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# “ The Role of digital health in emotional intelligence: Perspectives and Implications.”

*Didactic intervention strategies*

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### **Resum**

En aquest treball s'examinarà l'impacte de les tecnologies en el desenvolupament cognitiu i emocional dels alumnes en els darrers deu anys. A partir d'enquestes a professors de centres públics i privats, mitjançant una comparació dels plans digitals implementats a Catalunya durant els períodes 2013-2018 i 2020-2023, i analitzant les polítiques relacionades amb l'ús de la tecnologia que han afectat a l'ensenyament i desenvolupament emocional dels alumnes. Finalment, es dissenya un pla d'acció tutorial (PAT), centrat en la salut digital escolar i amb l'objectiu de promoure un ús responsable de les tecnologies en l'alumnat. Aquesta proposta es recolza en teories com les proposades per Daniel Goleman i Howard Gardner, que destaquen la importància de l'educació emocional i el desenvolupament integral dels alumnes.

**Paraules clau:** *Sistema educatiu, Desenvolupament emocional, Salut digital, Impacte social, Enfocament pedagògic, Intel·ligència emocional, Tecnologies de la comunicació, Entorn educatiu.*

### **Resumen**

En este trabajo se examinará el impacto de las tecnologías en el desarrollo cognitivo y emocional de los alumnos en los últimos diez años. A partir de encuestas a profesores de centros públicos y privados, mediante una comparación de los planes digitales implementados en Cataluña durante los periodos 2013 - 2018 y 2020-2023, y analizando las políticas relacionadas con el uso de la tecnología que han afectado a la enseñanza y desarrollo emocional de los alumnos. Finalmente, se diseña un plan de acción tutorial (PAT), centrado en la salud digital escolar y con el objetivo de promover un uso responsable de las tecnologías en el alumnado. Esta propuesta se apoya en teorías como las propuestas por Daniel Goleman y Howard Gardner, que destacan la importancia de la educación emocional y el desarrollo integral de los alumnos.

**Palabras clave:** *Sistema educativo, Desarrollo emocional, Salud digital, Impacto social, Enfoque pedagógico, Inteligencia emocional, Tecnologías de la comunicación, Entorno educativo.*

### **Abstract**

In this final work, we will examine the impact of technologies on the cognitive and emotional development of students in the last ten years. From surveys of teachers in public and private schools, through a comparison of digital plans implemented in Catalonia during the periods 2013 - 2018 and 2020-2023, and analyzing policies related to the use of technology that have affected the teaching and emotional development of students. Finally, I designed a tutorial action plan (PAT), focused on

school digital health and with the aim of promoting a responsible use of technologies in students. This proposal is supported by Daniel Goleman and Howard Gardner theories , who emphasize the importance of emotional education and the integral development of students.

**Key words:** *Educational system, Emotional development, digital health, Social impact, Pedagogical approach, Emotional intelligence, Communication technologies, Educational environment.*

*"Education is the most powerful weapon you can use to change the world." - Goody, G. V.*

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## **1. Introduction**

Primary education in Catalonia is approached from an integral point of view, in which the importance of developing emotional aspects, and not only cognitive aspects, is recognized. In accordance with Decree 175/2022, of September 27, on the organization of the teachings of Basic Education, there is an upward trend in physical, mental, social and psychological aspects. Authors such as Daniel Goleman and Howar Gardner, highlighted the importance of working on mental development. Today, we live in a digital era, in which we use technology in all areas, including education. For this reason, the emotional well-being and cognitive development of students has become a particularly relevant aspect in education. The impact of technology applied to education has been so important in recent years that there has been a growing interest in understanding how these aspects affect the educational process.

This paper focuses on the concepts of school "digital health" and "emotional education". It will analyze their interaction in the current educational environment. It will examine how technologies have influenced the cognitive and emotional development of children in the last decade, based on the collection of opinions of teachers from various public and private schools through surveys.

Finally, based on the results obtained from the analysis and research, the creation of a Tutorial Action Plan (TAP) focused on digital health at school will be proposed. This plan will include specific resources that will aim to promote a responsible and healthy use of technology in the classroom. As well as promoting the emotional well-being of students in the educational environment. This proposal arises from the need to adapt educational practices to the challenges and opportunities posed by the digital era, ensuring a comprehensive development of students.

### **Justification of the proposal**

Currently, the use of technology in education is constantly expanding and evolving. The increasing integration of digital devices and technology platforms in the classroom has created both opportunities and challenges for the educational process. It is for that reason that in this final degree project I will explore how these technologies impact the emotional well-being and cognitive development of students. In addition, students' emotional well-being is increasingly becoming a crucial aspect of academic and personal success. Emotional education is not only about managing emotions, but also about building social skills, developing empathy, and promoting healthy relationships. In this sense, it is very important to examine how digital technologies can influence

these emotional aspects and how strategies can be designed. Following this model of justification, my final thesis focuses on the detailed exploration and analysis of the concepts of school digital health and emotional education. Through this study, I try to examine how technologies have impacted the cognitive and emotional development of children over the last 10 years, based on the opinions collected in surveys of teachers from public and private schools.

The research will also include a comparative analysis of two digital plans implemented in Catalonia, specifically the digital plan for the period 2013-2018 and the digital plan for the period 2020-2023. This comparison will allow us to understand the evolution of policies related to the use of technology in the educational environment and how they have impacted teaching and learning, as well as the emotional well-being of students.

Finally, based on the results obtained from the analysis and research, I will propose the creation of a Tutorial Action Plan (TAP) focused on digital health at school. This plan will include specific tasks and texts based on my findings, with the aim of promoting a responsible use of technologies, while fostering the emotional well-being of students within the educational environment. This proposal arises from the need to adapt educational practices to the challenges and opportunities posed by the digital era, while ensuring a comprehensive development of students.

**HYPOTHESIS** → “It has been observed how technologies affect children at cognitive and emotional levels and there is no plan in the schools to deal with it. “

## 2. Objectives

The objectives to be developed in the following section are divided into two categories, general and specific. The first corresponds to the general objectives that have been set in relation to the completion of the Final Degree Project. The second will be the specific objectives that have been proposed to achieve around the theme chosen to develop a comprehensive digital health and emotional intelligence education program for students in a school.

### 3.1 General objective

- ☐ To develop a comprehensive digital health and emotional intelligence education program (TAP) for students in a school to promote responsible use of technology and strengthen the emotional skills needed to navigate safely and healthily in today's digital environment.

### 3.2. Specific objectives

The specific objectives pursued by carrying out this work are the following:

- ☐ Design and implement interactive workshops and educational resources that address key digital health topics, such as online time management, internet privacy and cyberbullying prevention, integrating emotional intelligence principles to strengthen self-awareness and emotion management in digital contexts.
- ☐ Train teaching staff and collaborate with external professionals specialized in digital health and emotional well-being to ensure effective program implementation, providing tools and strategies for the integration of digital health concepts and emotional intelligence skills in the school curriculum and in the development of extracurricular activities.

### 3. THEORETICAL FRAMEWORK

*"At least 80% of success in adulthood comes from emotional intelligence", Daniel Goleman.*

#### 3.1. CONCEPT OF EMOTIONAL INTELLIGENCE

##### 3.1.1. Background of Emotional Intelligence

Before going to explain the concept of emotional intelligence, we believe it is necessary to talk about the importance of learning and being able to understand emotions. Previous theories considered knowledge and emotion to be self-directed activities, and that learning begins with "a harmonious union of knowledge, mind and body, of which phenomena (...) are an important component. an important and powerful part of the process of knowledge acquisition" (Pekrun, 1992; LeDoux 2000a, 2000b; Dalgleish, 2004, cited in Elizondo, Rodriguez, & Rodriguez, 2018, p. 4). Thanks to the contributions of authors such as Gardner (1993), Salovey and Mayer (1990), and Daniel Goleman (1999), it has been suggested that there is an alternative intelligence that includes "emotional intelligence".

Emotions arise from a complex system of brain areas, many of which are involved in learning. Therefore, we can say that when a child receives a wonderful message, the mental and emotional parts of his or her brain work together. In addition, emotions can "guide" the implementation of these lessons to classify experiences as negative or positive. Among other things, "the prefrontal cortex is the part of the brain involved in executive functions, including the correct choice of learning methods and goal setting" (Fuster, 2008, cited in Elizondo, Rodriguez, & Rodriguez, 2018, p. 4) .

According to Landazábal (2018), intrapersonal intelligence *"is the ability to know oneself, that is, to know the essence of a person and the nature of his or her heart"*. In many situations, emotions lead to the essence of different behaviours, that is why we show all situations, which vary according to the environment and our approach. Martin (2000) explains that emotions help us respond quickly to situations and communicate nonverbally with others. Reeve (2007) believes that emotion has four strands: the subjective part is responsible for providing the emotion; the biology is responsible for planning and controlling the evolutionary process; the function, i.e., the benefits that passion brings to people; and explains that this is responsible. for social communication.

On the other hand, Ekman (2003) identified four ideas that have specific characteristics, which people understand regardless of their culture, something we can confirm. Although there are many

differences in finding lists of triggers, most authors agree in mentioning fear, anger, disgust, sadness and happiness (Revee, 2007).

Understanding other people's thoughts, feelings and opinions can help you respond to them. This power is demonstrated through professional actions. "Social intelligence has two parts: the emotional part is related to empathy, and the behavioral part is knowing how to connect with others" (Giménez, 2010).

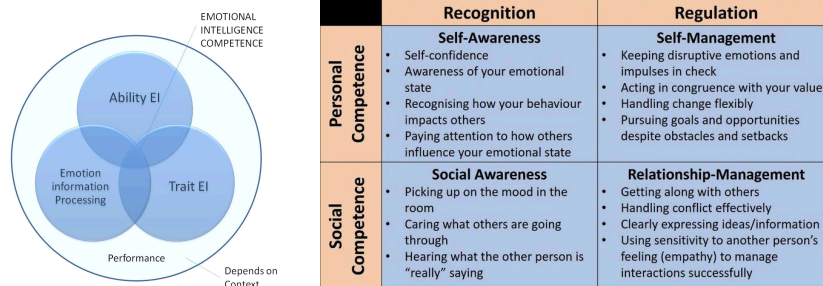
The model developed by Mayer and Salovey (1997) is the most popular. In this model, emotional intelligence is defined as a person's ability to recognize, adapt, understand and manage their own emotions and feelings (the emotions and feelings of others), which allows each individual to develop thoughts and ideas. A large part of this model is a change in the perception of the things around us and the study of each person's abilities related to his or her disposition (Mayer and Salovey, 1997). Goleman (2006) also supports the definition of emotional intelligence, which is "the ability to understand our emotions and those of other people, motivate ourselves and manage interpersonal relationships". According to this definition, we can distinguish two main parts: the ability to analyze oneself and the ability to understand other people's situations and ideas.

We can see that although each author of EI has a different explanation, they all say the same thing: EI is the ability to understand oneself and others, and to manage and act appropriately. Furthermore, Goleman (2006) said that social intelligence is created through daily experiences with parents, teachers, friends... It is considered an intelligence that can be learned and used, and therefore can be enhanced. Therefore, learning and research on kids' psychosocial knowledge is considered very important, and its assessment can be integrated into school programs, which is useful in the context of adolescence and beyond.

### 3.1.2. Theoretical models of Emotional Intelligence

Reviewing the literature on emotional intelligence, classifying the models into mixed ability and others that combine both. Daniel Goleman's model is characterized by five key components, according to emotional intelligence, and these include self-awareness, self-regulation, motivation, empathy and social skills. In the case of Bar-On's model, he proposes a model that starts from a very simple definition but hides a great potential. For him, Emotional Intelligence is "the ability to understand and direct our emotions so that they work for us and not against us, which helps us to be more effective and successful in different areas of life", it is based on intrapersonal and interpersonal

skills, and focuses on aspects such as emotional understanding, assertiveness and interpersonal relationships. Other models, such as Salovey and Mayer's, focus on four basic skills to talk about the concept of emotional intelligence, which stand out in cognitive skills, such as perceiving, evaluating, expressing and regulating emotions intelligently. As well as to understand and use them in a way that facilitates thinking. In addition, there are models that incorporate personality components and other factors, such as Cooper and Sawaf's model.



*Daniel Goleman's Model of Emotional Intelligence (Positvepsychology, 2022).*

### 3.1.2.1. Peter Salovey and John Mayer's model of emotional intelligence.

*We define emotional intelligence as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions. - Peter Salovey*

Salovey and Mayer's emotional intelligence model can be applied in several areas of life, and can help us improve our interpersonal relationships, mental health and work performance. The first instrument to measure EI <sup>1</sup>It is structured in three dimensions and asks several questions about awareness, understanding and regulation. This instrument is used to analyze the emotional intelligence of students. The following are some possible contributions and applications of Salovey and Mayer's emotional intelligence model:

<sup>1</sup> The Trait Metamood Scale (TMMS-24), is a tool used by Salovey-Mayer to analyze emotional intelligence.

## Building Emotional Intelligence in the Classroom

ASPECT	DESCRIPTION	EXAMPLE
Emotional Self-awareness	Identifying and understanding our own emotions to manage stress and make effective decisions.	Recognizing a negative emotion and taking actions like exercising, meditating, or talking to someone.
Emotional Regulation	Managing our emotions to maintain emotional balance and make rational decisions.	Applying relaxation techniques, such as deep breathing or visualization, in intense situations.
Empathy	Understanding the emotions of others to improve interpersonal relationships and responding empathetically.	Perceiving the emotions of a friend or colleague and responding effectively and compassionately to their needs.
Emotional Communication	Expressing our emotions effectively to enhance interpersonal relationships and resolve conflicts.	Clearly and respectfully expressing feelings to avoid misunderstandings and reach effective agreements.
Leadership	Understanding and perceiving the emotions of others to lead effectively in the workplace and other contexts.	Motivating the team and creating a positive work environment through the use of emotional intelligence.

Source: Own elaboration

### 3.1.2.2 Daniel Goleman's emotional intelligence model.

*If your emotional abilities aren't in hand, if you don't have self-awareness, if you are not able to manage your distressing emotions, if you can't have empathy and have effective relationships, then no matter how smart you are, you are not going to get very far. - Daniel Goleman's*

In the book <sup>2</sup>written by Daniel Goleman on emotional intelligence, he proposes and analyzes five basic components, which he highlights:

1. **Emotional self-awareness:** This means that we have something like a properly calibrated personal compass that allows us to always stay on the right path. As long as we keep in mind these inner realities, our emotional state, we will be prepared to act accordingly.
2. **Self-control:** It is very important to know how to regulate ourselves and not to verbally attack others. We have to think before making a decision and not compromise our values.
3. **Self-motivation:** It allows us to orient ourselves towards a goal. Recover from setbacks and focus all personal resources on a single goal, a single objective. If you can combine optimism,

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<sup>2</sup> Déniz, E. Q. (1997). Goleman, Daniel. *Inteligencia emocional*. Edit. Kairós, Barcelona, 1996. *Aula de Encuentro: Revista de Investigación y Comunicación de Experiencias Educativas*.

perseverance, creativity and self-confidence, you can overcome all difficulties and continue to achieve victory and success.

4. **Empathy:** There are aspects of our relationships that go beyond words. We are talking about the emotional reality of each individual.
5. **Social Skills:** And how do you interact with others? Can you communicate effectively and confidently? Do you know how to deal with conflict and differences? Goleman's theory of emotional intelligence focuses on five components:

ASPECT	DESCRIPTION	EXAMPLE
Emotional Self-awareness	Recognizing and understanding one's own emotions and how they impact behavior and relationships with others.	Improving emotional self-awareness for effective behavior management and interpersonal relationships.
Emotional Regulation	Controlling emotions and impulses to handle challenging situations and make informed decisions.	Developing skills to stay calm and make rational decisions in challenging environments.
Motivation	Maintaining focus on long-term goals, even in the face of obstacles and challenges.	Developing the ability to sustain motivation and persistence in achieving long-term objectives.
Empathy	Understanding and responding to the emotions of others to establish stronger and more effective relationships.	Enhancing interpersonal skills for empathetic communication and more positive relationships.
Social Skills	Effectively communicating with others to establish positive and productive relationships.	Developing social skills for effective communication, crucial in both business and personal environments.

Source: Own elaboration

### 3.1.2.3 Reuven Bar-On's emotional intelligence model.

*... emotional-social intelligence is an array of interrelated emotional and social competencies and skills that determine how effectively individuals understand and express themselves, understand others and relate with them, and cope with daily demands, challenges and pressures.*

*Reuven Bar-On, 2010, p. 57*

Reuven Bar-On's emotional intelligence model focuses on the development of emotional skills, such as the ability to recognize, understand and manage our own emotions and those of others. This model has been applied in various fields, including education, business, sports and mental health.



## Building Emotional Intelligence in the Classroom

Domain	Applications of the Bar-On Model
Education	Development of emotional education programs in schools to enhance the emotional well-being of students. Teacher training to enhance their ability to manage emotional situations in the classroom.
Business	Development of emotionally intelligent leaders to motivate teams, resolve conflicts, and make effective decisions. Personnel selection based on emotional intelligence as an indicator of teamwork skills and adaptability.
Sports	Improvement of athletes' performance by developing emotional skills to handle pressure, self-motivate, and recover from injuries.
Mental Health	Evaluation and treatment of emotional disorders such as depression and anxiety, focusing on strengthening emotional intelligence.
Research and Development	Ongoing exploration of new models to understand and apply emotional intelligence in diverse contexts.

Source: Own elaboration

The emotional intelligence models of Salovey and Mayer, Daniel Goleman and Reuven Bar-On, which we have analyzed above, share similarities and differences in the field of emotional intelligence. They all emphasize the importance of recognizing and understanding one's emotions, but each model has its own unique approach, reflecting the various perspectives and theories of emotional intelligence. Below I have made a table comparing the three models divided into different aspects:

	Goleman's Model	Bar-On's Model	Salovey and Mayer's Model
<b>General Approach</b>	Mixed (Emotional and Personality traits)	Mixed (Emotional and Social competencies)	Mixed (Cognitive abilities for processing information)
<b>Components</b>	- Self-awareness - Self-regulation - Motivation - Empathy - Social Skills	Intrapersonal components (Emotional self-understanding, Assertiveness, Self-concept, Self-realization, Independence)	- Perceptual - Facilitative - Understanding - Directional - Reflective
<b>Self-awareness</b>	Emphasizes understanding and managing one's own emotions.	Components include emotional self-understanding, assertiveness self-concept, and self-realization	Emphasizes perceptual and facilitative emotional skills.
<b>Self-regulation</b>	Stresses the importance of self-regulation for emotional intelligence.	Reflective regulation of emotions is a component.	Part of the facilitative emotional skills.
<b>Motivation</b>	Considered a component of emotional intelligence.	Included in the intrapersonal component (self-realization).	Part of the facilitative emotional skills.
<b>Empathy</b>	Highlighted as a crucial component for successful relationships.	Key component, along with interpersonal relationships and social responsibility.	Included in the understanding and directional emotional skills.
<b>Social Skills</b>	Emphasized for effective interpersonal dynamics.	Includes interpersonal relationships and social responsibility.	Part of the directional and reflective emotional skills.
<b>Areas of Application</b>	Organizational workplace contexts. and	Broadly applicable in various life contexts.	Broadly applicable in various life contexts.

Source: Own elaboration

On the other hand, Reuven Bar-On focuses on the development of emotional skills and highlights specific applications in education, business, sport and mental health, broadening his focus beyond everyday life. Goleman, moreover, introduces additional components and highlights practical applications in education, business, sport and mental health. In contrast, Salovey and Mayer offer more general applications in life and business, and Bar-On emphasises the assessment and treatment of emotional disorders, along with specific programs for the educational setting. Despite these variations, all models agree on the importance of emotional intelligence for well-being and success in life. Each author brings unique perspectives and specific applications, contributing to the continued understanding and development of emotional intelligence in different contexts.

### 3.2. EMOTIONAL INTELLIGENCE IN THE SCHOOL CONTEXT

#### 3.2.1. Emotional Development in the primary stage

In our contemporary society, the importance of intelligence has been emphasised, traditionally measured by mastery of classical languages and mathematical skills in the school environment. Currently, the perception of intelligence is associated with a high Intelligence Quotient (IQ), correlating it with better academic performance (Fernández-Berrocal and Pacheco, 2002).

In recent times, recognizing Emotional Intelligence in primary education has become crucial. This perspective not only contributes to the mental well-being of students but also fosters comprehensive development by promoting the acquisition of valuable emotional skills for their future (Petrides et al., 2016). Simultaneously, teachers face increasing challenges, such as disruptive behaviours and emotional difficulties, factors that can impact classroom performance and engagement. Therefore, the implementation of emotional education combined with teacher training is essential to understand and address children's emotions at this early stage and thus improve the teacher-student relationship (Serrano and García-Alvarez, 2010).

The importance of emotional intelligence in primary education lies in its ability to develop the skills necessary not only for academic success but also for socioemotional development. The integration of emotional literacy at this level creates a solid foundation that allows children to cope with different situations, build positive relationships and promote a healthy learning environment (Fernandez and Salovey, 2006, Rivera et al., 2014).

### 3.2.2. Importance of Emotional Intelligence in school

The importance of working on emotional intelligence in the classroom lies in its positive influence on multiple aspects of educational development. Prominent authors such as Daniel Goleman, a pioneer in the theory of emotional intelligence, argue that these skills are not only complementary to cognitive ones, but often more decisive for academic and professional success. In addition, authors such as John Mayer, Peter Salovey, Richard Boyatzis and Maurice Elias highlight the importance of these skills for mental health, bullying prevention, effective leadership and decision making. Taken together, emotional intelligence in the classroom creates an environment conducive to learning, emotional well-being and the holistic development of students.

### 3.2.3. Empirical studies and EI programs in Primary Education

In Catalonia and Spain, emotional education is also an important part of the school curriculum. While specific implementation may vary between autonomous communities and educational institutions, here is a list of some additional programs and approaches used to foster emotional education in primary schools:

- Fundación Botín's "Responsible Education" program is a strategy aimed at intervening in the school environment to improve child development. It is divided into three parts covering emotional, psychological and social dimensions. Its implementation in schools and individual teacher training is supported by extensive publicity and internal and external evaluation.
- The "Emotional Intelligence" project of the Provincial Council of Guipuzcoa, with the support of the Basque Government, focuses on activities to practice emotional skills in different subjects. It includes analytical methods based on research and empirical evidence.
- The "INTEMO / INTEMO +" project of the University of Malaga is supported by the governments of Spain and Andalusia and aims to promote mental health through the development of psychology. The revised version "INTEMO+" increases the complexity and efficiency of the process, focusing on teacher training and post-program evaluation. Quasi-experimental training has proven effective in increasing empathy and reducing anger, as well as promoting other health-related skills.

Among other related projects, the UPRIGHT intervention, a European psychoeducational program that has proven to be cost-effective, comes from learning to achieve. It was also mentioned that PAE's Emotional Education Guides, the Canary Islands Government's Emotional Education and Culture, the Happy Classroom project and the EMOTI project have specific methods and strong suggestions.

### 3.3. DIGITAL HEALTH

*"ONE OF THE KEY ISSUES, NOW, IS TO ASSESS THE EXTENT TO WHICH THE USE OF ICTS -RATHER -MORE THAN JUST ACCESS TO ICTS ITSELF IMPACT ON STUDENTS' COMPETENCIES".*

#### 3.3.1. Definition of Digital Health

Godoy, G. V. (2020) The Internet has arrived in our lives without warning, it has gained a privileged place in our daily lives, sweeping away everything that is put in front of it. Digital health refers to the impact of digital media, as is the case of phones and computers, and trying to find a healthy balance between the technological devices we have and our daily lives, avoiding unhealthy uses in relation to technology and favoring our physical, mental and social well-being and at all stages of life. As digital technology has become more integrated into our daily lives, the need has arisen to understand how it affects our health in a variety of ways. Digital media affects health from birth to old age, in aspects such as physical, psychological, social and sexual functioning, depending on age.

For example, increased screen time is associated with problems such as work-life balance insomnia and depressive symptoms (Twenge & Campbell, 2018).

It is very important to promote the use of information and communication technologies in a safe, responsible and healthy way, as they generate different risks that can be harmful to digital health. The objectives of digital health include the promotion of healthy digital habits, early detection of risks and related pathologies, as well as appropriate treatment to prevent future discomfort.

#### 3.3.2. Importance of digital health in education

The importance of digital health in education lies in ensuring an appropriate and balanced use of technology to enhance student learning and prevent possible negative effects on their well-being. According to the article, **TECHNOLOGY IN EDUCATION: How does it affect student performance?** of

students, authors such as the OECD (2015) highlight that it is not only the quantity of digital devices that benefits student performance, but also the quality in which they are integrated into classrooms. Likewise, authors such as the Ministry of Education and Training (2020) have formalized agreements on digital teaching skills, which highlights the importance of regulation and training in the use of technology in education.

### 3.3.3. Importance of digital health teacher training

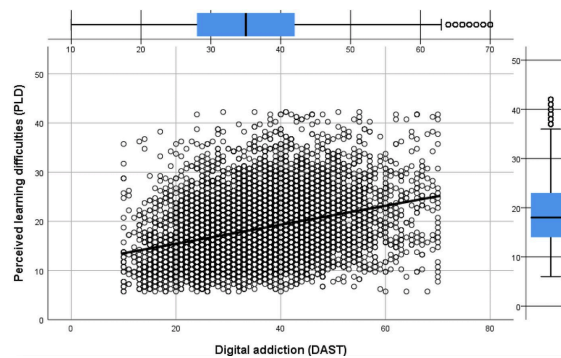
Training teachers in digital health is very important to ensure an appropriate and beneficial use of technology in the educational environment. *Authors such as the Ministry of Education and Training (2020) have highlighted the need for teachers to acquire digital competencies to effectively integrate technological tools into their pedagogical practice.* They also highlight how the lack of teacher preparation in digital competencies can explain part of the negative results in students' academic performance, as has been observed in recent years in education. Therefore, digital health training for teachers is essential to maximize the benefits of technology in the teaching-learning process and to promote a healthy and productive educational environment. In addition, teachers must be prepared to use digital tools effectively and ethically, as well as to understand how these technologies can impact patient care and health outcomes. If teachers are trained in digital health they can help students improve the quality of care in the classroom. Because if they have the tools they can control the classroom much better and have resources for children's emotional skills.

### 3.3.4. Importance of attention

According to the article, *TECHNOLOGY IN EDUCATION: How does it affect student performance?* It has been observed that when students make use of screens, it can be noticed a dispersion in the concentration and attention of students in class. Previous studies, such as the OECD (2018), suggest that the use of digital devices and the well-known "**multitasking**" can distract students from learning activities, which can negatively affect their ability to grasp information. In addition, it is highlighted that most teachers show gaps in their digitalization training, which may influence the management of students' attention in a digital environment.

According to the article *A Review of Evidence on the Role of Digital Technology in Shaping Attention and Cognitive Control in Children*, the use of computers in the classroom can affect students' attention to learning. Fried (2008) conducted a study on the use and effects of computers in the classroom during the learning process. The results indicate that the use of computers in the

classroom can indeed lead to attention and performance deficits. According to the authors, it is very important to avoid or reduce students' multitasking in order to encourage students' attention in the classroom, especially with regard to non-academic distractions. Therefore, limiting digital distractions in order to try to pay attention to academic activities may become the key to improving students' attention and concentration in the classroom.



**Figure 5.** Linear regression of digital addiction (DAST) and perceived learning difficulties (PLD) scores. Seema, R., & Varik-Maasik, E. (2023). Students' digital addiction and learning difficulties: shortcomings of surveys in inclusion.

#### 4. RESEARCH METHODOLOGY AND DESIGN

##### 4.1. Introduction:

This methodological section focuses on the development of a tutorial action plan for a charter school. Prior to its development, an exhaustive analysis was carried out through surveys addressed to several school teachers in Terrassa, in order to examine their perspectives on digital health and its impact on the emotional and cognitive development of students.

In addition, an interview was conducted with expert psychologists in digital health based in Barcelona, with the purpose of enriching the process of creating the plan by obtaining new tools and specialized perspectives.

In addition, a comparison was carried out between two digital plans: that of 2013 and that of 2023, with the aim of observing the evolution of technology in this time span and analyzing its possible influences in the educational field. This comparative analysis will provide a solid basis for understanding how the digital landscape has evolved and how this has affected educational strategies in the context of the concerted center under study.

#### 4.2. Interviews with teachers

For the creation of the digital health and emotional intelligence plan I have made more than 100 surveys to teachers from several schools in Catalonia to better understand their perceptions, knowledge and needs in relation to the teaching of issues related to digital health and emotional intelligence in the school environment. This survey consists of several questions that address their experiences, knowledge and opinions on specific topics related to digital health and emotional intelligence. The conclusions we can extract from these surveys on digital health and emotional education of students in Catalonia, with a focus on the creation of a current digital plan, are the following: [\*Annex 1\*](#) shows the survey questions, with their graphs.

After conducting several surveys to teachers of public and charter schools in Catalonia, on how new technologies influence the cognitive and emotional development of students, and what measures and supports we can use to promote digital health in students, we can extract a thorough and careful analysis of the results. We can detect that the respondents, who are both kindergarten and primary school teachers, do not feel prepared to face the situation and teach students about digital health and emotional intelligence. And therefore, it can be observed how most of the teachers have never received training on these topics. This is reflected in their lack of confidence and ability to teach these topics to students.

The digital health topic that stands out in a bulky way, is the management of screen time and balance between online and offline activities. Teachers highlight this topic over others that have very serious consequences such as cyberbullying and online privacy and protection. If teachers highlight this first topic, it is due to the excessive amount of hours that students spend on the screen, online, to the point that there is a very large imbalance between online and offline activities.

All teachers agree on the importance of implementing a digital health plan in the classroom to understand and adequately address these emerging issues and support students in their digital and emotional well-being. The main trends detected by teachers regarding students are those related to academic performance and concentration, as a lack of attention is observed in classrooms. Also others related to the way they interact and relate to each other, but less so with respect to concentration. The resources that teachers would most like to have to deal with these issues are, in a similar percentage, the advice of experts, teaching staff, specialist teaching staff and then practical activities in the classroom. Basically, human resources specialized in an area that is difficult to deal

with if you do not have the necessary knowledge and tools. They also see useful practical activities in the classroom to help students develop skills related to digital health and emotional education.

#### 4.3. Interviews to psychologists experts in digital health

The first interview was conducted by a psychologist, social educator, trainer and coach. He is currently part of the psychologist company *Salud y Pantallas*<sup>3</sup>. It is formed by psychologists specialised in Digital Health and work with families and people of all ages and have expertise in addictions and as a trainer in companies.

- 1. What do you see as the main challenges for psychologists in developing a comprehensive digital health and emotional intelligence educational program for students to promote responsible use of technology and strengthen the emotional skills needed to navigate safely and healthily in today's digital environment?**

I will quote 4: The deterioration of family situations in relation to screens. The inequality of forces between family and GAFAM and the porn industry, or video games, for example. The relaxation of the school institution and administrations at all levels in the protection of health. The fact that there are components of innovation and development in the screens, i.e. positive things unlike traditional fights against, for example, drugs that "do not have that component of development and innovation".

- 2. From a psychology perspective, what strategies do you suggest for designing an effective program to foster both mental health and emotional intelligence for students in a digitized school environment?**

Bruce Lee used in martial arts "Be water My Friend" This was to use the strength of the opponent's attack as a force to avoid aggression. Using the highly addictive component of screens to prevent or restore the health, academic performance, or social, emotional or behavioral development of children.

- 3. How can collaboration between psychologists with expertise in digital health and educators contribute to the successful development and implementation of educational**

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<sup>3</sup> *Salud y pantallas, psicólogos especializados en salud digital en Barcelona.* (s. f.). Salud y Pantallas, Psicólogos Especializados En Salud Digital En Barcelona. <https://www.saludypantallas.com/>



*programs that address both responsible technology use and strengthening students' emotional skills in today's digital context?*

A training policy to involve parents in this task. Review the use of screens in the academic context. But encouraging the coordinated work of Family-Tutors-Programs for the change of habits is a good strategy in the centers where it is used.

#### **4.4. Comparative digital plan analysis**

My investigation to then carry out the tutorial action plan, focuses on the comparative analysis of two digital plans implemented by the Department of Education of Catalonia. On the one hand, I will examine the *TAC Plan* <sup>4</sup>(2013-2018), and on the other, the *Digital Plan* <sup>5</sup>for the period (2020-2023). Through this comparison, I would like to understand the evolution of educational policies related to the use of technology in the school environment during these two time periods. Deeping into this analysis will allow us to identify the changes, priorities and challenges that have arisen in relation to the integration of information and communication technologies (ICT) in Catalan classrooms over these years.

##### **4.4.1 Goals and priorities:**

According to the current and valid plan of digital education 2020 -2023, its main objective is to make Catalonia a leader in the educational use of technology. In addition, the plan informs us that they want to ensure digital mastery and competence to all students at the end of compulsory education, and also to train many more teachers in this competence. For this plan to work, they want digitally competent teachers. The objectives of the 2020-2023 digital plan are the following: As I said before, to try to ensure that students in Catalonia are competent at the end of the compulsory secondary stage, to increase the number of teachers and that they have to accredit digital competence, which is understood as a key competence of the 21st century, and finally that Catalonia has digitally competent centers that facilitate the learning of all students.

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<sup>4</sup> *El Pla TAC de centre*. (s. f.). Departament D'Educació.  
<https://educacio.gencat.cat/ca/departament/publicacions/colleccions/tac/pla-tac-centre/>

<sup>5</sup> *Pla d'educació digital de Catalunya (PEDC)*. (s. f.). Departament D'Educació.  
<https://educacio.gencat.cat/ca/departament/linies-estrategiques/pla-educacio-digital/>

On the other hand and with respect to the TAC Plan of Catalonia 2013-2018 we also found that it already sought to position Catalonia as a leading country in the educational use of technology. And that had the following objectives:

Promote the digital transformation of the learning environment and develop students' digital skills. Comparing these objectives, it is worth noting that the Digital Catalonia Plan 2020-2023 and the TAC Plan of Catalonia 2013-2018 contribute to the preparation of students and teachers in digital skills. However, the Plan Catalunya Digital 2020-2023 shows the creation of a digital environment in education reform to promote learning, while the Plan Catalunya TAC 2013-2018 shows how to make Catalonia a leader in education using technology.

#### 4.4.2. Strategies and actions:

We will now analyze and compare how concrete actions to promote the use of technology and the development of digital skills have changed. Both at the current digital level and at the TAC level. *In the Digital Education Plan of Catalonia 2020 - 2023*, several strategies and actions have been defined to improve digital competence in the classroom and promote the use of technology in education. First, the plan proposes to define a permanent teacher training aimed at achieving digital competence in teaching. This is to provide teachers with the necessary tools and knowledge to integrate digital technologies in the classroom and promote their effective use in the teaching-learning process. The plan also proposes to evaluate the digital competence of students at different educational levels, as well as their digital skills in order to adapt educational practices to improve them. Also, they propose to promote the use of technology as a pedagogical resource to adapt to the needs and learning preferences of students. And thus be able to design specific actions aimed at students in vulnerable situations to ensure digital equity. This means that all students, regardless of their socio-economic status, have access to the same digital learning opportunities, which is another objective of the current digital plan.

The strategies proposed in the 2013-2018 TAC Plan for Catalonia to promote digital literacy in the classroom include various measures to improve the use of technology and develop digital skills and engagement. How can we ensure that students acquire the skills they need to overcome the digital challenges of the future? And use technology not only as a tool for learning, but to support innovation in education and technology worldwide, equal access and use in all schools. For this

reason, Catalonia's two digital plans, the Digital Education Plan 2020-2023 and the TAC Plan 2013-2018, promote digital literacy in the classroom and ensure that all students have access to technology, regardless of external factors. We have common goals, like the economy.

The digital education plan focuses much more on teacher training and actions. The TAC plan pursued a broader digital transformation of schools and positioned Catalonia as a leader in the educational use of technology.

#### 4.4.4. Resources and support:

We will now analyze teacher training, the creation of digital content and the improvement of the technological infrastructure in the two plans. In the Digital Education Plan 2020-2023 we can see various resources and support to manage teacher training, the creation of digital content and the improvement of technological infrastructure in schools. Teacher training will be done through the creation of a professional portfolio platform to facilitate teachers the registration of educational resources, so that teachers can access resources and support to improve their digital skills and integrate them into the classroom. On the other hand, it is proposed to establish a coordination framework with universities to ensure the achievement of digital teaching competence in the initial training of university students, who previously worked at school. This implies providing future teachers with the necessary tools and knowledge to create innovative digital content adapted to the needs of students. And finally, the technological infrastructure in schools must be improved to ensure that teachers have within their reach the necessary tools and resources to integrate technology in the classroom.

Regarding the Tac Plan, we can analyze that it seeks to ensure equity in access and use of technologies to all schools and, as for the management of teacher training, they wanted to seek courses for training in digital skills for teachers, and establish support networks between schools to share best practices in the use of technology in the classroom, and also to share any doubts that arise.

If we compare the TAC plan with the digital plan 2023, we can conclude that in the current plan there is a greater focus on teacher training in digital competence, the creation of digital content and the improvement of technological infrastructure in schools. These actions reflect the importance of offering the necessary tools to teachers to promote an effective use of technology in the classroom and improve the digital competencies of students, something that was not valued in the TAC Plan.

#### 4.4.5. Results and assessment:

Below, we look at how to evaluate the results of these two programmes and how they differ over time. It also looks at what metrics are used to measure the success of digital innovation. In the TAC programme, we are evaluating the results of activities such as monitoring the activities planned in the programme, analysing the use of technology by teachers and students in the classroom, analysing the integration of technology in teaching and evaluating technology development. As you can see in the TAC system the results of things done are evaluated, such as following the information provided in the TAC system, evaluating the use of technology by teachers and students in the classroom, evaluating technology in the classroom. Integrating technology in teaching and evaluating teachers' and students' digital skills development.

In addition, the TAC plan includes many activities such as increasing the number of teachers with digital skills, increasing the use of technology in the classroom by teachers and students, improving the digital skills of teachers and students and improving the university. The impact of technology on learning outcomes and student engagement. It is important to carry out evaluations to measure the success of the development of digital competences and the results of the actions implemented within the TAC programme in Catalonia. This allows us to look at this analysis to improve what is needed.

On the other hand, according to the Catalan Digital Education Plan 2020-2023, it is known that a monitoring and evaluation process is foreseen to assess the results and outcomes of the work done during this process. Some evaluation methods and indicators used to measure the success of digital skills development but not implemented in TAC PL include:

Also, it is proposed the development of the student's personal learning dossier in digital support to collect data, analyze them and make decisions related to the consequences of digital competence. This tool will allow individualized monitoring of the evolution of students' digital competencies and the adaptation of educational interventions according to their needs.

Through this monitoring and evaluation system, the plan aims to effectively measure the impact of the actions implemented in the development of digital competence in Catalonia, and that the PLA TAC did not contemplate consequences or measures that could arise due to ICT.

## 5. TUTORIAL ACTION PLAN (PAT)

### 5.1. General principles of tutorial action

It has been observed that the excessive use of screens in students is causing serious cognitive as well as emotional problems among students. To address this issue, we propose a tutorial action plan for teachers and the entire educational community to facilitate the promotion of children's digital health and improve their emotional skills in the classroom. Regarding personal and social skills, it is crucial to foster their autonomy, personal initiative, as well as emotional and moral development. We understand that guidance and tutoring of students is the responsibility of all teachers. This implies not only the specific actions of the tutor, but also the individual and group interactions that each teacher maintains with the students.

The tutorial action is aligned with the identity and values of the center, reflected in its mission and vision:

**Mission:** To provide comprehensive training that promotes the digital health of students, equipping them with the technical and emotional skills necessary to meet the challenges of a digital society.

**Vision:** To develop an educational environment that prioritizes the digital health of students, through innovation and continuous adaptation to the needs of students in the digital age.

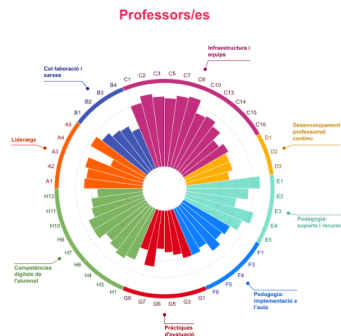
### 5.2. Contextualization of the center

The chosen school is an educational center that offers a great education for life. With a long history of comprehensive training, it welcomes children from the age of 3 and accompanies them until they reach the age of majority. It has 4 lines up to ESO. In addition, it stands out for its multilingual educational offer in English, French and German, being a pioneer in the city in offering official qualifications. The center places a strong emphasis on education in values, promoting emotional management and the personal development of the students. It also integrates a music school to provide a complete education and ensure the integral formation of the students.

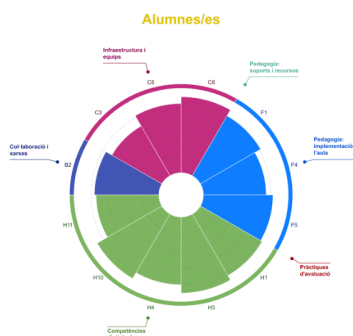
At an economic level, it is a center subsidized by the Generalitat de Catalunya and is registered in the register of Religious Entities. In addition, its innovative pedagogical project, the SUMMEM project, recognized as innovative by the Generalitat de Catalunya, stands out.

### 5.2.1. Digital strategy plan

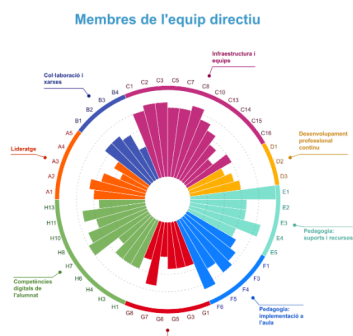
After analyzing the digital strategy of the center we have chosen to make the tutorial action plan, we can observe different points of improvement:



The teaching team would need more temporary spaces for the exchange of experiences in order to improve practices with the use of digital technologies. The teaching team could improve the feedback they give to students using digital technologies.



Our students would like to talk more with teachers about the use of digital technology in the learning process and how to use it.



The graph shows how teachers do not have enough time to explore how to improve their teaching method using digital technologies. They propose increasing collaborations and/or synergies with other centers or organizations to support the use of digital technologies.

### 5.3. General and specific objectives

Raise students' awareness of the importance of digital health, with its benefits and the possible negative effects of excessive use.
To prepare students with practical strategies to effectively manage their screen time.
Empower students to manage online risks, including cybersecurity, and cyberbullying, promoting a safe and respectful digital environment.
Foster the development of emotional competencies, such as stress management, resilience and empathy.
Enhance cognitive skills, such as concentration, memory and problem solving, through educational activities and the critical use of information and communication technologies.

### 5.4. Contents

In relation to the objectives of the PAT, the contents have been structured in two blocks. The first one refers to Awareness and Management of the Use of Technology and the second one to the Development of Emotional and Cognitive Competences.

	<b>Block 1: Awareness and Management of Technology Use.</b>
1	<b>Digital Awareness Workshop</b>
2	<b>Debate on Responsible Use of Technology</b>

	<b>Block 2: Development of Emotional and Cognitive Skills</b>
<b>1</b>	<b>Development of Emotional and Cognitive Skills</b>
<b>2</b>	<b>Cyber Assetjament Role Playing Games/ Simulation of Online Emergency Situations</b>

5.5. General planning of actions (by area, target groups, school year,...)

In [ANNEX 2](#) you will find all the activities of the blocks mentioned above, well detailed with all the activities, timing, groups and material.

5.6. Coordination and follow up of the actions (tutoring, MP, work plan,...)

- Teaching hours: the hours of the workshop, two per month.
- The management considers that it should have them, but it depends on the center's resources. Person in charge: PAT coordinator
- Number of meetings: 3 during the school year. 1 per trimester with tutors: PAT follow-up. Other meetings with study heads, cycle coordinators and other coordinators.

5.7. Distribution of functions in relation to the TAP.

**Functions Study leaders:**

- Final responsible of PAT follow up.
- Coordination with PAT coordinator (document, activities, supervision of activities carried out by tutors with the class group).

**PAT coordinator functions:**

- Coordination with tutors and cycle coordinators to follow up on the established TAP program and other issues related to the TAP.
- Updating of the document and action protocols.
- Coordination with study coordinators

**Functions of the cycle coordinators:**



- Meeting with tutors of the cycle to program the actions from tutoring.
- Meeting with the coordinator of the PAT
- Functions of the coordinator of the plan of coexistence:
- To make the study of needs of the center regarding the improvement of the plan of coexistence of the center with the Direction.
- To propose a plan of coexistence of the center.

***Functions of the tutors:***

- To monitor the learning process and personal development of the students in their tutoring, as well as their integration into the class group.
- To control the attendance of the students, according to the criteria established by the school management.
- To carry out the Tutorial Action Plan.

## **6. Conclusions**

First of all, we can conclude that the general and specific objectives I proposed at the beginning of this final degree project have been met by designing strategies that address key digital health issues, such as online time management, internet privacy and cyberbullying prevention, integrating principles of emotional intelligence to enhance self-awareness and emotional management in digital contexts. Also, my initial hypothesis *"It has been observed how technologies affect children at cognitive and emotional levels and there is no plan in the schools to deal with it."* has been confirmed throughout the research. It highlights the need to implement a Tutorial Action Plan focused on digital health in schools to effectively address the challenges and opportunities posed by the digital era, thus ensuring a comprehensive development of students.

We can conclude with the theoretical and methodological part of this work, as the surveys conducted by teachers from public and private schools, highlight the need to work on digital health and emotional intelligence in the school environment, as it has been shown that it is a very present issue today and in which effects are being observed in students and it is not being addressed in schools. In addition, it has been observed how the use of technology in the classroom disperses students' attention, affecting their performance. Digital multitasking and lack of teacher training in digitization are key factors. Therefore, reducing digital distractions is crucial to improve concentration and learning in the educational environment. The theory on the cognitive and emotional development of students is reflected in the responses of the teachers, who highlight the lack of preparation and training for these important and present issues today, and that schools do not work and do not receive the necessary training to address these issues, as can be seen in the methodological part. Therefore, these teachers recognize the importance of implementing a digital health plan in the classroom, to address the challenges they face and support the emotional well-being of their students. Time management in front of screens and the balance between online and offline activities, as well as lack of concentration in class are highlighted as priority issues. In this context, the need to provide resources and tools to teachers to effectively address digital health and emotional intelligence in the educational environment is also highlighted.

For this, the creation of a Tutorial Action Plan on digital health in schools is presented as the solution to these challenges that arise in the digital age, and provide students with skills for this world that is increasingly technological and emotionally complex. Highlighting the theoretical part of the present work on digital health and emotional education in school environments is closely related to the book *"El seu primer mòbil: bones pràctiques per a la família digital"* by Godoy, G. V. (2020), which provides guidelines and recommendations to promote a healthy and responsible use of technology in the

family environment, since at school we can carry out some sessions and a tutorial action plan to address the issue but the family role is extremely important in the era of digital health and to promote good emotional development for their children. Tutorial action plan sessions are focused in this work, which makes us a reference to address issues such as screen time management, technology addiction and online safety, relevant aspects for both parents and educators. In addition, authors such as Mayer and Salovey (1997) have highlighted the importance of emotional intelligence in the educational field, emphasizing how the development of emotional skills can influence the well-being and academic performance of students. Likewise, Martineaud and Engelhart's (1996) work on the emotional intelligence test provides tools to assess and promote emotional competence in the school context.

Therefore, the integration of concepts and recommendations of authors such as Mayer, Salovey, Martineaud, Engelhart and the reference to the book *"El seu primer mòbil"* in the academic work contributes to enrich and support the proposals to improve digital health and emotional education in the educational environment.

In relation to the analysis of the two digital plans, both the digital plan of 2013-2018 and the digital plan of 2020-2023, it can be seen how there has been an evolution with the use of technologies in the classroom over the years, they have been adapted to the educational needs and technological changes. In addition, the current plan emphasizes that teachers must have a high digital competence, compared to the previous plan, which indicates a recognition of the importance of training teachers to work and integrate technologies in the classroom. In the current plan, there is a concern in the evaluation of these technologies in the classroom, in the need to follow up and thus be able to observe the digital learning of students. On the other hand, the importance of emotional education and the negative effects that technologies can have on students are not highlighted in these plans.

That is why in the present work and in the tutorial action plan the importance of promoting a responsible and healthy use of technology among students is highlighted, considering the effects on their cognitive and emotional development. The importance of collaboration between digital health psychologists, educators and other professionals to design effective programs that address both the digital health and emotional intelligence of students is stressed. A preventive approach is proposed to address problems such as cyberbullying, screen addiction and online safety, highlighting the need to proactively intervene in these aspects. And all these aspects are included in the tutorial action plan, based on the theoretical framework, books and opinions of the authors, as well as the

reflections of teachers in Catalonia, psychologists specializing in digital health and a comparison of the two digital plans in Catalonia to observe the developments and objectives in schools in Catalonia.

### **7. Limitations and future perspectives**

It has been possible to find limitations and perspectives in the present work. On the one hand, and referring to the limitations, we could say that the surveys were conducted only with teachers from Catalonia, so we cannot generalize results from other educational backgrounds and contexts. In addition, the analysis focused only on teachers, so we do not know the opinions of students on the issue of digital health. On the other hand and according to future perspectives, surveys could be conducted to other countries to know the opinions of teachers in other school contexts, we could ask students to understand their strategies and have a more representative view. Also, one would have to evaluate the impact of the proposed TAP-based pilot program to measure its effectiveness in promoting digital health and emotional well-being of students. Also to be able to investigate new technologies, as is the case of artificial intelligence, and how they affect at the emotional and cognitive level in students.

### **8. Recommendations for future research**

For future work, we could conduct long-term research to evaluate digital and emotional health interventions on student development. We could also analyze how digital and emotional health interventions influence students' overall well-being, including their academic performance. Other proposals that could be investigated would be how the time students spend in front of screens affects the physical and mental health of students, and we could analyze how we can use technologies to foster skills such as empathy or self-esteem in students. We could also work on the role that families have in the use of technologies by students and how they influence depending on the context in which they are: charter schools, rural schools, schools of maximum complexity .... And finally, we could analyze how to effectively integrate digital and emotional health education in the school curriculum, considering the needs and demands of today's digital society.

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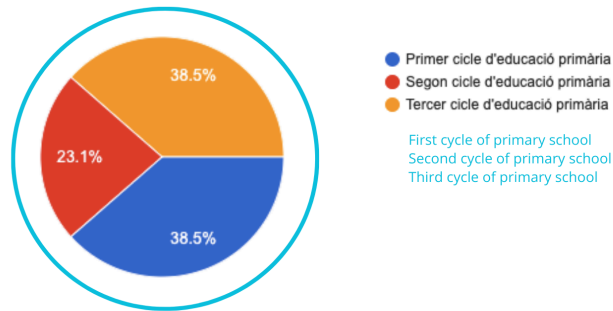
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## 10. Annex

### ANNEX 1: *survey questions*

Educational level in which you work:

Nivell educatiu en què treballa:

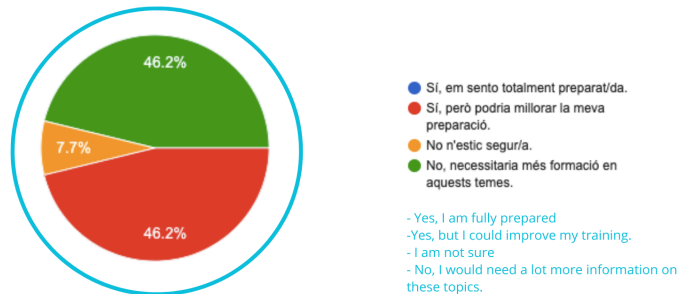


#### 2. Habilitats per a l'Ensenyament:

**Se sent preparat per ensenyar als estudiants sobre salut digital i intel·ligència emocional?**

Do you feel qualified to teach students about digital health and emotional intelligence?

[Copy](#)



## Building Emotional Intelligence in the Classroom

En cas que hagi rebut una formació, pots especificar el centre, professional, material etc...

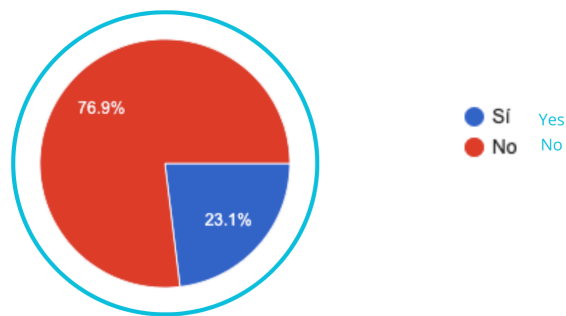
In case you have received a training, can you specify where?

Universitat de València	Universitat de València
SomDocents	SomDocents
SomDocents	SomDocents
Som docents	Som docents
SomDocents	SomDocents
Som docents	Som docents
SomDocents	SomDocents
Som docents	Som docents

Heu rebut alguna formació o capacitat prèvia sobre aquests temes?

Did you receive any training on these issues?

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### 3. Interessos i Necessitats:

Quins temes relacionats amb la salut digital considereu més importants d'abordar a l'aula?

What topics related to digital health do you consider most important to address in the classroom?

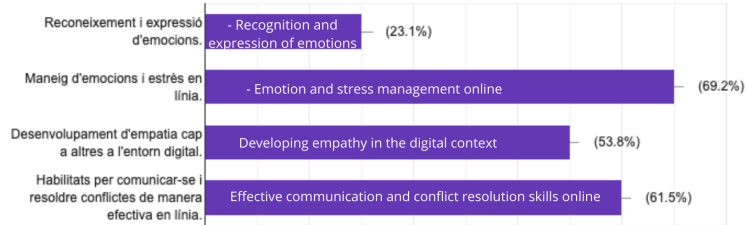
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## Quins aspectes de la intel·ligència emocional creus que són més rellevants per als estudiants d'educació primària al context digital?

What aspects of emotional intelligence do you think are most relevant for elementary school students in the digital context?



## Creus que hi ha una necessitat urgent d'abordar les preocupacions sobre la salut digital a les aules? Per què?



- Si, a causa dels impactes negatius observats als estudiants.
- No, considero que el problema no és urgent.
- No estic segur/a



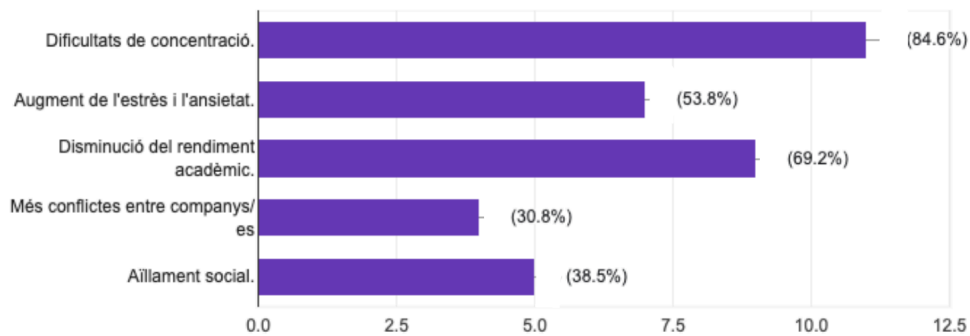
## Consideres necessari implementar un pla de salut digital a les aules per abordar els desafiaments relacionats amb l'ús de la tecnologia per part dels estudiants?



- Si
- No

**Quins canvis o tendències has observat en el comportament dels estudiants relacionats amb l'ús de la tecnologia els darrers anys?**

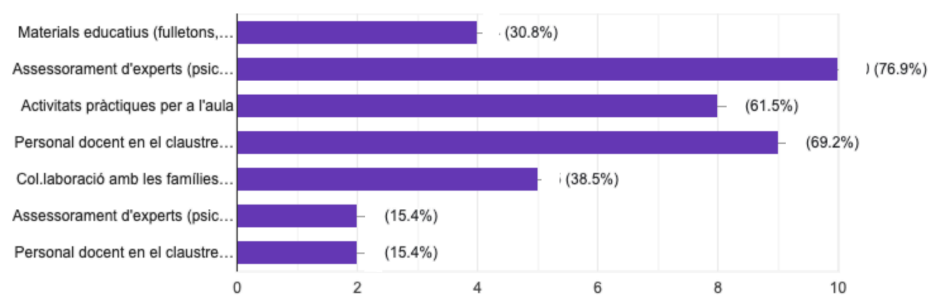
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#### 4. Recursos i Suport:

**Quin tipus de recursos o eines us agradaria tenir per ensenyar sobre aquests temes de manera efectiva?**

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## ANNEX 2: General planning of actions

<b>Block 1: Awareness and Management of Technology Use.</b>		<i>Digital Awareness Workshop</i>	<b>Age:</b> Fifth and Sixth grade of primary school
<b>Activity:</b> Exploring the Digital World: Awareness and Trust on the Web			<b>Duration:</b> 2 weeks, one session of one hour each week
<b>Description:</b> In this activity, which will last approximately two sessions, students will explore the concept of circles of trust online, working in groups to identify and discuss the people they trust in digital environments, such as friends, family members and trusted adults. They will do this using a trust circle template, where children will draw or write the names of these people at different levels of the circle, reflecting on the importance of establishing healthy online relationships. Also in the second session, students will reinforce their understanding of online circles of trust and develop strategies for maintaining healthy relationships in the digital world. In this second session they will work individually to identify concrete actions they can take to strengthen their circles of trust, such as setting boundaries and protecting their emotional privacy online. Finally we will conclude the activities by debating, sharing and discussing these strategies, before creating a personalized plan to apply these actions in their daily online lives.			
<b>Specific objectives</b>	<b>Topic</b>	<b>Key skills</b>	
Identify trusted people online.	The main topic of this didactic sequence would be about healthy online relationships and circles of trust. In these two activities we will focus on exploring how students can establish positive and safe relationships in digital environments, identifying the people they trust and learning to differentiate with whom to share information online.	<ul style="list-style-type: none"><li>- Identification Skills</li><li>- Communication Skills</li><li>- Critical Thinking Skills</li><li>- Self-Management Skills</li></ul>	
Learn to discern with whom to share information in digital environments.			
Reflect on the importance of establishing circles of trust online to protect our emotional safety.			

Sequence of the teaching-learning activity	Classroom organization	Temporization	Methodology	Resources	Location
Topic Introduction (10 minutes)	In a circle all in the middle of the class.	10'	Explanation of the concept of online circles of trust and their importance in establishing healthy relationships in digital environments.	Tool to understand how trust circles work, and educational video to put in the classroom: Family Finding and Engagement Tools. (2020,December 8). Circles of Trust Tool [Video]. YouTube. <a href="https://www.youtube.com/watch?v=eYwzF4K8Pog">https://www.youtube.com/watch?v=eYwzF4K8Pog</a>	Classroom
Group Activity (30 minutes) <b>Session 1</b>	Formation of small groups, by tables in the class.	30'	In small groups they should discuss the people they trust online, such as family members, close friends and trusted adults. In groups create a list.	<a href="#">Annex 2.1.</a> You will find the <b>template of the circles of trust</b> that will be distributed to the students.	Classroom

Creating Circles of Trust (15 minutes) <b>Session 1</b>	Formation of small groups, by tables in the class.	15'	A Circles of Trust Poster template is distributed to each group. In groups they should draw or write the names of the people they trust in each section of the circle. the names of the people they trust in each section of the circle.	<a href="#">Annex 2.1</a> . You will find the <b>template of the circles of trust</b> that will be distributed to the students.	Classroom
Individual Activity (10 minutes) <b>Session 2</b>	Individually by tables in classroom spaces.	30'	Students individually will be asked to reflect on how to strengthen online circles of trust. On a piece of paper they will have to write down actions they think can help them to maintain healthy relationships and protect emotional safety in digital environments.	Attached is a video of a lecture on safe spaces on the Internet for teachers to view and have a guide: Mental Health America Webinars. (2023, September 12). <i>Safe Spaces: How digital Environments Can Serve Youth</i> [Video]. YouTube. <a href="https://www.youtube.com/watch?v=ArHc22xPmWA">https://www.youtube.com/watch?v=ArHc22xPmWA</a>	Classroom
Paired Sharing (30 minutes) <b>Session 2</b>	In pairs in the classroom.	10'	Once they have the list completed, students should pair up and share ideas. Then together they have to	In <a href="#">annex 2.2</a> : you will find an example of a <b>poster on digital health</b> . In addition, I also attach a guide for	Classroom



			create a poster to share with the other classes and the school.	teachers on strategies that students should write. <i>OECD legal instruments.</i> (n.d.). <a href="https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0389">https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0389</a>	
Reflection (5 minutes)	In a circle all in the middle of the class.	5'	Closing the session with a brief reflection on the importance of online circles of trust and how they can help protect our emotional safety in digital environments.	In <a href="#">annex 2.3.</a> you will find a teacher's <b>guide for conducting a discussion</b> on digital health in the classroom.	Classroom
<b>Measurements for special education needs and evaluation:</b>					
Materials will be made more visual, such as pictures and large print for the trust circle template, as well as the inclusion of tactile materials if needed. We will also reduce instructions, make use of pictures if necessary, and provide individual support throughout the activity for those students who require it. For students who need an individualized support plan, one will be created for them with all adapted activities. For evaluation, teachers will make a direct observation of student participation in the activities and posters created. They will also provide feedback to the school in case we need to modify the activity.					

<b>Block 1: Debate on</b> <i>Awareness and Management of Technology Use.</i>		<b>Age:</b> Fifth and Sixth grade of primary school
<b>Responsible Use of Technology</b>		
<b>Activity:</b> Browsing Responsibly!: Debate on the Responsible Use of Technology		<b>Duration:</b> 2 weeks, one session of one hour each week
<b>Description:</b> The students will be divided into groups and in each group we will give them a topic that they have to prepare and find arguments so that later in the debate that we will do in class they can defend the responsible use of technology. In addition, in the second session a psychologist who is an expert in digital health will come and offer a talk on digital health and emotional education, both for students and teachers. At the end, they will reflect on what they learned during the talk and debate.		
<b>Specific objectives</b>	<b>Topic</b>	<b>Key skills</b>
Promote reflection on the responsible use of technology and its impact on children's digital and emotional health.	The main topic on these activities is the digital and emotional education of children, focusing specifically on the responsible use of technology and its impact on their digital and emotional well-being.	<ul style="list-style-type: none"><li>- Identification Skills</li><li>- Communication Skills</li><li>- Critical Thinking Skills</li><li>- Self-Management Skills</li></ul>
Develop debate, critical thinking and effective communication skills.		
Facilitate access to information on digital health through collaboration with an expert psychologist.		

Sequence of the teaching-learning activity	Classroom organization	Temporization	Methodology	Resources	Location
Topic Introduction (10 minutes)	In a circle all in the middle of the class.	10'	We will explain the topic about the importance of the responsible use of technology, through a video that we will visualize the whole class.	The following video will be shown in class about the importance of making good use of technology: TEDx Talks. (2019, October 21). Technology, The best or worst thing for education   Scott Widman   TEDxYouth@BSPR [Video]. YouTube. <a href="https://www.youtube.com/watch?v=9IbN1LxXevM">https://www.youtube.com/watch?v=9IbN1LxXevM</a>	Classroom
Assignment of Groups and Topics.  <b>Session 1</b>	Formation of small groups, by tables in the class.	5'	We will divide students into groups and assign each group a specific topic related to technology and its impact on digital and emotional health, such as: <i>screen time</i> ,	It is recommended that teachers read the book "El seu primer mòbil", to know the most recurrent topics to talk about and	Classroom

			<i>concentration and attention, cyberbullying, screen addiction, online safety.</i>	work on. Godoy, G. V. (2020). El seu primer mòbil: bones pràctiques per a la família digital.	
Research and Argument Preparation  <b>Session 1</b>	Formation of small groups, by tables in the class.	25'	The groups will have to research on the topics they have been assigned, looking for information. Then, they will prepare arguments taking into account digital health, emotional and cognitive skills. Then, they will debate.	It is recommended that teachers read the book "El seu primer mòbil", to know the most recurrent topics to talk about and work on. Godoy, G. V. (2020). El seu primer mòbil: bones pràctiques per a la família digital.	Classroom
Presentation of Arguments and Discussion  <b>Session 1</b>	In a circle all in the middle of the class.	25'	Each group will present their arguments in class, each group will have a set amount of time to present. Then we will open time to questions. Those questions that have not been answered will be the questions that will be asked by the psychologist expert in digital health who will attend the school the following week.		Classroom

TALK BY THE PSYCHOLOGIST EXPERT IN DIGITAL HEALTH. <b>Session 2</b>	The whole group together.	50'	This session will be led by a psychologist expert in digital health from a company of psychologists in Barcelona. He will offer us a talk about digital health and the impact it has on our cognitive and emotional development. Students will have a turn to ask questions about the discussion that they will have done previously.	For teachers you have the link to the official website of the psychologists, health and screens, who will come to the school to make a talk and solve our doubts: Salud y pantallas, psicólogos especializados en salud digital en Barcelona. (n.d.). Salud Y Pantallas, Psicólogos Especializados En Salud Digital En Barcelona. <a href="https://www.saludypantallas.com/">https://www.saludypantallas.com/</a>	School theater
Reflection (5 minutes)	In a circle all in the middle of the class.	10'	To end these two sessions, we will make a brief closing with the students in the classroom, collecting everything that has been said by the guest psychologist, the topics of which we have made the debate and we will point out attitudes that we have to change in our	In <a href="#">annex 2.3.</a> you will find a teacher's <b>guide for conducting a discussion</b> on digital health in the classroom.	Classroom

			technological routine to have benefits at a cognitive and emotional level.		
<b>Measurements for special education needs and evaluation:</b>					
<p>For those students with special educational needs, pictograms and more time will be provided in the discussion. They can also do it in written form if they need it or through images. For the evaluation, the teachers should make an observation during the debate, and note down the ideas that arise in the groups, also during the talk the questions asked by the students will be evaluated. Positive feedback will be given to the students during the discussion.</p>					

<b>Block 2:</b> <i>Development of Emotional and Cognitive Skills</i>		<b>Age:</b> Fifth and Sixth grade of primary school
<b>Activity:</b> Mindfulness with observation games		<b>Duration:</b> 2 weeks, one session of one hour each week
<p><b>Description:</b> In these two sessions we will focus on working on emotional and cognitive skills as well as attention and concentration, two skills that have been shown to be diminished by the use of screens in students. In the first activity we will make a brief introduction where we will explain to the students the importance of disconnecting from the screens to increase our skills such as attention and creativity. Then they will be presented with some cards that they will have to observe with special attention without any distraction and then complete some questions. In activity 2 there will be a role play where they will have to imitate different situations such as conflict resolution or teamwork or solve situations where they will have to communicate actively. Before starting the activities we will have five minutes of relaxation.</p>		
Specific objectives	Topic	Key skills
Improve children's attention and concentration through observation games, creating a more focused learning environment.	The main topic of this didactic sequence would be children's socioemotional development and interpersonal skills, especially in an environment where technology is omnipresent.	<ul style="list-style-type: none"> <li>• Social skills</li> <li>• Communication skills</li> <li>• Empathy</li> <li>• Problem solving</li> <li>• Team work</li> <li>• Emotional awareness.</li> </ul>
Promote the practice of empathy and active listening as tools to strengthen interpersonal relationships and human connection.		

To provide practical strategies to maintain attention and concentration during academic and daily activities.					
Sequence of the teaching-learning activity	Classroom organization	Temporization	Methodology	Resources	Location
Topic Introduction (10 minutes)	In a circle all in the middle of the class.	10'	We will explain to the students the importance of disconnecting from the screens to increase our skills such as attention and creativity.	Below I attach a web page, so that the teacher can have as a guide to make this brief introduction and be able to explain it to the students:  Suarez, N. (2023, September 18). Los niños y las pantallas: ¿cómo conseguir que se distancien? Divernostrum - Centro Ocio. <a href="https://www.divernostrum.es/desconectar-ninos-pantallas/">https://www.divernostrum.es/desconectar-ninos-pantallas/</a>	Classroom



Breathing Exercise	All together, each one in his place.	5'	We spend five minutes in the two sessions, before starting the activities, to do some relaxation exercises to connect with oneself and avoid distractions and not to think about the screens.	For teachers, I attach a guide to correctly conduct breathing and deconditioning exercises with students in the classroom.  Pathway2success. (2022, July 20). Teaching Kids How to Relax with Mindfulness The Pathway 2 Success. The Pathway 2 Success. <a href="https://www.thepathway2success.com/teaching-kids-how-to-relax/">https://www.thepathway2success.com/teaching-kids-how-to-relax/</a>	Classroom
Observation game <b>Session 1</b>	Formation of small groups or pairs, by tables in the class.	25'	We will organize the children into pairs or small groups and give each group a series of cards with geometric figures or drawings. Individual children will have thirty seconds to memorize the letter and look it up on the template. There will also be letters where the students will have to observe each image for a set amount of time and then, without looking at the image,	<a href="#">Annex 2.4</a> you can find the targets that we will use for the children to memorize it and look it up in the template.	Classroom

			describe what they saw to their teammate. After each team has had a chance to look at and describe several images, they can discuss what techniques helped them maintain their attention and concentration.		
Role-playing game <b>Session 2</b>	Four groups of five students.	25'	We will provide the students with cards with real life situations that they have to interpret as a role-playing game. They will be situations of everyday life and real cases that have happened to children of their age because of the internet and screens. Students will have to try to find a solution to the problem posed.	<a href="#">Annex 2.5</a> . There are templates with role-plays and possible solutions to pose these problems.	Classroom
Reflection (10' minutes)	In a circle all in the middle of the class.	5'	The activity will conclude with a brief group reflection. As a teacher we will ask the children how they felt when participating in the game and if they noticed any improvement in their	An example of techniques that we can pass on and introduce to students to concentrate at home while having screens.	Classroom

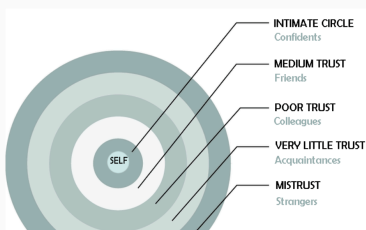
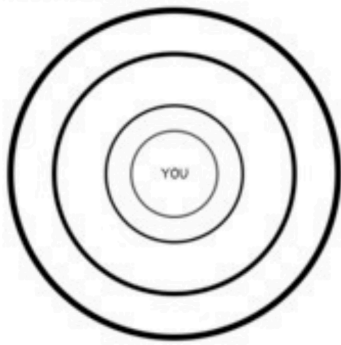
			<p>ability to pay attention and concentrate. In addition, we will also share the techniques they have used to concentrate and pay attention so that they can apply it at home, even if they have the screens nearby.</p>	<p>Técnicas de concentración - educaweb.com. (n.d.).  <a href="https://www.educaweb.com/contenidos/educativos/tecnicas-estudio/tecnicas-concentracion/">https://www.educaweb.com/contenidos/educativos/tecnicas-estudio/tecnicas-concentracion/</a></p>	
<p><b>Measurements for special education needs and evaluation:</b></p>					
<p>Materials will be made more visual, such as pictures and large print for the trust circle template, as well as the inclusion of tactile materials if needed. We will also reduce instructions, make use of pictures if necessary, and provide individual support throughout the activity for those students who require it. For students who need an individualized support plan, one will be created for them with all adapted activities. For evaluation, teachers will make a direct observation of student participation in the activities and posters created. They will also provide feedback to the school in case we need to modify the activity.</p>					

### Annex 2.1: Template of the circles of trust

Exploring the Digital World: Awareness and Trust on the Web

BLOCK 1

-----'s Circle of Trust



Source: Own elaboration

### Annex 2.2: Poster on digital health

BLOCK 1

**DIGITAL HEALTH**

REMEMBER TO TAKE CARE OF YOUR DIGITAL,  
EMOTIONAL AND COGNITIVE HEALTH!



**USE  
TECHNOLOGY  
WISELY!**



**BE SAFE ON  
THE  
INTERNET!**

Only talk to people  
you know in real life.  
Don't share personal  
information with  
strangers.

**PLAY AND  
MOVE!**

Play outdoors and  
exercise every day.



**ADEQUATE REST**

Turn off all devices at  
least 1 hour before  
bedtime.



**EXPRESS YOUR  
EMOTIONS!**

If something makes you feel  
sad or worried, talk to a  
trusted adult such as your  
parents or teachers.



**THINK  
POSITIVE!**

Remember that you are  
special and valuable. Don't  
compare your life to what you  
see on the internet.



Source: Own elaboration

Annex 2.3: Guide for conducting a discussion

# BLOCK 1

## Guide for conducting a discussion

DIGITAL HEALTH

**QUESTION 1**  
What does online 'circles of trust' mean to you, and who are part of these circles?

**QUESTION 2**  
Why is it important to only share personal information with people we trust when we are on the internet?"

**QUESTION 3**  
How does spending too much time on the internet without taking a break affect our emotional wellbeing?"

**QUESTION 4**  
What activities can we do to rest our mind and body after using the computer or phone for a long time?

**QUESTION 5**  
Have any of you ever felt you needed to talk to someone about something you saw on the internet? Who did you talk to and how did you feel afterwards?

**QUESTION 6**  
How can we help our friends feel safe and happy when using the internet?

**QUESTION 7**  
What can we do to take care of our mind and emotions while on the internet?

**Closing and reflection**

Source: Own elaboration

Annex 2.4: Targets description

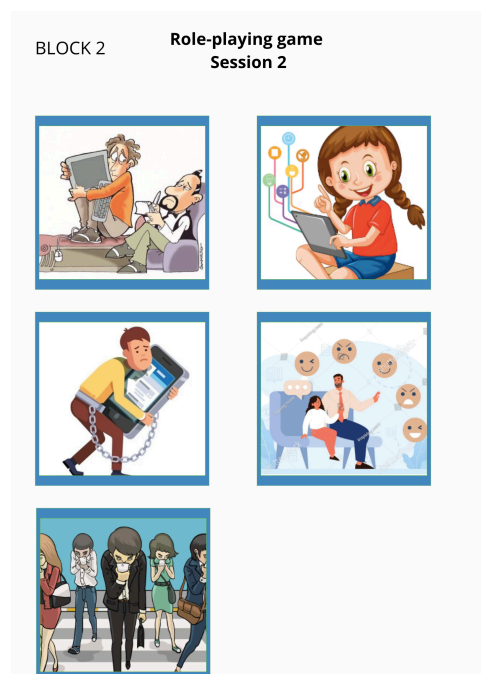
**BLOCK 2**

**Observation game**  
**Session 1**

The image displays the visual components of the Observation game for Session 1. It features two columns of icons: the left column contains a red square, a blue triangle, a yellow arrow, a blue arrow, a red triangle, a green circle, a green square, and a black square; the right column contains a yellow circle, a green arrow, a blue triangle, a blue square, a red arrow, a blue square, and a black arrow. Below these are two 4x4 grids, each containing a unique arrangement of these icons.

Source: Own elaboration

*Annex 2.5: Templates with role-plays*



*Source: Own elaboration*