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POSITIVE LEARN

R2.2 POSITIVE LEARN Pedagogical Framework

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TABLE OF CONTENTS

Executive Summary	4
1. Background	7
2. Methodology	9
3. Current State of Research	11
3.1 Literature Review and Concept Map	12
4. Proposed POSITIVE LEARN Pedagogical Framework	20
5. Recommended Interventions	23
5.1 General Interventions	23
5.2 Technology-Based Intervention and Teaching Methods	25
6. Conclusion	29
7. References	32

EXECUTIVE SUMMARY

This report outlines the pedagogical framework of POSITIVE LEARN (R2.2), which is a key component of the broader POSITIVE LEARN framework for positive distance education. It is further supported by the POSITIVE LEARN Competency Framework (R2.1). The primary goal of this innovative pedagogical framework is to integrate digital competencies with emotional well-being, creating a supportive environment that enhances the overall well-being, motivation, and positive learning experiences for both students and educators. While the field of positive education has been extensively studied in traditional classroom settings, there is still a significant lack of research on the application of positive education principles and interventions in distance education.

As the educational landscape continues to evolve, especially with the rise of digital learning, POSITIVE LEARN's pedagogical framework aims to address this shift by exploring the innovative field of positive education in online and technology-supported learning environments. The goal is to fill the existing research gap by investigating the feasibility and effectiveness of positive educational principles in distance learning settings. A key focus of this research is integrating technology into positive education initiatives. Our review of current scientific studies has revealed two main categories of positive interventions: (a) general positive pedagogical interventions designed for both students and educators, and (b) technology-based interventions and teaching methodologies. Each of these categories was further divided into sub-sectors, with specific positive interventions identified within each sector.

The structural framework of this report includes an introduction, a background, a methodology, an overview of the current state of research, a comprehensive literature review with a concept map of the domain and the proposed pedagogical framework for POSITIVE LEARN (initial version). In addition, it offers a selection of recommended interventions, categorically divided into general interventions and technology-based intervention and teaching methods.

The POSITIVE LEARN pedagogical framework is an innovative approach that extends the principles of positive education into the realm of distance learning. This project aims to provide valuable insights and practical applications that empower educators to leverage positive education in order to enhance well-being and improve learning experiences in our rapidly evolving digital age.

The initial version of the pedagogical framework was created during the project's first phase. Together with the Competency Framework (R2.1), it served as a foundation for developing positive Open Learning Scenarios (OLS). These scenarios were discussed, piloted, and validated in the three partner countries as part of the work conducted in R4.

The empirical findings collected during the validation phase of the project, can help adapt our positive learning interventions to the realities and nuances of our specific learning context and ultimately improve its robustness and utility of the POSITIVE LEARN approach.

School pedagogical training prepares teachers to impart knowledge to students and support their personal development. Introducing and integrating pedagogical training in schools is essential to quality education. A variety of definitions of **positive education** exist in the literature. It is an educational approach that imparts knowledge and aims to promote learners' personal development, well-being, and character-building.

Researchers have developed various **concepts, models, and frameworks** to promote students' well-being, personal development, and character formation. These approaches help target academic achievement and strengthen social and emotional skills, resulting in confident, empathetic, and resilient individuals. This holistic education helps improve learners' quality of life and prepares them for life's challenges. Most studies show that positive education is essential for **emotional management, coping, attention and awareness, relationships, engagement, habits, and goals**. The studies of Water and Noble have developed a framework for developing positive education in which they have considered many domains. They have also formulated interventions for the domains that drive positive school education.

As part of the positive education approach focused on the holistic development of learners, it is critical to address the challenges that arise in our increasingly digitised world. One of these challenges is school **technostress**, which can affect **well-being** and the educational environment. Technostress positively impacts education because, while the increasing use of digital technologies in education offers many benefits, it also presents challenges when finding a healthy balance between technology and personal well-being. For this reason, educators need to develop approaches to minimise technostress and ensure that the integration of technology into the classroom contributes positively to learners' personal development. When dealing with technostress in the context of positive educational approaches, well-being is central to ensuring that digital technologies do not come at the expense of learners' mental health and emotional well-being. Well-being measures, such as regular breaks, mindfulness training, and promoting a healthy online-offline balance, are critical for the positive and sustainable use of technology in education. In the context of technostress in positive education, an important challenge is to ensure that using digital tools and technologies does not lead to excessive distraction or social loneliness but promotes learners' social interaction and

emotional intelligence. It is critical to develop methods for managing technostress to ensure a healthy relationship between technology and personal well-being and to support positive educational goals.

We began by reviewing the **literature** to identify the existing concepts, models, and frameworks for positive education. Using a concept matrix, the frameworks were analysed among themselves and discussed the most critical domains to get an overview at the beginning. After that, the overlapped fields were classified, and the corresponding descriptions were taken from the literature. In addition, the interventions for each domain were examined, and teaching methods and technology-based interventions were identified as an afterthought.

1. BACKGROUND

Technostress can be defined as stress experiences that relate to the use of information technology (IT, see e.g., Tarafdar et al., 2019). Because both adults and young people are nowadays active users of IT as part of their daily lives, the implications of technostress should be considered from the perspectives of teachers and students alike. In teachers, research on technostress has focused on its implications to educational IT use (see e.g., Chou & Chou, 2021; Syvänen et al., 2016). Additionally, students' experiences of technostress have been explored especially in the university context, with a focus on the educational outcomes associated with technostress experiences (see e.g., Upadhyaya & Vrinda, 2021; Qi, 2019). Given that the school-related IT use environment is not unilateral, the specific characteristics of different educational settings might be important to consider in this context. In a recent study conducted by Mehtälä et al. in 2022, the challenges associated with online education, as perceived by students, were investigated. The findings shed light on several key issues that students encounter during their online learning experiences.

Firstly, students expressed concerns about the significant amount of time they felt compelled to spend using IT for their educational purposes. The pervasive use of digital tools and platforms in online education often resulted in what students perceived as an excessive time commitment. Secondly, technical difficulties emerged as a recurring challenge for students in their attempts to engage effectively in online education. These difficulties ranged from issues with software and hardware to connectivity problems, all of which hindered their participation and learning experience. Additionally, online education sometimes posed disruptions to other family members. The presence of students engaged in online classes within the home environment could lead to disturbances for siblings, parents, or other household members, creating an additional layer of complexity in the online learning landscape.

In a study focusing on teacher's experiences of IT use in online and on-site education, teachers also reported various difficulties (Mehtälä et al., 2023). For example, the teachers highlighted challenges in reaching students and effectively interacting with them in online settings. This was compounded by concerns related to their own well-being, including the stress and demands associated with managing online education. Additionally, technical difficulties remained a pervasive issue for teachers, affecting their ability to deliver seamless online instruction. Planning educational activities, tracking student progress, and ensuring student well-being were additional areas where teachers encountered challenges. The integration of new technology into teaching practices, the readiness level for IT use in schools, and the support received for organising online education were cited as challenges by teachers.

Balancing work and leisure time, dealing with prolonged workdays, and accommodating varying student capabilities in using IT further complicated the teaching process. Teachers also faced challenges related to on-site education, including maintaining students' focus on schoolwork. Again, their own well-being was a concern, and technical difficulties persisted. The amount of communication teachers received during the day, the blending of work and leisure time, and teachers' attitudes towards IT use or their lack of knowledge in this area posed additional challenges (Mehtälä et al., 2023).

Summary

Technostress is an important phenomenon to be considered in the educational context, and from both student and teacher perspectives. According to recent literature, the challenges associated with online education, as identified by both students and teachers, encompass a wide range of issues (Mehtälä et al., 2022; 2023). These challenges extend beyond technical difficulties and include time management, family disruptions, teacher-student interactions, teacher well-being, and the integration of technology into educational practices. Addressing these challenges effectively is essential for creating a more conducive and successful online learning environment.

2. METHODOLOGY

The **literature review** described below examined existing pedagogical frameworks in positive education. The basis of the literature review is a systematic approach (Webster & Watson, 2002; Kitchenham et al., 2009) in which relevant articles are examined using clearly defined research questions, criteria, or phenomena. First, publications were searched using predefined search terms. Then, the references of the identified articles were checked (backward search). A forward search was also performed to identify publications citing these articles (Vom Brocke et al., 2015). Key journals and selected conference proceedings were used for the literature search (Webster & Watson, 2002). A web-based digital library search (Kitchenham et al., 2009) was used to search academic databases for positive education and pedagogy studies. The search was based on a full-text search.

A concept matrix search (Webster & Watson, 2002) was used to analyse the existing frameworks against each other. For each selected publication, a summary of the content was provided, and the identified and redundant areas were presented with the associated measure. From the **analysis**, a **concept map** was created on a virtual Miro board to get an overall view. We selected Waters and Loton (2019) and Noble and McGrath (2015) frameworks to develop the first approach of our pedagogical framework. The concept map contains the domains that partially overlap and subdomains that belong to the respective main domains. In addition, the concept map represents the interventions of the respective studies.

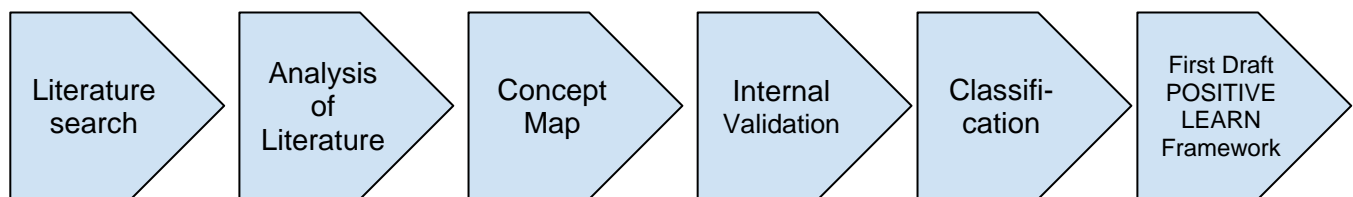


Figure 1: The research approach

After the presentation of the concept map, an **internal validation** by experts was performed to classify the domains. The **classifications** of the domains were made by analyzing the descriptions of the respective dimensions by Waters and Loton (2019) and Noble and McGrath (2015). We looked at the reports of the domains analysed for content and classified accordingly. Afterward, the first approach of the **pedagogical framework** was developed. In the first draft, a total of eleven domains were created. The domains were described again with an established taxonomy, in which we used appropriate verbs. After that, the descriptions also used in Waters

and Loton's frameworks (2019) and Noble and McGrath (2015) were adopted. Also, the interventions that the authors suggested were added to the pedagogical framework.

3. CURRENT STATE OF RESEARCH

Numerous studies in the literature examine positive pedagogy in depth. These studies address developing concepts and frameworks and exploratory research in the field. Thus, research in the field of positive pedagogy has produced a wide range of findings and approaches. Norrish et al.'s (2013) research found that positive emotions, engagement, collaboration, purpose, relationships, and health are the most important factors for positive pedagogy. However, the model has not been evaluated and does not demonstrate a method. Another study by O'Brien and Blue (2018) found that positive emotions, cognitions, and experiences are necessary for developing a pedagogical approach, which they examined with action research. The authors looked at three factors, although others are crucial in developing a holistic framework.

For the first approach to a pedagogical framework, White and Kern's (2018) study identified nine main domains. The qualitative research approach was used, but these domains were not described using a common taxonomy, nor were interventions identified or formulated.

Another study addresses the PROSPER framework, which considers positivity, relationship, outcomes, strengths, purpose, engagement, and resilience as the prominent domains for positive pedagogy. This study used a survey and confirmatory data on usefulness to develop and evaluate the framework. Measures were also formulated for each part to promote positive pedagogy in students (Noble & McGrath, 2015). Waters and Loton (2019) also developed a framework for positive pedagogy and, like Noble & McGrath (2015), included the domains of strengths, relationships, and resilience as subdomains. Here, it can be seen that these domains play an important role and need to be considered when developing the pedagogical framework. In contrast to Noble & McGrath's (2015) framework, the authors have incorporated emotion management, attention and awareness, habits, and goals into the model.

The development of a framework is also addressed in another study, although the research methodology is not clearly described. The framework is divided into four dimensions: 1) self-regulation 2) self-efficacy 3) achievements and 4) evaluation. This study did not include measures or interventions (Smith et al., 2016). The other study addresses exploratory research, followed by a qualitative study based on structured interviews. The results show that learning with pleasure, discursivity, success, happiness in knowledge acquisition, positive self-image, motivation, confidence, and self-esteem play an important role in positive pedagogy. However, the researchers did not address possible interventions for the identified areas in this study. Another study was explanatory but did not identify specific dimensions important to positive

pedagogy. However, the study found that students valued pedagogical approaches that were active, meaningful, and student-centred. Teachers were also found to be critical in enabling or hindering the implementation of well-being curricula (Riedel et al., 2020).

3.1 Literature Review and Concept Map

The development of the Pedagogical Framework began with a literature review to identify existing concepts, models, and frameworks. The literature review is based on a systematic approach (Webster & Watson, 2002; Kitchenham et al., 2009) in which relevant articles are examined using clearly defined research questions, criteria, or phenomena. Most concepts used are based on case studies. The following table shows the research approach adopted for the studies. Most have a qualitative research methodology based on case studies. The results of the studies show that many domains are relevant to positive pedagogy. Strengths, relationship skills, coping, resilience, and engagement stand out among them. Interventions and policies have been formulated to promote these and other identified attributes in students and teachers. A closer look at these interventions and measures reveals that some interventions overlap. These include, for example, implementing and creating positive learning environments, which are described in more detail in the table.

Table 1: The literature included in the literature review

Nr	Autor	Paper title	Methodology	Results	Measures
1	Waters, L. (2021)	Positive education pedagogy: Shifting teacher mindsets, practice, and language to make wellbeing visible in classrooms	qualitative research method (Case Study)	Teacher (Mindset, Language, Practice) Students (Wellbeing)	Positive education: (1) the use of implicit practices (in addition to explicit programs), (2) the consideration of context (in addition to the teaching of content), and (3) the empowerment of teachers (in addition to the education of students)
2	White, M.A., & Kern, M.L. (2018)	Positive education: Learning and teaching for wellbeing and academic mastery.	qualitative research method (Case Study)	Engagement Perseverance Optimism Connected Happiness Wellbeing Cooperation Effort Organization	

Nr	Autor	Paper title	Methodology	Results	Measures
3	White, M. (2016)	Why won't it Stick? Positive Psychology and Positive Education	Case Study		
4	O'Brien, M.B., & Blue, L.E. (2018)	Towards a positive pedagogy: designing pedagogical practices that facilitate positivity within the classroom	Action Research	Positive= Emotions, Cognitions, Experiences	<p>Pedagogical methods that explicitly focus on the development of positive cognitions, positive emotions, and positive experiences for students</p> <p>Positive pedagogy includes teacher talk, social and emotional resources for students, enhancing instruction with resource-building materials, and developing individualised learning goals aimed at developing positive cognitions, emotions, and experiences.</p>
5	Smith, K., Gamlem, S.M., Sandal, A.K., & Engelsen, K.S. (2016)	Educating for the future: A conceptual framework of responsive pedagogy		Self Regulation Self Efficacy Achievements Assessment	
6	Riedel, R., Vialle, W., Pearson, P.J., & Oades, L.G. (2020)	Quality Learning and Positive Education Practice: the Student Experience of Learning in a School-Wide Approach to Positive Education	explanatory case study	<p>Students valued pedagogical approaches that were active, meaningful, and student-centred</p> <p>Teachers play a critical role in enabling or hindering the implementation of well-being curricula</p> <p>Understand students' prior knowledge about well-being and use it as a foundation on</p>	<p>Involve family members in the design and implementation of positive education, as participants clearly expressed that they have a critical influence on their well-being.</p> <p>Make training in positive psychology context-specific and specifically address components of students' lives that impact their well-being, such as the broader, competitive academic culture that participants perceive.</p> <p>Implement positive education interventions in</p>

Nr	Autor	Paper title	Methodology	Results	Measures
				which to build when teaching positive psychology.	<p>a variety of secondary schools with diverse demographics, including coeducational and all-girls schools, public and private schools, and schools with high percentages of minority/at-risk groups</p> <p>Design and implementation of future positive education interventions involve ongoing consultation and collaboration among school staff, parents, students, and relevant community members to ensure that the initiative is relevant and context-specific.</p>
7	Maaloul, A., & Hamida, S.B. (2018)	The positive pedagogy exploratory study and proposal of pedagogical positive practices	Exploratory study followed by a qualitative study based on structured interviews	Learning With Pleasure Discovery Success Happiness During The Conquest Of Knowledge Positive Image Of Oneself Motivation Confidence Self Esteem	
8	Stepanenko, O., Ohrimenko, Z., Shaforost, Y., Pasichnyk, L., & Pochynok, Y. (2021)	Positive learning environment in educational sphere	Quantitative (survey)	<p>Students and Teacher: Emotions, Feelings, Value, respect, love, and tolerance</p> <p>Schoolmasters': fairness, caring, and praise for effort and the importance of values, moral order, adherence to school rules, and good performance</p>	<p>Identify, plan, and implement preventive techniques to promote student behaviour in positive</p> <p>Apply effective strategies to create positive learning environments in the classroom (play an active role in seating arrangements and ensure that students have an appropriate level of academic success)</p> <p>Teaching class rules can</p>

Nr	Autor	Paper title	Methodology	Results	Measures
					<p>increase the likelihood of success with students</p> <p>Balancing praise with corrective feedback and understanding the impact of cultural differences to establish and maintain appropriate interactions between teachers and students is an important skill for all school leaders.</p> <p>Practical strategies for creating a positive school climate are important aspects of a comprehensive classroom management program.</p>
9	Waters, L., & Loton, D. (2019)	SEARCH: A meta-framework and review of the field of positive education	Literature Review Action-research	Strengths Emotional Management Attention and Awareness Relationships Coping Habits and Goals	<p>Strength Awareness Interventions These interventions help students to identify their strengths, typically through surveys.</p> <p>Strength Use Interventions These interventions help students set goals for how to put their strength into actions.</p> <p>Strength Spotting Interventions These interventions teach students how to see when their peers are using strengths.</p> <p>EI Interventions These interventions teach students how to perceive, understand, use and regulate emotions.</p> <p>Gratitude Interventions Gratitude interventions help students to notice, appreciate and acknowledge the positive in their lives</p> <p>Attention and Awareness:</p>

Nr	Autor	Paper title	Methodology	Results	Measures
					<p>Meditation Interventions Meditation is defined as the deliberate act of regulating attention through the observation of thoughts, emotions and body states. Meditation interventions in schools involve training a student's attention.</p> <p>Mindfulness Interventions Mindfulness is a state of focused awareness on one's thoughts, feelings and body sensations. Mindful interventions in school help students to develop the skill of self-observation and to be dispassionate about the self in the Present-moment</p> <p>Relationships:</p> <p>Mentoring Interventions Mentoring is a process by which a more experienced person provides a less-experienced person with guidance, support and caring over an extended period of time. The school-based mentoring interventions aim to provide peer support and or teacher-student support to enhance a sense of connectedness and belonging in the school.</p> <p>Coping Interventions Interventions focusing on teaching students to change their thoughts and behaviour in response to stress</p>

Nr	Autor	Paper title	Methodology	Results	Measures
					<p>Resilience Interventions These interventions aim to help students develop the capacity for maintaining, recovering or improving mental health following life challenges</p> <p>Habits and Goals Self-Regulated Learning (SRL) Interventions SRL interventions teach students the cyclical process of steps needed to persist through the learning process: self-evaluation, self-monitoring and goal setting along with strategy planning, implementation and monitoring.</p> <p>Goal Interventions These interventions teach students to set and strive for goals</p>
10	Norrish, J. M., Williams, P., O'Connor, M., & Robinson, J. (2013)	An applied framework for positive education		<p>Positive Emotions= Experience of positive emotions such as joy, gratitude and hope</p> <p>Positive Engagement= Interest, engagement, curiosity, and absorption</p> <p>Positive Accomplishment = Striving for and achieving meaningful outcomes</p>	<p>Live it= Comprehensive programmes support staff wellbeing and help them to live the tenets of positive education</p> <p>Teach it= Teaching of wellbeing skills in dedicated classes and integrated with traditional curriculum</p> <p>Embed It= Complementary school wide processes and practices promote a culture for wellbeing across the school community</p>

Nr	Autor	Paper title	Methodology	Results	Measures
				<p>Positive Purpose= Contributing to others and the community</p> <p>Positive Relationships= Social and emotional skills to foster positive relationships</p> <p>Positive Health= Optimal physical and psychological health</p>	
11	Noble, T., and McGrath, H. (2015)	PROSPER: a new framework for positive education	Confirmatory data on the usefulness surveys	Positivity=	<p>Positivity: helping students to experience positive feelings and a positive mindset about school both academically and socially.</p> <p>Relationships: Supporting students to develop positive relationships with other students and teachers</p> <p>Outcomes: Providing an optimal learning environment to enhance students' learning outcomes and their sense of competence in learning</p> <p>Strengths: helping students to discover their own strengths and limitations, and how this self-knowledge contributes to their learning self-management.</p> <p>Purpose: supporting students to gain a sense of purpose in what they are learning at school and understanding its relevance for their future</p>

Nr	Autor	Paper title	Methodology	Results	Measures
					Engagement: engaging students in learning through providing choice, a voice and meeting their psychological needs Resilience: Supporting students to develop the skills and attitudes that underpin resilient behaviour

4. PROPOSED POSITIVE LEARN PEDAGOGICAL FRAMEWORK

We created a first draft after classifying the domains and checking internal validity. The following figure shows the concept map based on the literature. This was discussed internally, and the overlapping areas were classified.

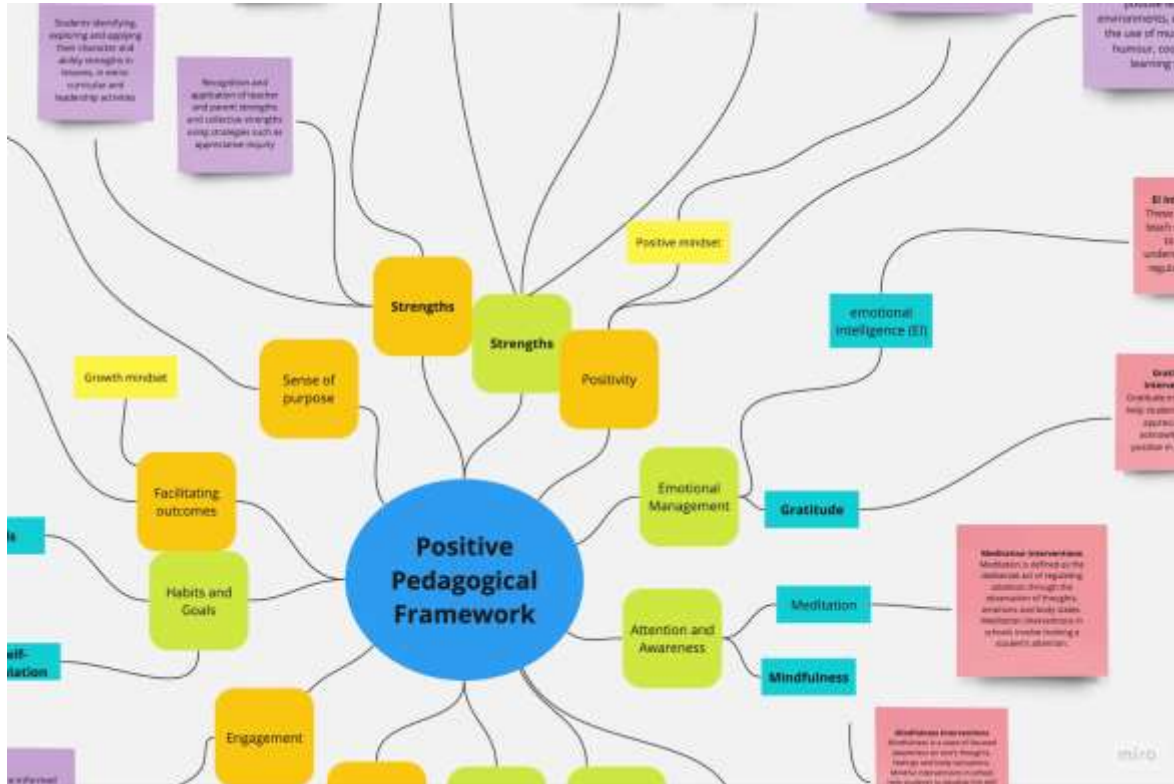


Figure 2: The initial version of the pedagogical framework

For developing the pedagogical framework, we used the approaches of Waters and Loton (2019) and Noble and McGrath (2015). They have created and evaluated a variety of domains, as well as interventions. In the first phase, we analysed the two frameworks among themselves. We have seen that many domains overlap with each other. For this reason, we created a Miro Board to have a complete overview of the parts, sub-domains, and interventions at the beginning. Afterward, we conducted a group discussion to find the overlapped domains and classify or sort them. The descriptions of the domains were taken from the corresponding literature. In addition, we have attempted to find verbs for the respective domains. The verbs are used to group overlapping domains together, as illustrated in the table below.

Table 2: The initial domains and sub-domains included in the pedagogical framework

Main domain	Sub-domain(s)	Description
Lean on your strengths and have a positive mindset	Strengths	<p>Identifying pre-existing qualities of individuals that can be considered natural, authentic and support intrinsic motivation (Waters & Loton, 2019).</p> <p>Focusing on strengths at whole school level - showing how different strengths can be valuable and worth of further development through school-based activities (Noble & McGrath, 2015)</p>
	Positivity	Goal-directed teaching of the values and skills that are needed to have a positive mindset (e.g., optimistic thinking, expressing gratitude and mindfulness) (Noble & McGrath, 2015)
Learn to understand your emotions	Emotional Management	Learning to identify, understand and manage emotions by building understanding of the process of how thoughts, feelings and actions converse into emotions (Waters & Loton, 2019).
Be attentive and aware	Attention and Awareness	Attention can be seen as the ability to focus on inner aspects of oneself (e.g., emotions, physical sensations) or the external stimuli that is present (e.g., the lesson). Awareness is viewed as an individual's ability to pay attention to a specific stimulus while it occurs (Waters & Loton, 2019)
Support and work well with others	Relationships	<p>Relationship skills can be used to build supportive social relationships, as well as, benefit from social interactions that are more momentary in nature (Waters & Loton, 2019).</p> <p>A school approach on relationship skills can focus on school staff intentionally promoting the building of positive relationships (e.g., peer relationships, parent-school relationships) (Noble & McGrath, 2015)</p>
Learn to cope and become	Coping	Coping can be viewed as the efforts of

Main domain	Sub-domain(s)	Description
resilient		an individual to manage internal and/or external demands that tax or exceed a person's resources (Lazarus & Folkman, 1984; Waters & Loton, 2019).
	Resilience	Resilience can be viewed as the ability to persist, adapt and recover after encountering adverse situations (e.g., challenges, disappointments) and gain/maintain a reasonable level of wellbeing (McGrath & Noble, 2011)
Engage in self-directed and dedicated learning	Engagement	<p>Engagement can be viewed as the interest, commitment, curiosity and receptiveness of an individual (Norrish, Williams, O'Connor & Robinson, 2013)</p> <p>Using evidence-based teaching and learning strategies (e.g., by providing activities that incorporate critical and creative thinking or help students experience flow) (Noble & McGrath, 2015)</p>
Be persistent and work towards your goals	Habits and Goals	Habits can be understood as persistent and learned patterns/preferences in decision making and behaviour. Goals can be viewed as formal milestones, endpoints, achievements or aspirations that signify people's desires and aims (i.e., what people are willing to invest effort into) (Waters & Loton, 2019)
	Facilitating Outcomes	Facilitating outcomes refers to providing optimal learning environments that have the potential to improve learning outcomes and the students' sense of learning competence (Noble & McGrath 2015).
Have a voice and be active	Sense of purpose	<p>The ability of an individual to contribute to others and the community as a whole (Norrish, Williams, O'Connor & Robinson, 2013)</p> <p>The ability to participate in student-owned and student-directed activities (Noble & McGrath, 2015)</p>

5. RECOMMENDED INTERVENTIONS

5.1 General Interventions

The general interventions are divided into two categories: **students and teachers**. The first sub-domains, *strengths* and *positivity*, have four interventions for positive pedagogy. *Emotional management* interventions are about students' emotional intelligence, how to perceive, understand, use, and regulate emotions. Another intervention is the promotion of gratitude, which helps students perceive, appreciate, and recognize the positive in their lives. Students' *attention and awareness* meditation can also be trained, and mindfulness in the school helps students observe themselves and look at themselves dispassionately in the present moment. *Relationship* intervention includes mentoring, which aims to provide peer, teacher, and student support to strengthen a sense of connection and belonging in the school. *Coping* and *resilience* interventions aim to teach students how to change their thoughts and behaviours in response to stress. In this way, students can develop the ability to maintain, restore, or improve their mental health following challenges in their lives. Another intervention is *engaging* students in learning through choice, voice, and meeting their psychological needs, which is articulated for the engagement domain. Interventions for the *habits and goals* sub-domain are suggested. Self-regulated learning (SRL) is necessary to persevere through the learning process. Self-assessment, self-control, and goal setting are considered, as are planning, implementation, and monitoring strategies.

In *facilitating outcomes*, explicit skills such as effort, persistence, and willpower and problem solving are taught. Finally, there are interventions in the area of *purpose* that help students understand what they are learning in class and its importance for their future.

Table 3: General positive pedagogy interventions associated with the domains identified in the literature

Sub-Domain (Main Domain)	Intervention
Strengths (Lean on your strengths and have a positive mindset)	Awareness helps students to identify their strengths, typically through surveys.
	Strength use helps students set goals for how to put their strength into actions.
	Strength spotting teach students how to see when their peers are using strengths
Positivity (Lean on your strengths and have a positive mindset)	Helping students develop positive feelings and attitudes about school, both academically and socially

Sub-Domain (Main Domain)	Intervention
	(Noble & McGrath 2015).
Emotional Management (Learn to understand your emotions)	<p>Emotional intelligence teach students how to perceive, understand, use and regulate emotions</p> <p>Gratitude interventions help students to notice, appreciate and acknowledge the positive in their lives.</p>
Attention and Awareness (Be attentive and aware)	<p>Meditation in schools involves training a student's attention.</p> <p>Mindfulness in school helps students to develop the skill of self-observation and to be dispassionate about the self in the present-moment.</p>
Relationships (Support and work well with others)	Mentoring is a process by which a more experienced person provides a less-experienced person with guidance, support and caring over an extended period of time. The school-based mentoring interventions aim to provide peer support and or teacher-student support to enhance a sense of connectedness and belonging in the school.
Coping (Learn to cope and become resilient)	Interventions focusing on teaching students to change their thoughts and behaviour in response to stress.
Resilience (Learn to cope and become resilient)	These interventions aim to help students develop the capacity for maintaining, recovering or improving mental health following life challenges
Engagement (Engage in self-directed and dedicated learning)	Engaging students in learning through providing choice, a voice and meeting their psychological needs (Noble & McGrath 2015)
Habits and Goals (Be persistent and work towards your goals)	<p>"Self-Regulated Learning (SRL) Interventions SRL interventions teach students the cyclical process of steps needed to persist through the learning process: self-evaluation, self-monitoring and goal setting along with strategy planning, implementation and monitoring.</p> <p>Goal Interventions These interventions teach students to set and strive for goals." (Waters & Loton, 2019)</p>
Facilitating Outcomes (Be persistent and work towards your goals)	Explicit teaching of skills for: organisation; goal achievement (e.g., effort, persistence + willpower [grit] and problem-solving); effective studying
Sense of purpose (Have a voice and be active)	Supporting students to gain a sense of purpose in what they are learning at school and understanding its relevance for their future (Noble & McGrath 2015).

5.2 Technology-Based Intervention and Teaching Methods

Technology-based interventions for technostress refer to interventions or approaches that aim to reduce or prevent the effects of technostress by using technology as a tool. Technostress occurs when the use of technology leads to excessive stress, anxiety, or other negative impact on a person's health and well-being. Thus, we aimed to identify technology-based interventions for technostress in the form of a preliminary literature review. The first results show that there might be a need to analyse different tools and apps at a more profound level. The interventions identified are listed in the table below. In addition to technology-based interventions on technostress, there are different teaching methods that might be beneficial in reducing technostress. Teaching methods in the context of technostress refer to the different approaches and techniques that can be used to teach individuals how to recognise, manage and avoid technostress, which can occur in education and training.

Table 4: Technology-based interventions for promoting positive pedagogy

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
Lean on your strengths and have a positive mindset	Strengths Assessment Apps	Case Studies and Scenarios (Presenting real-life case studies on technostress and asking participants to analyse them from a strengths perspective and figure out how different strengths could have been used to alleviate stress)
	Positive content platforms Digital Well-Being-Tools	Case Studies and Discussions Positive Technology Projects Positive Mindset Challenges Ongoing Feedback and Reflection
Learn to understand your emotions	Relaxation and meditation VR applications (Users can experience relaxation and meditation)	Interactive Workshops Digital Well-being Apps
	Gamification for stress management (Games and apps that contain playful elements can be	

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
	<p>used to increase motivation to learn and apply stress management techniques)</p> <p>Chatbots for emotional support (Emotions can be shared and they receive support when they feel stressed or overwhelmed. Such chatbots can respond to text messages and offer advice)</p>	
Be attentive and aware	<p>Digital Mindfulness Training</p> <p>Attention Management Workshops</p> <p>Mindful Tech Use Policies</p> <p>Educational Modules</p> <p>digital learning platform</p> <p>Stress Management Apps (using technologies and Apps, including videos, music, nature sounds, and guided mindfulness meditation, to alleviate stress symptoms and teach stress management, (Geoffrey Lautenbach & N. Randell 2017))</p>	<p>Augmented Reality (AR) and Virtual Reality (VR) (DOI: 10.12753/2066-026X-21-072)</p> <p>Learning Management System</p> <p>Collaborative tools (DOI:10.22318/CSCL2017.115; doi: 10.1109/ISETC56213.2022.10010175)</p>
Support and work well with others	<p>Knowledge management and documentation platforms (Services facilitate collaborative creation and access to knowledge bases and documents, making information easier to find and share)</p> <p>Communication platforms and chat applications (Messaging apps enable</p>	<p>Emotional Intelligence Training (Understand emotional responses to technology-related stressors and learn how to communicate effectively with others in digital spaces)</p> <p>Online Communication Etiquette (Inform students about proper online communication etiquette and netiquette. Discuss topics such as respectful language, tone, and behaviour in digital conversations, as well as the consequences of</p>

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
	real-time communication within groups. They promote the rapid exchange of information and ideas)	cyberbullying and online harassment.) Role-Playing Scenarios (Develop a series of role plays or case studies that simulate common challenges related to technostress in the workplace or in education. Challenge students to propose solutions and practice effective communication strategies)
Learn to cope and become resilient	Online MinMapping Tools (MindManger Software) (Holland, 2003)	Cognitive Behavioral Therapy (CBT) Techniques Case-Based Learning Positive Technology Initiatives Digital Mindset Shift
Engage in self-directed and dedicated learning	Gamified Collaborative Discussion Environment on Moodle LMS (a technological innovation designed, developed, and evaluated to create an engaging learning environment on the Moodle Learning Management System (LMS)) Adaptive Learning Technologies (These technologies adjust to the learner's pace and level of understanding, reducing stress and promoting engagement).	Self-Paced Learning Active Learning Gamification Tools of Engagement Project (TOEP)
Be persistent and work towards your goals	Using online environments to promote programs and content that are relevant for the students (see e.g., Yang et al., 2017)	Discovering the interests of the students and their plans for the future
Have a voice and be active	Using technology to support student engagement (see e.g.,	Learn about current technologies and their affordances

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
	Heiberger & Harper, 2008)	Explore IT use-related trends among students

6. CONCLUSION

The present report represents the initial version of the POSITIVE LEARN pedagogical framework (R2.2), which, together with the POSITIVE LEARN Competency Framework (R2.1), constitutes the conceptual foundation for our project. Aim of this innovative pedagogical framework is to relate digital competencies with emotional aspects and wellbeing, to promote the well-being, motivation and overall positive experiences of students and teachers in the learning process. It is intended to serve as a practical tool for transferring the POSITIVE LEARN approach and ultimately provide an answer to the question: how can teacher education incorporate positive interventions and emotional aspects?

The POSITIVE LEARN pedagogical framework describes pedagogical and didactic assumptions and principles for implementing positive education in the distance learning context. Positive education is typically described as an approach that aims to support student wellbeing by weaving contemporary knowledge from the science of wellbeing and positive psychology into educational practice (Waters & Loton, 2019). It combines the concepts and insights of positive psychology with best practice guidelines from education with the aim of increasing both well-being and academic outcomes (Slemp et al, 2017). A positive pedagogical framework represents a pedagogical approach that emphasises positivity, constructive teaching and learning strategies, and the creation of a supportive and engaging learning environment.

In the evolving landscape of positive education, several scholars have highlighted existing gaps in positive education research and stressed the need for further research to build cumulative evidence. Meta-frameworks have been proposed to help identify and structure the diverse elements of positive education, emphasising its potential to enhance well-being, resilience, and positive educational outcomes (Noble & McGrath, 2015; Waters & Loton, 2019). They provide a systematic examination of various components and interventions within positive education, shedding light on its theoretical foundations and practical applications.

Nonetheless, while there has been a growing body of research on positive education in traditional classroom settings, there appears to be a relative lack of research specifically addressing the application of positive education principles and interventions in distance learning environments. Positive education is rapidly evolving, and researchers and educators continue to adapt to new challenges and opportunities presented by distance learning.

The POSITIVE LEARN pedagogical framework aims to fill this gap, by investigating positive education in the distance learning setting. Integrating technology into positive education initiatives in distance learning is an emerging area. Researchers are exploring the role of

technology, such as virtual reality and online platforms, in delivering positive education content and assessing its impact on student outcomes.

Our analysis of the scientific research revealed two main types of positive interventions: (a) general positive pedagogy interventions for students and teachers and (b) technology-based intervention and teaching methods. These were then further analysed into sub-domains and relevant positive interventions were identified in each area.

An important contribution of the present research is that it incorporates technology-based interventions for technostress into a positive education framework. These are interventions or approaches that specifically aim to reduce or prevent the effects of technostress in distance learning by using technology as a tool. The POSITIVE LEARN pedagogical framework systematically explores technology-based interventions for technostress in distance learning per domain of positive pedagogy. The analysis also features teaching methods in the context of technostress, which refer to the different approaches and techniques that can be used to teach individuals how to recognise, manage and avoid technostress, which can occur in education and training.

There is a need for empirical studies examining the effectiveness of the identified positive interventions and other positive education strategies when delivered through online platforms. The first results show that there might be a need to analyse different tools and apps at a more profound level. Questions about whether these interventions produce similar outcomes in virtual environments compared to in-person settings also require further exploration.

We developed an initial pedagogical framework for positive distance learning based on well-founded theory that served as our fundamental blueprint. This framework was intended to guide our efforts and provide a structured path forward. However, we recognized the importance of empirical validation and refinement to ensure its effectiveness and applicability in real-world contexts. As we began the pilot validation phase of our project, we were intensively engaged in data collection, analysis, and feedback gathering. This empirical phase not only allowed us to test the practicality and feasibility of our framework, but also provided insights and feedback from stakeholders and participants. Based on these empirical findings, we carefully revised and refined our framework to better adapt it to the realities and nuances of our specific context and ultimately improve its robustness and utility.

The empirical phase provided a valuable opportunity to evaluate the implementation of the pedagogical framework within real-world educational settings. This process was essential for understanding how the framework functioned as an integral component in the design and delivery of positive learning scenarios. By applying the framework in practice, we were able to

assess its strengths, identify areas for improvement, and collect insights into how it could effectively support the creation of engaging, meaningful, and wellbeing-oriented educational experiences in a distance learning context. integral part of developing positive learning scenarios.

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