cope with academic pressures and interpersonal conflicts (Zins et al, 2004; Jones & Bouffard, 2012).

c) Social Awareness

Social awareness is the ability to understand and empathize with others, including individuals from diverse backgrounds and cultures. It entails recognizing social norms, appreciating different perspectives, and demonstrating respect for others. This competency supports the development of inclusive and equitable environments by encouraging students to act with compassion, engage in perspective-taking, and build a sense of belonging among peers (Jagers et al., 2019; Zins et al., 2004).

d) Relationship Skills

This domain encompasses the ability to establish and maintain healthy and rewarding relationships through effective communication, listening, cooperation, conflict resolution, and seeking or offering help when needed. Strong relationship skills are vital for collaboration in academic settings, participation in group activities, and the development of leadership qualities. These skills also serve as protective factors against social isolation and peer conflict (Wentzel, 2010; Denham & Brown, 2010).

e) Responsible Decision-Making

Responsible decision-making involves making ethical, constructive choices about personal behavior and social interactions across varied contexts. It includes evaluating the consequences of actions, considering the well-being of oneself and others, and aligning decisions with moral and civic standards. This competency encourages critical thinking, accountability, and a long-term orientation toward achieving positive outcomes for individuals and communities (Oberle & Schonert-Reichl, 2017; CASEL, 2023).

SEL adopts a systemic perspective that underscores the critical role of creating equitable learning environments and aligning practices across key contexts, namely classrooms, schools, families, and communities—to support the holistic social, emotional, and academic development of all students (Figure 1; CASEL, 2023; Durlak et al., 2011). Effective implementation of SEL relies on the integration of well-designed, evidence-based programs within classroom instruction, alongside broader school-wide policies and culture (Jones & Bouffard, 2012; Oberle & Schonert-Reichl, 2017).

Embedding SEL throughout the academic curriculum and fostering collaboration among educators, families, and community organizations are essential components of this approach (Jagers et al., 2018; Weissberg et al., 2015). Such coordinated efforts promote youth agency and engagement, cultivate supportive and inclusive school climates, improve adult social and emotional competencies, and build authentic partnerships with families and communities (Adams et al., 2016; CASEL, 2023).

Figure 1. CASEL "Wheel"

1.1.1. SEL and Inclusive Education

Social and Emotional Learning (SEL) is deeply aligned with the principles of inclusive education, as both prioritize the development of equitable, supportive, and participatory learning environments. These frameworks share the goal of ensuring that all students—regardless of their abilities, cultural backgrounds, or educational needs—are provided with opportunities to succeed academically, socially, and emotionally.

In inclusive classrooms, SEL helps promote:

- Empathy and respect for diversity, by fostering social awareness and perspective-taking (Jagers et al., 2018; Oberle & Schonert-Reichl, 2017);
- Belonging and community, through the cultivation of relationship skills and collaborative learning (Wentzel, 2010; Durlak et al., 2011);
- Individual support, by enhancing students' self-awareness and helping them manage emotions and behaviors in ways that respect their unique profiles (Denham & Brown, 2010; Jones & Bouffard, 2012);
- Equitable participation, by empowering all students to engage in meaningful learning and decision-making processes (Taylor et al., 2017; CASEL, 2023).

Recognizing that students and educators operate within complex, interconnected systems shaped by social identities such as race, ethnicity, socioeconomic status, language, gender identity, and sexual orientation, it is clear that systemic inequities profoundly influence learning experiences (Gay, 2010). While SEL alone cannot resolve entrenched inequities within education, it plays a vital role in establishing conditions that enable individuals and institutions to identify, challenge, and reduce unfair policies and practices (Adams et al., 2016; Oberle & Schonert-Reichl, 2017). Through these efforts, SEL contributes to the creation of more inclusive environments that acknowledge the strengths and potential of all community members (CASEL, 2023; UNESCO, 2020).

The integration of SEL into inclusive education practices has been shown to improve academic engagement, foster peer acceptance, and support the emotional and behavioral needs of students with disabilities or from marginalized backgrounds (OECD, 2021; Sklad et al., 2012). Furthermore, literature highlights SEL as a fundamental component in achieving the goals of inclusive, equitable, and quality education for all learners (UNESCO, 2020; CASEL, 2023).

2. How can educational technologies and digital education make the difference

Literature has allowed us to understand in greater detail how people learn. Despite different designations or topologies (e.g., Jarvis et al., 2003; Schunk, 2019), there seems to be more consensus on a continuous line of theories ranging from behaviorism and cognitivism to social learning and constructivism. If classical theories, such as behaviorist ones, were based on a passive role for the student, in which the teacher could use appropriate stimuli or consequences, and all students learned effectively. Research has shown how limited this universalist view was, emphasizing the role of cognitive factors, as Piaget emphasized; social factors, modeling by observation or vicarious learning, as emphasized by Bandura's social learning theory. More contemporary theories, also known as constructivist theories, value the role of relationships, particularly between educators and children, and the promotion of meaningful activities that promote the internalization of knowledge that exists in the culture of our time. In this way, they should encourage the exercise of an active role, respond to needs that are authentic and meaningful, promoting the acquisition of knowledge but also skills for positive development.

In an increasingly digitized world, it is important to understand how to promote the use of technology in education. In the past, several authors have emphasized the positive role of technology in schools (Haleem et al., 2022; Lai & Bower, 2019; Yu et al., 2019). Authors such as Yu et al. (2019) explore how education technology and its use in schools can make the difference in the school of the XXI century. Presenting best practices of technology enhanced learning, the role of mobile, augmented and wearable technologies in instructional and content curriculum development process. But challenges emerge. Lai and Bower (2019) developed systematic review exploring the impact of technology in education analysing also how its evaluated. And understand that existing studies focused on different elements that difficult comparison, since learning, affective elements, to behaviors and design. But also consider that need to develop new, more holistic and robust measures to evaluate the impact of technology in education. Also, Hallem and colleagues (2022), point out how recent COVID-19 Pandemic contributed to institutionalize digital technologies in education, with eventual impact in a paradigm shift in the entire education system. Educational technology emerged as a knowledge provider, but the development of this field allowed the emergence of new functionalities that enable users (whether teachers, students, or others) to become co-creators, mentors, assessors, as well as other roles that may be useful for educational tasks. It is not just about making the roles of

teachers and students easier, but allowing each one to take on new roles, promoting engagement and creative freedom to create more motivating learning tasks.

At the same time, several studies point to the risks associated with digital technology. Doubts emerged about the quality of teaching and learning with ICTs (Timotheou et al., 2023), with many schools and teachers demonstrating lack of training and experience to promote significative tasks. The lack of preparation is more evident when we consider intervention to prevent school failure (Azevedo et al., 2022) or inclusion (Letzel-Alt et al., 2022). According to review of existing scientific literature, Azevedo and colleagues (2022) verify a clear lack of digital-based interventions for school failure or underachievement, despite the beneficial results of existing interventions. Also, Letzel-Alt and collaborators (2022), comparing data from teacher's perceptions and practices in three European countries, as Germany, Austria and Portugal, found differences between countries but specially the difficulties to implement a differentiated instruction using digital technologies to address vulnerable and at-risk students.

Considering the complexity and ongoing digital technology integration within the school ecosystem - and its multifaceted impact on various stakeholders - it is imperative to highlight the need for comprehensive professional development tailored to digitalized contexts. Training and dissemination of existing knowledge is crucial for understanding the interrelated effects of technological change and for facilitating effective and sustainable transformation in educational settings. More particularly, when planning to use technologies to support teaching and learning, the initial question should not be *which* tools to adopt, but rather: *how to promote learning objectives?* Our starting won't be the capabilities of the technology itself, but a pedagogical framework informed by cognitive science, educational psychology, and evidence-based practices. More than enthusiasm for innovation, effective use of educational technologies requires careful consideration of how learners engage with content, construct knowledge, and apply skills in meaningful contexts.

2.1 How to promote learning using educational technologies?

Having looked at a number of approaches to conceptualize how learning occurs from a theoretical perspective, now the question is, how might we put learning theories into practical action of using technologies to support learning. If learning theories create a conceptual framework for understanding learning, they also promote different models and frameworks to design learning activities. As example, Anna Sfard (1998) distinguished two categories of learning activities: acquisition-oriented, and participation-oriented learning activities. If the first category might involve reading a book, consulting a webpage, listening to a podcast, or watching a video;

Sfard focused also on 'participation-oriented' activities, such as using project-based learning or other methodologies that allow students to get involved in active learning. In these kinds of activities, students not only take part or participate but they can make also 'contribute' to the learning process.

A second line of research that has been gaining attention in last decades is based on the taxonomy of Benjamin Bloom (1956). Based on cognitive perspectives, a hierarchical framework for learning was proposed across three domains: cognitive (Bloom et al., 1956), affective (Bloom et al., 1964), and psychomotor (Dave et al., 1970), each outlining progressive levels from basic to advanced mastery of knowledge, skills, and attitudes. The original taxonomy pointed out several learning goals as **Knowledge** – Recall of facts and basic concepts; **Comprehension** – Understand the meaning of information; **Application** – Use information in new situations; **Analysis** – Break information into parts to understand structure; **Synthesis** – Compile information in different ways to create new ideas; and **Evaluation** – Judge the value of information or ideas. Recent revisions of its taxonomy were made (ex., Anderson and Krathwohl, 2001), as presented in the figure 2, and adaptations toward digital context (table 1).

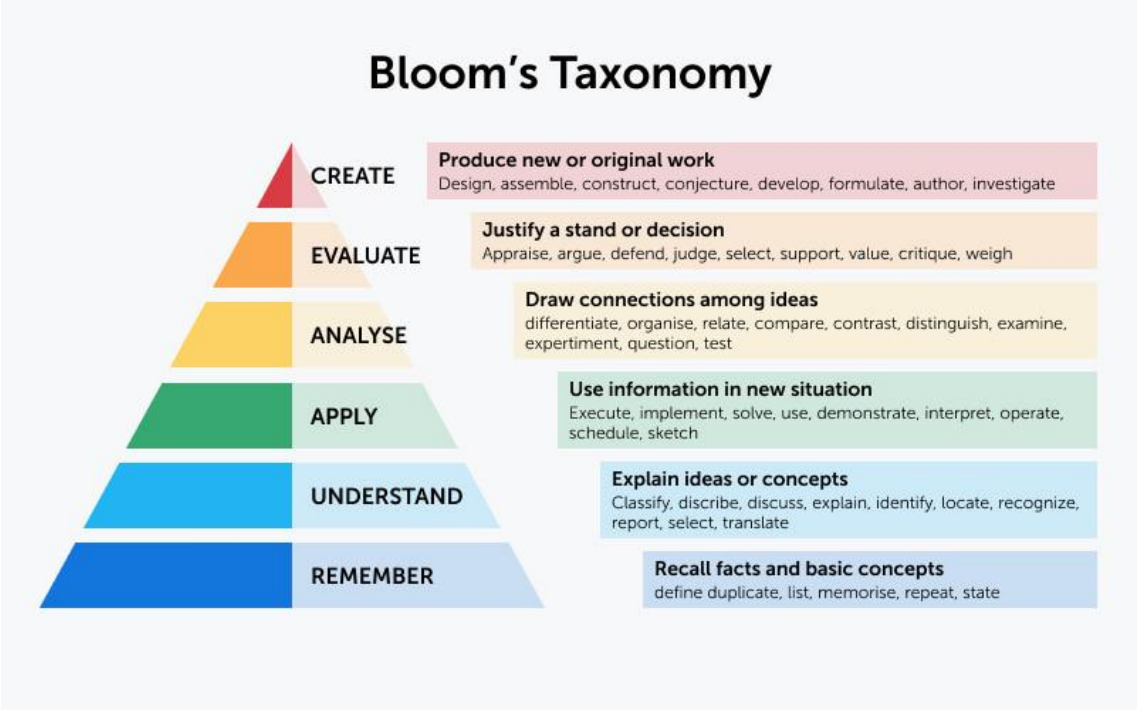

Figure 2: Bloom's Taxonomy revise (Anderson and Krathwohl, 2001)

Table 1. Digital classroom according to Bloom's Taxonomy

Level	Description	E.g., Digital Activity	Digital Tools
Remember	Recall information from memory	Identify a legitimate search engine and understand how it works	Search engine
Understand	Describe the meaning behind a graphic or passage	Categorize and tag pictures or posts	Tweeting, tagging, subscribing
Apply	Execute or implement information in simulations, presentations, collaboration, or using models	Edit a wiki page	Wikipedia, charting, calculating
Analyse	Differentiate between parts, organize them, and explain relationships	Use an online survey tool to set up and run a survey	Survey monkey, mind mapping, validating
Evaluate	Check, critique, test, or make judgments about a topic at this level	Moderate and respond to comments made on a forum, blog or other	Blogs, forums
Create	Do all of the previous forms of thinking and have reached the pinnacle of Bloom's Digital Taxonomy	Launch and produce a podcast on a topic of the curriculum	Podcast, video, blog

Another reference author is Diana Laurillard. Professor of Learning with Digital Technologies at University College London Knowledge Lab, Laurillard is one of the most influential theoretical authors exploring how we use technologies to support learning activities. Keeping pace with the development of digital technologies in education and learning, Laurillard developed a first version of the Conversational Framework in 1993, which she refined in her subsequent work in 2002 and 2012. Together with her colleagues at University College London, she created a learning design approach called the ABC Learning Design framework (https://abc-ld.org/), which has become recognized as an effective approach for developing constructivist learning pathways, strongly characterized by active learning on the part of the student.

Laurillard (2012) conceptualizes the teaching and learning process as a dynamic dialogue between teacher and learner. According to her Conversational Framework, effective learning

occurs through iterative interactions in which both parties actively engage to co-construct an understanding of a particular aspect of the world. This model emphasizes the reciprocal nature of teaching and learning, highlighting the importance of feedback, adaptation, and reflection throughout the process. The framework presents learning as interactive, dialogic, and learner-centered, reinforcing the notion that knowledge is developed through meaningful exchanges. Figure 2 provides a simplified representation of Laurillard's Conversational Framework, illustrating the core components of this pedagogical model. More information can be found at https://blogs.ucl.ac.uk/abc-ld/

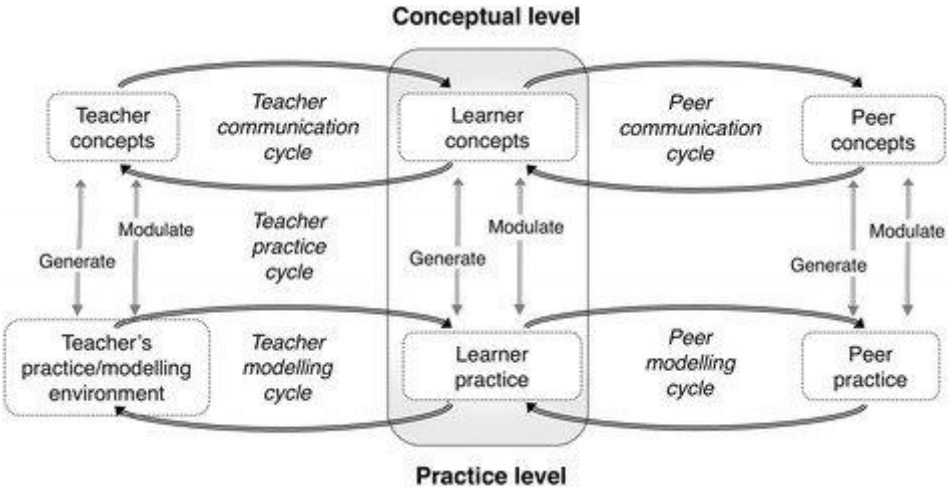

Figure 2: The conversational framework (Laurillard 2012)

Based on this model, Laurillard (2012) categorizes learning activities into six distinct types, each representing a different way in which learners engage with knowledge and develop understanding and how technologies might support different learning activities. Laurillard explains the six types of learning activities with examples of associated learning technologies (https://www.youtube.com/watch?v=TSP2YlgTldc), as presented in the following table.

Table 2. Types of learning, conventional and digital learning technologies that serve them (from Laurillard, 2012, p. 96)

Learning type	Conventional learning activity	Digital learning activities
Acquisition	• Reading books or papers • Listening teachers' presentations or lectures • Watching demonstrations	• Reading multimedia, websites, digital documents/ resources • Listening to podcasts, webcasts • Watching animations or videos
Inquiry	• Using text-based study guides • Analysing the information in a range of materials and resources • Using conventional methods to collect and analyse data • Comparing texts, searching and evaluating information and ideas	• Using online advice and guidance • Analyzing the ideas and information in digital resources • Using digital tools to collect and analyse data • Comparing digital texts, using digital tools for searching and evaluating information and ideas
Practice	• Doing exercises • Implementing practice-based projects, labs, field trips, and face-to-face role-play activities	• Using models, simulations, microworlds, virtual labs and field trip, online role-play activities
Production	• Producing articulations using statements, essays, reports, accounts, designs, performances, artefacts, animations, models, • Videos.	• Producing and storing digital documents, representations of designs, performances, artefacts, animations, models, resources, slideshows, photos, videos, blogs, e-portfolios.
Discussion	• Tutorials, seminars, email discussions, discussion • groups, online discussion forums, class discussions, blog comments.	• Online tutorials, seminars, email discussion, discussion groups, discussion forums, web-conferencing tools, synchronous and asynchronous.
Collaboration	• Small group project, discussing others' outputs, building joint output.	• Small group project, using online forums, wikis, chat rooms, etc. for discussing others' outputs, building a joint digital output.

2.2. How to promote social inclusion using educational technologies?

As demonstrated in the state of the art report, and particularly in the systematic review developed under the project (Costa et al., 2023), (i) there is a clear lack of digital-based

interventions for promoting social inclusion (ii) and in, particular, amongst primary school students; (iii) of the existing interventions, the majority focused on specific pathologies and occur at individual level; iv) nonetheless, the interventions selected for this study appears to be beneficial for the children targeted in each program.

The degree and nature of social exclusion are especially pronounced among students with social, emotional, and behavioural difficulties, as well as those with learning disabilities (Krull et al., 2018; Zweers et al., 2021), with effect on acceptance by peers, feelings of loneliness, low self-worth to depressive symptoms (Juvonen et al., 2019). According to literature and field the improvement of social participation of students in inclusive education should consider the value of social and emotional learning (cf. Elias et al., 1997) in their intervention, particularly, considering that academic learning and achievement are embedded in social processes; that is urgent to support students in their academic development, but also in their social-emotional development; that socio and emotional skills are determinant in their preparation for a life in a heterogeneous society (Mahoney et al., 2018). Going further, the supporting students with special needs do not only contribute to their development but benefit also students without SEN (Roldán et al., 2021; Ruijs & Peetsma, 2009) and contribute to a more equitable society (Shaeffer, 2019). To implement it, some success factors have been identified (Hassani et al., 2020):

- Implementation at an early stage in students' social development;
- Regular integration into lessons;
- Maintaining long-lasting and continuous approaches;
- Involvement of the entire class (not only focus children);
- Engage students cognitively, affectively, and behaviourally.

The use of cooperative methods, challenging problems or using project-based learning with heterogeneous groups are also more suitable to involve all students and allowing teachers to be more attentive to children with particular difficulties. Despite no method is universal and universally applicable, the knowledge of the class and all students and a nuanced understanding from teachers are key factors to successful interventions (Stalmach et al., 2023). In summary, while there is no strong pedagogical rationale for integrating digital technologies into teaching and learning, it is equally important to acknowledge the challenges associated with their use. Therefore, when selecting digital applications for educational purposes, several key factors must be considered:

- Accessibility for all students, regardless of socioeconomic background and health condition;

- Alignment with pedagogical goals and learning outcomes;
- Ease of use for both teachers and learners, particularly in collaborative work;
- Inclusivity, ensuring that technology does not exacerbate existing inequalities;
- And the capacity to foster active, meaningful learner engagement.

Given the constant emergence of new digital tools, it is difficult to identify a single, definitive source that educators can rely on for future use. However, educators can stay informed about current and widely used applications by consulting regularly updated resources such as Top Tools for Learning (https://www.toptools4learning.com/), which provides rankings and insights based on global input from learning professionals.

3. DIGIT]ALL[Intervention program

TECHNICAL SHEET

General Aims	Specific goals	Number, duration
• Promote the social participation and inclusion of children in the 1st cycle of basic education/primary schools, with children from 8 to 10 years old, in the classroom, with or not special needs. • Promote socio-emotional and digital skills, to facilitate social interactions between children with and without special needs.	• Know and demystify beliefs about inclusion. • Explore the concept of Inclusion and raise children's awareness. • Promote self and hetero knowledge, acceptance and empathy. • Promote self-esteem and emotional regulation. • Develop verbal and non-verbal communication skills. • Develop social interaction skills training.	• 8 sessions, lasting from 90 to 120 min. Each session will be divided into two shorter sessions, each lasting a maximum of 60 minutes, to be held within the same week.

SESSION 1: Welcome my friend

SPECIFICS AIMS:

- Pre-test evaluation.
- Promote the sense of group.
- Motivate the students for the program - what can make the class a special place, of friendship and happiness.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: Teacher and students

DURATION: 120 min or 60min + 60 min

PROCEDURE:

After a word of welcome to the students, the teacher invites them to participate in an activity that consists of filling in two questionnaires, the Perceptions of Inclusion Questionnaire (PIQ; Venetz et al., 2015) and the Social Network Analysis (Mamas et al., 2019), as well as a brief sociodemographic questionnaire. It emphasizes that this is not a test and there are no right or wrong answers, but that their answers are important to understand how to make the class a friendly space for everyone. The teacher then invites all students to complete the online questionnaire available on the project website, ensuring that everyone completes the questionnaire. After making sure that all students are on the page, he asks them to fill it out in a sincere way and without thinking too much about each question.

Once the task is finished, the teacher invites all students to participate in the program "Social Inclusion - I want to be your friend. And you?". Since school is a place of friendship and learning, all students are invited to get to know each other better and to realize how they can learn more with the help of their peers, not only about school content but about themselves and others. In this way, he motivates the students to participate in the program and counts on their collaboration in all the sessions, not only for the topics that will be presented but also for the way they will discover more about themselves and others, using educational technologies that will surprise them. For this, the teacher organizes the class into heterogeneous groups of 4

students, in which each of them is invited to share a piece of information (a quality, a surprise, something they like to do in their free time, a positive secret) that no one in the class knew. Each pupil should put, on family of tools suitable for primary school classrooms that includes various interactive, collaborative and creative platforms designed to improve student engagement and learning". Examples are: Lucispark, (https://lucidspark.com/), or other app, and post hit with their quality that the group mates know and the other groups' mates should try to guess.

The teacher should value sharing and reinforce the information shared; should use humor and value how the information shared was interesting for the group. At the end, underline how important it was for everyone to get to know each other better as a class and how each one felt better within the group. Invite everyone to participate in the next session.

SESSION 2: All different, all equal

SPECIFICS AIMS:

- Explore the value of the difference.
- Verify the impact of diversity in the classroom.
- Promote social awareness.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: students and teachers

DURATION: 120 min or 60min + 60 min

PROCEDURE

The teacher recalls the previous session, reinforcing the importance of all of us knowing each other better to face challenges and to grow as a person and challenges the students to a new activity. He/she will launch a video exploring the animal world. Starting from a movie about the differences between animals, everyone is invited to watch it carefully and then carry out a small challenge.

Thus, the teacher shows a video about the differences between animals (suggestion links in the above) and invites the students to appreciate the different animals on the planet and how each of them is important for the diversity of the ecosystem. Then, the teacher organizes the pupils in heterogeneous groups of 4 elements (different from the previous session) and invites the groups to search the internet for information about the animals. Through the Padlet platform (https://padlet.com/), or another tool recommended for this purpose, students must present three animals that surprise their classmates for their special characteristics (they must insert the image in the padlet and at least one distinctive feature). They then verbally present how these animals are special and how they contribute to the balance of the ecosystem (e.g. honey production capacity of bees and pollination). At the end of the activity, the teacher reflects on the value of difference and diversity not only regarding animals, but also regarding people (including each other). Students are invited to reflect at home, with their parents, on their own differences and talents. Each student is asked to select a photo in which they are doing

something that makes them feel good and proud of themselves and bring it to school to use in the next activity.

SESSION 3: We are all special

SPECIFICS AIMS:

- Promote self-esteem and emotional regulation.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: children in the 3rd and 4th year of primary school

DURATION: 120 min or 60min + 60 min

PROCEDURE:

After the teacher summarizes the previous session, the theme of this session "self-esteem and emotional control" is introduced. He/she mentions that liking oneself, feeling good about oneself is important for accepting others, making friends, collaborating, and helping. Following this introduction, activity 1 is explained: students are asked to make a short SMS message to share with their classmates: each child should imagine that they are their best friend and write a message to the class about what he/she likes about him/herself. Or alternatively, each child is asked to name the child in the class who is most like him/herself, justifying it with three positive characteristics. Alternatively, each child is asked to name the child in the class who is most like them and to justify this with three positive characteristics. Each child presents to the class the task they have completed. A summary is made highlighting and reinforcing the positive characteristics of each child.

The children are then more aware of seeing the differences between people with a smile, accepting them. Each child is given the name of a colleague in the class to make a declaration friendship. Each child presents their friendship declaration to their friend. The child who receives the declaration of friendship is invited to express how he/she felt and to say thank you.

In the last activity (activity 3) the class is invited to take an original photo and to name the photo together in an inclusive way.

SESSION 4: My difference matters

SPECIFICS AIMS:

- Promote Self and hetero knowledge, acceptance, and respect for others.
- Promote Self-management.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: students and teachers

DURATION: 120 min or 60min + 60 min

PROCEDURE:

The students are asked to post the same photograph of the previous lesson on the platform named FLIP (www.flip.com). In the session, the classmates are asked to place a positive characteristic on each student's profile (e.g., ask them to make a list of the students in the class and in front of each one they should place a characteristic that is different from their classmates; there can be no identical characteristics). Then, the teacher must emphasize that there are also differences among the children.

After, again in groups selected by the teacher (different from the previous ones), the students must choose one difference (special need, ethnic, linguistic, cultural) and what it can bring to each one? On the flip platform, or another tool recommended for this purpose, the students must also comment on the difference that they have chosen, saying how it contributes to making everyone richer and happier. Finally, the teacher must reflect on the differences and similarities between self and hetero knowledge. And appreciate that each person is the result of the history of their family, the place and time where they live. And it is all this history that makes us unique and special. For home, students should reflect with their parents about the session and ask parents to point out three positive characteristics that make them unique and that can help the class be a more cohesive and friendly group.

SESSION 5: Extraordinary people with disabilities

SPECIFICS AIMS:

- Promote self and hetero knowledge, acceptance, and respect for others.
- Promote social awareness about inclusion.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: Students

DURATION: **120** minutes or 60min + 60 min

PROCEDURE:

The teacher summarizes the theme of the previous session. And invites the students to share the three characteristics that their parents have identified that make them unique and special to the class and to their friends. The teacher emphasizes that everyone can contribute in a special way to others. And for that, he identifies exceptional cases; of people who we did not imagine would go through increased challenges, but who have become inspiring examples for their life path and the way they deal with difficulties.

To understand how this is possible, she challenges the class to explore cases of people with special needs who have stood out for their journey and the way they have managed to cope with difficulties. To explore these success stories, the teacher presents a set of vignettes, each one about a person, challenging the groups to choose a case and create a 2-minute podcast describing the success story as well as the reasons that can help explain their successful journey. The vignettes are based on cases described in the literature (Boudah, 2017; Kent & Quinlan, 1997) but also on notable cases in the contexts close to the students' reality, serving as a motto for reflection and for the meaning attributed to adversity and the factors that can help deal with challenges to achieve extraordinary goals.

Teachers should help students create a podcast by explaining the methodology and how to use it, as well as the different cases in a brief way so that students choose the case that interests them the most. Once developed, the podcasts are shared by the different groups and made

available on the class/school media pages. The teacher should invite the students and reflect on the main idea they learned from the activity, underlining the learning potential of each one and how environmental factors, from family, school to peers, can make a difference in one's success.

SESSION 6: What about difficulties?

SPECIFICS AIMS:

- Develop verbal and non-verbal communication skills.
- Develop social interaction skills training.
- Promote responsible decision-making.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: Students

DURATION: 120 minutes or 60min + 60 min

PROCEDURE:

The teacher should start the activity by recalling the synthesis of the previous session, underlining the potential for success that we all have and how much the school and contexts can make a difference in achieving each other's goals.

Despite advances, the literature still reveals the limits of inclusion and situations of conflict and stigma, with some studies pointing to neutral or negative attitudes (e.g., de Boer, Pijl, & Minnaert, 2012). Therefore, to explore boundaries and opportunities for all, the teacher challenges students to explore non-acceptance situations outside the class context to foster reflection on challenging situations and what can be done to best deal with it. To do so, the teacher shares vignettes with concrete challenging situations (children with diabetes; ASD; intellectual disability or other), and challenges the class, in groups, to find strategies to help peers and include children at risk. Each group should choose one of the examples and create a short video on the Powtoon platform (https://www.powtoon.com/), or another similar tool recommended for this purpose, in which they present the case and what can be done to promote social participation and inclusion.

At the end of the session, the groups share the animation videos produced and the teacher reinforces the role of the group in promoting inclusion and the importance of accepting the other in their difference.

SESSION 7: listen, talk, accept and be a good friend

SPECIFICS AIMS:

- Develop verbal and non-verbal communication skills.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: children in the 3rd and 4th year of primary school

DURATION: 120 minutes or 60min + 60 min

PROCEDURE:

The session begins with a welcome and the facilitator, with the help of the children, summarizes the previous sessions. Then, in order to make the connection with the general theme of the program, the children watch a short film "The hare and the tortoise" (activity 1). The film is followed by a discussion about the respect for others, namely that we are all important with our own specificities. The facilitator will ask questions to spark debate such as: what characteristics does the hare have that make him special? What about the tortoise? What about the other animals that appear in the film? Am I more hare or tortoise? What did the hare learn from the tortoise? And what did the tortoise learn from the hare? What role do the other animals play in this story?

Then, the next activity (activity 2) is presented, which allows reflection on the impact of communication on social relations. The facilitator/teacher draws up with the children a list of difficulties/challenges that exist in communication in the class (e.g. putting aside, ignoring a colleague who is slower to perform a task, offending a colleague with a comment). Afterwards, he/she presents to the children through an example (to be chosen by the teacher according to the class where he/she is applying the program) a situation demonstrating problems in communication and the impact on each of those involved and on the relationship between them (e.g. John tells Mary that she is fat; Mary becomes sad and no longer wants to go to the break to play, preferring to stay alone in the classroom). It discusses what caused Mary's attitude and how to solve the situation, which will include an apology and learning when and how to criticize. In this way, the children will reflect and indicate in groups "solutions" for situations of

difficulties/challenges at the level of communication. Finally, activity 3 is proposed: it is proposed to draw up a puzzle together, in which everyone is important for the execution of the task. The teacher chooses a puzzle and distributes the pieces in equal numbers to all the children. He/she indicates that they will have to complete the task successfully and with everyone's help. The teacher observes the interactions and communication records used by the pupils when carrying out the task (ideally filmed). When the group finishes the puzzle, the film is shown, which shows the way (communication and social interaction) the group used to solve the task. Everyone reflects on the positive aspects and the aspects to be improved.

The session ends with the presentation of an intersession task (activity 4), in order to prolong the effect of the skills rehearsed in the session: the class is asked to prepare a game for everyone to play and to present it through a poster.

The session ends with the advancement of activities and participation of everyone.

SESSION 8: Integration and evaluation

SPECIFICS AIMS:

- Integration and celebration of the experience.

FACILITATORS: Primary school teachers and/or Inclusive Education teachers

PARTICIPANTS: Teacher and students

DURATION: 90 min or 60min + 30 min

PROCEDURE:

The teacher briefly recalls the sessions, considering what they did in each of them, until reaching the present day. He/she should identify the activities and the message that emerged from each of the groups after all the involvement.

Based on what they have learned, you invite the students to do a joint task, producing a video celebrating the journey they have made, exploring what they have learned that can contribute to making a better world. The whole class is involved in planning the task, giving suggestions and clues for making a video on the VISME platform (https://www.visme.co/storyboard-creator/) or POWTOON (https://www.powtoon.com/).

After editing, the video should be viewed by the whole class and the journey made by everyone celebrated. How everyone has grown as a group and become more united and happier.

As a last task, they are asked to evaluate the journey they have made. For this, the same measures as in the pre-test are administered, recalling also the motivation and response of the students.

At the end of the session the students are invited to meet and are invited to an end-of-program snack.

Conclusion

This manual is the result of a collaborative effort between researchers from Universidade Católica Portuguesa (UCP), the University of Vienna (Austria), and the University of Paderborn (Germany), developed under the DIGIT]ALL[– "A new approach to digital education and inclusion" project. This initiative is funded by the European Commission through the Erasmus+ Program (Project Reference: 2021-1-PT01-KA220-SCH-000032818).

One of the primary outcomes of the project is the creation of this manual, which presents the DIGIT]ALL[Intervention Program—an educational strategy designed for primary and special education teachers working with children aged 8 to 10, with or without special needs. The program aims to foster social participation and inclusion through the use of educational technologies. It particularly emphasizes the role of digital tools in supporting inclusive practices in increasingly digitalized classroom settings, while simultaneously nurturing children's socio-emotional and digital competencies.

The intervention is structured into eight sessions, each lasting between 90 and 120 minutes, but divided into two shorter parts of no more than 60 minutes each, to be delivered within the same week. This format aligns with the developmental needs of the target age group and allows for more regular and structured engagement.

Grounded in Socio-Emotional Learning (SEL) models, the program encourages active student participation. Children engage in group-based digital activities that build interpersonal relationships, improve emotional awareness, and enhance digital literacy, contributing to a more inclusive classroom environment.

Using technology with students with special needs presents several challenges, including ensuring accessibility, addressing diverse learning styles, and maintaining engagement. Many digital tools are not designed with universal design principles, making them difficult to adapt for students with physical, cognitive, or sensory impairments. Teachers may also face difficulties in selecting appropriate tools that match individual learning needs, especially in classrooms with a wide range of abilities. Additionally, limited training and support for educators can hinder effective integration, while inconsistent

access to devices and reliable internet further complicates equitable use. Overcoming these challenges requires thoughtful planning, inclusive design, and ongoing professional development to ensure technology truly supports meaningful participation and learning for all students.

It is important to highlight that the course presented as part of this project's outcomes can play a key role in addressing the challenges related to using technology with students with and without special needs in an inclusive classroom. By offering structured training and practical guidance based on socio-emotional learning models and inclusive digital education, the course equips teachers with the tools and strategies needed to effectively select and implement technological resources. This, in turn, supports the active participation of all students and contributes to the development of both digital and socio-emotional skills, fostering more inclusive and equitable learning environments.

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