

Hoferichter, Frances; Savolainen, Hannu; Zurbriggen, Carmen; Schoeps, Konstanze
Innovative practices to strengthen socio-emotional development of primary school students

Schlesier, Juliane [Hrsg.]; Frey, Anne [Hrsg.]; Hoya, Fabian [Hrsg.]; Parade, Ralf [Hrsg.]; Rank, Astrid [Hrsg.]:
Foundations of learning. Unveiling the mosaic of primary education systems worldwide. Bad Heilbrunn : Verlag Julius
Klinkhardt 2026, S. 403-421. - (Grundschule International / Primary Education International)



Quellenangabe/ Reference:

Hoferichter, Frances; Savolainen, Hannu; Zurbriggen, Carmen; Schoeps, Konstanze: Innovative practices to strengthen socio-emotional development of primary school students - In: Schlesier, Juliane [Hrsg.]; Frey, Anne [Hrsg.]; Hoya, Fabian [Hrsg.]; Parade, Ralf [Hrsg.]; Rank, Astrid [Hrsg.]: *Foundations of learning. Unveiling the mosaic of primary education systems worldwide.* Bad Heilbrunn : Verlag Julius Klinkhardt 2026, S. 403-421 - URN: urn:nbn:de:0111-pedocs-358070 - DOI: 10.25656/01:35807; 10.35468/6239-15

<https://nbn-resolving.org/urn:nbn:de:0111-pedocs-358070>

<https://doi.org/10.25656/01:35807>

in Kooperation mit / in cooperation with:



<http://www.klinkhardt.de>

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz:
<http://creativecommons.org/licenses/by-sa/4.0/deed.de> - Sie dürfen das Werk bzw. den Inhalt vervielfältigen, verbreiten und öffentlich zugänglich machen sowie Abwandlungen und Bearbeitungen des Werkes bzw. Inhaltes anfertigen, solange sie den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen und die daraufhin neu entstandenen Werke bzw. Inhalte nur unter Verwendung von Lizenzbedingungen weitergeben, die mit denen dieses Lizenzvertrags identisch, vergleichbar oder kompatibel sind.
Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License:
<http://creativecommons.org/licenses/by-sa/4.0/deed.en> - You may copy, distribute and transmit, adapt or exhibit the work or its contents in public and alter, transform, or change this work as long as you attribute the work in the manner specified by the author or licensor. New resulting works or contents must be distributed pursuant to this license or an identical or comparable license.

By using this particular document, you accept the above-stated conditions of use.



Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Mitglied der:


Leibniz-Gemeinschaft

EUROPE (GERMANY, ITALY, SPAIN, FINLAND, AUSTRIA, PORTUGAL & LUXEMBOURG)

*Frances Hoferichter, Hannu Savolainen,
Carmen Zurbriggen and Konstanze Schoeps*

Innovative Practices to Strengthen Socio-Emotional Development of Primary School Students

Abstract

Socio-emotional competencies such as empathy, emotional regulation, and goal-setting are essential to students' well-being, positive relationships, and lifelong success. In primary education, socio-emotional learning (SEL) programs foster these skills and especially support disadvantaged students by improving mental health, academic performance, and social inclusion while reducing dropout rates. Despite their effectiveness, SEL initiatives are implemented inconsistently, highlighting the need for structured, research-based approaches. This article presents two international SEL initiatives for socio-emotional development and inclusion in primary education: SEL4@ll (Germany, Italy, Spain, Finland) and SO-WELL-AWARE (Austria, Finland, Portugal, Luxembourg). Both aim to strengthen SEL in schools but use different methods. SEL4@ll offers a serious game and digital teaching materials to engage students in developing socio-emotional skills and promoting well-being, diversity, and inclusion. SO-WELL-AWARE provides teachers with an online tool to assess students' subjective well-being and training to support evidence-based SEL strategies. Both projects show how technology and research-based practices can foster socio-emotional competencies and inclusion in primary education.

Keywords: Socio-Emotional Learning (SEL), Well-Being, Gaming, Digital Tools for Students and Teachers across Europe

1 Socio-emotional learning (SEL) facilitated by serious games and school-wide positive behaviour interventions

Socio-emotional skills are crucial for children's adjustment, individual well-being and academic success (Ross & Tolan, 2017; OECD, 2021). However, disadvantaged students, including those with special educational needs (SEN) or learning disabilities (LD), report lower socio-emotional competences and reduced well-being compared to their peers (OECD, 2021; McCoy & Banks, 2012). These groups face greater challenges, fewer opportunities and less support in developing essential socio-emotional skills. Thus, socio-emotional competencies, which include empathy, emotional regulation and goal setting (CASEL, 2020), are vital in enhancing both individual well-being and the quality of interpersonal relationships, leading to overall fulfilment and success in diverse areas of life (Schwarzenthal et al., 2020). Educational initiatives focused on SEL help all children develop essential skills, such as self-awareness, emotional regulation, social skills and responsible decision-making (Durlak et al., 2011). These programs are particularly beneficial for children from disadvantaged backgrounds, as they provide crucial support in managing emotions, building positive relationships and navigating challenges, ultimately enriching their overall school experience and long-term well-being (Shriver & Weissberg, 2020) and supporting a successful transition from primary to secondary school (Kaspar & Massey, 2022). At an individual level, empirical research has found that SEL benefits students' mental health and academic performance and mitigates the likelihood of grade retention and school dropout (Price, 2019). At the classroom level, SEL has been found to promote social inclusion and equity among all students in the classroom (Cipriano & McCarthy, 2023).

Enhancing socio-emotional development in children is a critical goal for educational institutions. Implementing prevention programs that engage the entire primary school community has proven effective in achieving this objective (Bierman et al., 2010; Mondì et al., 2021). An effective example of how socio-emotional development can be fostered among primary school students is the school-wide positive behaviour intervention and support (SWP-BIS) programme (Horner et al., 2010), which has successfully reduced problem behaviours while improving the learning climate and social relationships (Bradshaw et al., 2012; Gage et al., 2018). However, research on the benefits for students' well-being is still underway. Possible mechanisms by which SWP-BIS could support the well-being of students include improving the clarity and predictability of the social environment and increasing the perception of safety (McIntosh et al., 2014). Moreover, integrating school mental health

services into SWPBIS approaches may offer many benefits (Weist et al., 2022). However, how teachers can support students' well-being as part of everyday teaching is less well-known. One reason why supporting well-being is more challenging than addressing problem behaviour is that internal feelings cannot be observed directly. This challenge is now being addressed by the project *Raising awareness for school well-being: Training primary and secondary teachers how to monitor emotional well-being, social inclusion and the academic self-concept of students (SO-WELL-AWARE)*, which seeks to achieve two aims: (1) provide teachers with an easy-to-use online tool to assess and follow students' well-being at school and (2) train teachers on how to use the tool as well as provide evidence-based strategies to support students' well-being and SEL are offered.

In addition to using online tools to monitor students' well-being, *serious games* can be incorporated into the educational framework to address SEL by providing interactive and engaging platforms (Zheng et al., 2021). Serious games are digital tools that facilitate skills or knowledge acquisition in an entertaining environment. They integrate both pedagogical theories and the motivational principles of game design in pursuit of an educational goal (Yu, 2019) (Ref). Serious games simulate real-life scenarios that require students, for example, to practice and develop their socio-emotional skills, such as empathy, teamwork and conflict resolution (Boyle et al., 2012). This approach is realized through the project *Promoting well-being among European adolescents– an inclusive and digital programme to strengthen socio-emotional competencies (SEL4@ll)*, which aims to develop, implement and evaluate a serious game for European children and youth to promote their socio-emotional competencies, well-being and inclusion at the class level.

In summary, such programs can help create a supportive environment for heterogeneous classroom settings and empower students to navigate challenges, build positive relationships and engage actively in learning, all of which enhance their well-being (Hassani & Schwab, 2021; Hoferichter et al., 2021; Hoferichter, 2025). In the following, we will first introduce the Erasmus+ funded project, *SEL4@ll*, which is a joint initiative of Universities in Germany, Spain and Italy. Second, we present the Erasmus+ funded project *SO-WELL-AWARE*, which is a collaborative effort between Universities in Luxembourg, Austria, Finland and Portugal. Moreover, we explore the following questions: What are the main priorities of both initiatives? What makes these approaches innovative?

2 SEL4@ll – Promoting well-being among European adolescents: An inclusive and digital programme to strengthen socio-emotional competencies

Digital methodologies can be powerful tools to modernize education, fostering key competencies, such as socio-emotional skills, and improving learning experiences for all students, especially those with fewer opportunities (Konishi et al., 2025). Serious games are especially effective for this purpose, providing an engaging environment that integrates pedagogical theories with game design to achieve educational goals (Boyle et al., 2012, 2016). These games create safe spaces where students can experiment with social interactions and receive immediate feedback to reinforce positive behaviours (Alotaibi, 2024). Research has highlighted their effectiveness in promoting prosocial behaviour and socio-emotional skills among children (Saleme et al., 2021). Additionally, serious games can be adjusted for personalized learning, addressing diverse students' needs (Saleme et al., 2021).

SEL4@ll builds on these principles. It is a collaborative initiative involving the University of Greifswald, University of Valencia, Politecnical University of Valencia and University of Perugia, funded by the European Union, Erasmus+, Cooperative Partnerships (<https://ews.uni-greifswald.de/forschung/sel4all/>). This project aims to co-create a serious game with students and implement an inclusive SEL-based programme for primary school students transitioning to secondary school, aged between 10 and 12 years. This age group undergoes a critical developmental period marked by biological, cognitive and social changes, which put students at risk for increased stress, emotional instability, peer pressure and declining academic motivation (Viner et al., 2017). These challenges can lead to difficulties in self-regulation, social relationships and overall well-being (Eccles & Templeton, 2002). Therefore, they may greatly benefit from SEL, which helps them develop essential skills, such as emotional regulation, resilience, interpersonal communication and responsible decision-making (OECD, 2021; McCoy & Banks, 2012). The programme aims to develop socio-emotional competencies, enhance students' well-being and foster inclusion within the classroom and school communities (Denham, 2019; Schwarzenenthal et al., 2020). Alongside the serious game, SEL4@ll provides a digital teacher handbook and accompanying didactic material, including worksheets and activities, to help teachers guide their students in reflecting and processing their experiences from playing the serious game.

SEL4@ll is based on the theoretical foundation of the Collaborative for academic, social, and emotional learning (CASEL) framework, which defines systemic SEL through five core competencies: self-awareness, responsible decision-making, relationship skills, social awareness and self-management

(CASEL, 2020). The design of the serious game is not only guided by the CASEL framework but also by theoretical models on SEL (Cefai & Cavioni, 2014; Cefai et al., 2021) and character development (Cloninger, 2004). The game is designed to cultivate key competencies anchored in frameworks on life skills (Sala et al., 2020) and positive youth development (Oliva, 2010), ensuring a comprehensive approach to fostering primary students' socio-emotional competencies.

At its core, the serious game consists of five missions or gates, each focusing on three overarching skills. Specifically, gate 1 (gate of Psyche) comprises sense of meaning, resilience and leadership; gate 2 (gate of Emotion) comprises emotional intelligence, empathy and compassion; gate 3 (gate of People) comprises communication, gratitude and positive influence; gate 4 (gate of Knowledge) comprises self-motivation, growth mindset, flexibility and critical thinking; and gate 5 (final mission) comprise equality, responsibility and justice. The serious game invites students to become the protagonists of their own journeys, and, through magical gates, they explore different worlds, acquiring socio-emotional skills that illuminate the branches of a skill tree. These skills are essential for overcoming the 'dark force' threatening the world. The serious game will be hosted on an online platform, accessible through any web browser, and will be offered in multiple languages, including German, Italian, Spanish, Finnish and English.

To assess the impact and effectiveness of the programme while following a co-creation approach, SEL4@ll integrates an evaluation component that includes quantitative and qualitative research with students and teachers, as well as feedback from critical friends, which is integrated into its design and implementation. Specifically, students will participate in a three-wave assessment by participating in a questionnaire study as well as focus group interviews to assess any potential changes in their socio-emotional competencies, well-being and social inclusion, which can be attributed to playing the game. In addition, teachers will be asked about their students' development concerning the described outcomes, as well as challenges during the implementation of the serious game and the use of the teaching material. By simultaneously implementing and evaluating SEL4@ll in Germany, Spain, Italy and Finland, the study incorporates a broad international perspective, allowing for a comparative analysis of the program's effectiveness across diverse educational systems, cultural contexts and student populations. This cross-national approach identifies potential universal benefits as well as context-specific challenges and ensures the adaptation and scalability of the programme to meet the needs of diverse learners in a European context.

2.1 Priorities of SEL4@II: Inclusion and diversity, digital transformation and the development of socio-emotional competencies

SEL4@all prioritizes key areas driving educational advancements, including social inclusion within the classroom, digital transformation and the development of socio-emotional competencies. First, it promotes inclusion and diversity by ensuring equal opportunities and access to the SEL-based programme by adapting a co-creative inclusive education strategy to engage participants from disadvantaged backgrounds and with fewer opportunities in the design process of the serious game. Elementary school students from schools with a high proportion of children facing fewer opportunities (e.g. those with a migration background, special needs, or challenging life circumstances) actively contributed to the co-creation of the game. They shared their perspectives on how the game should be structured and designed to make it engaging and appealing to them. The SEL4@II programme integrates 'digital transformation' by combining SEL with technology by embedding SEL in a serious game that capitalizes on students' familiarity with digital tools. In addition to technologies, gamification is considered an excellent method of intrinsically motivating students to engage with their use.

Third, the project emphasizes the development of key competences through a novel programme that uses digital technology to develop socio-emotional competencies among European students. At its core, the game consists of five gates, each targeting a fundamental socio-emotional skill. Each gate presents students with challenges that require them to respond in a socially appropriate manner, fostering essential competencies through experiential learning. They receive direct feedback on their actions, reinforcing their growth and development. A skill tree visually maps their progress, making their socio-emotional development tangible and allowing them to track gradual improvements. This structured approach ensures that students not only engage with the game but actively build and refine their socio-emotional skills in a meaningful way.

2.2 What makes SEL4@II innovative?

The project is built on the idea that technology can enhance access to education and foster the acquisition of transversal skills critical for inclusive educational processes, thus addressing the need for innovative tools in this domain (Morganti et al., 2019). The project is implemented over 36 months and is designed for students aged 10 and above. To participate in the serious game, students need basic reading skills and internet access. All material is free of charge and available in multiple languages. By incorporating digital methodologies and technological platforms, SEL4@II transforms educational settings,

supporting students in developing emotional and social competencies while fostering inclusive environments at the class and school levels.

The SEL4@ll programme employs the innovative anticipation-action-reflection (AAR) approach, which facilitates an iterative learning process that encourages learners to act intentionally and responsibly (Figure 1). This method allows learners to develop socio-emotional skills that support inclusion and diversity, encouraging thoughtful and meaningful social interactions. The AAR cycle consists of three key phases, each designed to help elementary school students develop their socio-emotional competencies, promote inclusion and enhance their overall well-being. Through this cycle, students learn to reflect on their own attitudes and behaviours, actively engage in socio-emotional learning experiences and meaningfully improve their interpersonal skills. The cycle consists of three key phases:

1. Anticipation Phase

In this phase, students reflect on their actions and attitudes as they relate to the mentioned aspects. In focus group interviews, students have been asked to do the following:

- Reflect on their relationships within the class
- Recall times when they may have felt frustrated or anxious
- Consider how they managed their emotions and resolved conflicts
- Share their preferences when playing computer games, such as the story plot, design and music.

2. Action Phase

In this phase, students actively participate in activities that help them strengthen their socio-emotional skills by engaging with the serious game. For instance, they

- Practice resolving conflicts, showing empathy and working together as a team with characters from diverse backgrounds
- Face in-game challenges that require effective collaboration to complete a task
- Ensure that every teammate is included, heard and respected
- This interactive approach helps students develop essential skills, such as
- Active listening
- Cooperation
- Problem-solving

These skills reinforce their ability to navigate social situations in an inclusive and emotionally intelligent way.

3. Reflection Phase

In this final stage, students look back on their experiences and assess how their thinking and actions have evolved. This is supported by teaching materials provided to the teacher, which

- Offer guidance in effectively facilitating the learning process
- Encourage students to recognize, categorize and reflect on their emotions
- Help students identify their strengths and weaknesses
- Promote discussion of various conflict resolution strategies and how to apply them in specific situations

By moving through these three phases, students gradually develop a deeper understanding of their social surroundings while strengthening their intra- and interpersonal competencies in a meaningful way that contributes to inclusion and well-being in the classroom.

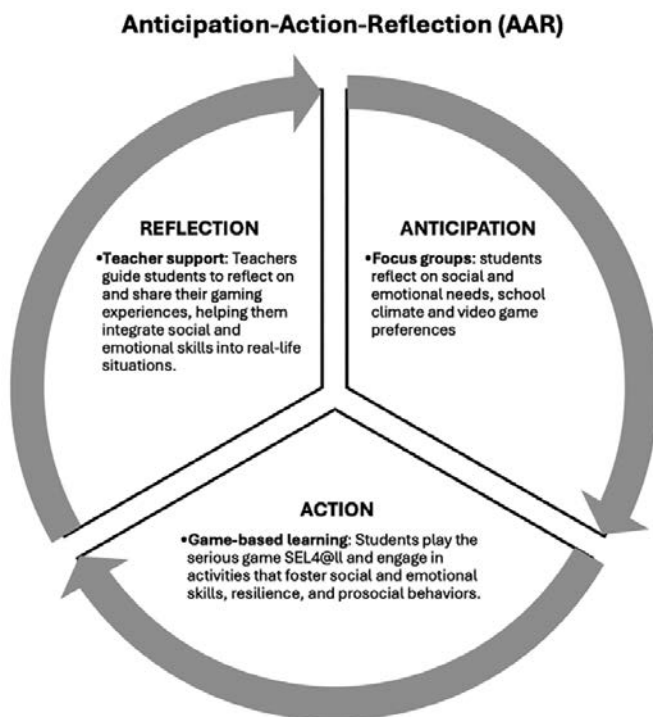


Figure 1: Anticipation-Action-Reflection (AAR), own illustration

2.3 Risks and Challenges

Although there are many advantages, implementing the SEL4@ll serious game in primary schools also presents several risks and challenges that need careful consideration. One major concern is digital accessibility and equity, as not all schools and students have equal access to technology and some students may struggle with digital literacy (Warschauer & Matuchniak, 2010). Moreover, ensuring consistent engagement and motivation can be challenging, as students have different attention spans, interests and tolerance for frustration, which may affect their willingness to participate (Ryan & Deci, 2000). Additionally, socio-emotional readiness varies among students, meaning some may find it difficult to reflect on or express their emotions and sensitive topics such as conflict resolution and inclusion may trigger emotional distress (CASEL, 2020). The role of teachers is also crucial, as the success of the implementation of SEL4@ll depends on teachers' willingness and ability to facilitate discussions and guide students through the learning process (Jennings & Greenberg, 2009). However, some educators may feel unprepared to integrate socio-emotional learning into their curriculum, and time constraints in schools could limit full implementation (Brckett et al., 2012). Classroom dynamics and inclusion could also be challenging, as students with diverse needs, such as those with learning difficulties or language barriers, may benefit from additional support to fully engage and participate (Florian & Black-Hawkins, 2011). Furthermore, some students may dominate discussions while others struggle to find their voice, highlighting the importance of equitable participation structures (Zins et al., 2004). Addressing these challenges requires comprehensive teacher training, technical support and continuous evaluation to ensure the game effectively enhances socio-emotional learning and fosters an inclusive classroom environment.

3 SO-WELL-AWARE – Raising awareness for students' well-being at school

It is widely acknowledged that the subjective well-being of students reflects a school environment that facilitates learning processes and promotes students' socio-emotional development (UNESCO, 2024). Furthermore, students' subjective well-being is also linked to students' engagement and motivation to learn (Hascher, 2012; Hoferichter & Schlesier, 2024).

Being aware of primary school students' subjective well-being enables teachers to adapt their teaching according to students' needs, but this requires that teachers possess the ability to accurately assess students' emotional characteristics (Herppich et al., 2018). However, previous studies have shown that

teachers' assessment accuracy of students' well-being ranges from low to moderate (Urhahne & Wijnia, 2021; Zurbriggen et al., 2023). Incorporating primary school students' self-assessments of their well-being is essential for obtaining deep insights and providing appropriate support. Against this backdrop, the SO-WELL-AWARE project was developed (<https://so-well-aware.univie.ac.at/the-project/>). The project is funded by the European Union, funding scheme Erasmus+ Cooperative Partnerships, and corresponds to a joint initiative of the University of Luxembourg, University of Vienna, University of Eastern Finland and the Portuguese Catholic University. The initiator of the project (Carmen Zurbriggen, University of Fribourg, Switzerland) serves as an external expert in the consortium.

The SO-WELL-AWARE project aims to enhance teachers' awareness of students' self-perceived well-being and support them in developing skills and teaching strategies to promote students' well-being and SEL. Because student well-being in school corresponds to a broad, multifaceted construct (Hascher, 2010, Hoferichter, 2025), the project focuses on the three dimensions that are deemed critical in the context of inclusive education, namely emotional well-being in school (including emotional attitudes towards school and emotional engagement in school), social inclusion in class and the academic self-concept (Prince & Hadwin, 2013; Zurbriggen et al., 2019).

3.1 Priorities and programme of the SO-WELL-AWARE project

The key contributions of the SO-WELL-AWARE project are, first, to empower teachers in the assessment and promotion of students' emotional well-being, social inclusion and academic self-concept. The objective is to give teachers an easy way to obtain a longitudinal report of students' ratings on their well-being. The second contribution is that information gives teachers new possibilities to (2) support at-risk students by providing targeted support for those with low emotional well-being, social inclusion, or academic self-concept. The project targets students aged eight to twelve and their teachers in primary or lower secondary schools. The project provides a comprehensive, evidence-based and highly practice-oriented teacher training programme and an easy-to-use online assessment tool, complemented by an online manual. The *SO-WELL-AWARE online tool* is designed for students from the age of eight onwards and their teachers, enabling efficient evaluation and monitoring of students' emotional well-being, social inclusion and academic self-concept. These three dimensions of students' well-being are assessed by the student and teacher version of the Perceptions of Inclusion Questionnaire (PIQ; Venetz et al., 2015). The user-friendly SO-WELL-AWARE online tool can be implemented in everyday teaching practice using a digital device and is designed to

be applied multiple times for each student (i.e. formative assessment), offering the possibility to capture a trend graph of a student's subjective wellbeing on these three dimensions and monitor changes in their well-being as well as for the class overall. The online tool is accompanied by an online manual containing the relevant information for implementation (e.g., data protection), guiding through each step with pictures and additional explanations (e.g., how to generate codes). The online tool and its accompanying manual are available in English, Finnish, French, German and Portuguese. The tool-generated results provide a concrete foundation for addressing both individual and overall students' well-being in the classroom. By allowing a comparison between primary school students' self-assessments of their well-being and teachers' evaluations, it facilitates meaningful discussions between students and teachers aimed at providing tailored support for each student.

The SO-WELL-AWARE online tool is designed to be flexibly integrated into various educational settings, making it a valuable resource for teachers, school counsellors and educational psychologists. It can be implemented in regular classroom settings as part of everyday teaching practice, allowing educators to monitor students' well-being and socio-emotional development over time through formative assessment. Although it has not been tested in the ongoing project, the tool could additionally be used in individual student support sessions, where teachers, counsellors, or psychologists work with students on personalized well-being strategies based on their self-assessment results.

The *SO-WELL-AWARE teacher training* includes two workshops, each lasting from three to four hours, and an implementation phase at primary schools over six weeks. The first workshop aims to familiarize teachers with the online tool and its online manual as well as to raise awareness on the relevance of students' well-being in school. Furthermore, evidence-based resource booklets and a toolkit are provided and introduced during teacher training. The first workshop is followed by a six-week implementation phase. In the second workshop at the end of the implementation phase, teachers will be given the opportunity to share and discuss their experiences and lessons learned in relation to the implementation. Teachers will be encouraged to reflect on their own roles and professionalization of teaching skills in the promotion of students' well-being and SEL.

The SO-WELL-AWARE teacher training can be effectively implemented in primary schools through a structured approach that combines professional development workshops with a six-week classroom implementation phase. This ensures that teachers not only gain theoretical knowledge but also apply it in practice, fostering a more systematic and sustainable integration of student well-being and SEL into everyday teaching.

3.2 What makes the SO-WELL-AWARE project innovative?

SO-WELL-AWARE gives teachers an easy-to-use online tool to measure and follow students' well-being at school. This way, teachers have access to real-time insights into the development of their students' emotional and mental states, enabling a more responsive and individualized approach to education. Hence, unlike conventional standalone questionnaires, the tool allows teachers to design classroom activities based on the continuous monitoring of students' well-being development, thus fostering a more adaptive and responsive educational environment. The project also contains an information package about the importance of supporting students' well-being in class and a presentation of evidence-based approaches with concrete examples to support the well-being of students as part of everyday class activities. The SO-WELL-AWARE project stands out as highly innovative because it bridges the gap between student well-being and actionable educational practices. The integration of evidence-based strategies into the classroom setting ensures that well-being support is not just theoretical but practical and actionable, being seamlessly woven into daily activities. Furthermore, the project's unique emphasis on using students' personal experiences of well-being to shape teaching methods and classroom dynamics represents a ground-breaking step towards a more student-centred and empathetic educational environment. This forward-thinking approach not only enhances academic outcomes but also fosters a more supportive and inclusive school culture. The SO-WELL-AWARE project offers primary schools a practical tool for monitoring and supporting student well-being in real time. The project offers evidence-based strategies and an information package to help integrate well-being support into daily teaching, ensuring it becomes a natural part of school culture. By incorporating primary school students' personal experiences, SO-WELL-AWARE bridges the gap between socio-emotional learning and education, thus promoting student-centred teaching that enhances both academic success and emotional resilience. Ultimately, it empowers teachers, strengthens student engagement and creates a more supportive and inclusive school environment.

3.3 Risks and Challenges

Although SO-WELL-AWARE includes various advantages, implementing the project may present challenges, including time constraints for teachers who must integrate well-being assessments into their existing curriculum. Research has shown that time limitations are a significant barrier to implementing new programs in schools, especially when teachers are already managing demanding workloads (Kraft et al., 2016). Unequal access to digital devices and internet connectivity may also limit the tool's usability in some schools, as

digital divides continue to affect educational equity (Warschauer & Matuchniak, 2010).

Additionally, teachers may struggle to interpret well-being data, risking misinterpretation or inadequate support for students. Accurately interpreting SEL-related data requires specific training and a nuanced understanding of student behaviour, which not all educators may possess. The teacher training workshops also require commitment, and not all educators may feel prepared to integrate SEL into their teaching. Studies have shown that teacher readiness and self-efficacy strongly influence the successful adoption of SEL programs (Brackett et al., 2012; Jennings & Greenberg, 2009).

Moreover, the effectiveness of training depends on teachers' willingness and ability to integrate SEL into their teaching style, which can vary significantly based on personal beliefs, school climate and perceived support (Schonert-Reichl, 2017). Differences between student self-assessments and teacher evaluations may also require careful facilitation to ensure constructive discussions, as such discrepancies are common and can reflect divergent perspectives on emotional states or classroom dynamics (Panadero et al., 2017). Addressing these challenges requires ongoing support, clear implementation guidelines and institutional commitment to primary school students' well-being (Durlak et al., 2011).

4 Summary and Outlook

The two SEL initiatives introduced in this article complement each other by providing distinct yet interconnected approaches to fostering students' socio-emotional competencies in primary school settings. This is particularly relevant in diverse classrooms, where some of the students come from disadvantaged backgrounds or have varying levels of academic and socio-emotional abilities. Inclusive education extends beyond equitable access to high-quality teaching in mainstream schools; it also involves creating enriched learning opportunities and providing tailored support to foster the academic and socio-emotional development of all students (UN, 2006).

The SO-WELL-AWARE project focuses on students' continuous subjective well-being monitoring similar to formative assessment or learning, equipping teachers with real-time insights into students' emotional well-being, social inclusion and academic self-concept. This data-driven approach allows for adaptive teaching and tailored support, ensuring that students' well-being is consistently addressed in the classroom.

On the other hand, the SEL4@ll initiative is centred around active engagement and skill-building through the AAR cycle, integrating game-based learning and structured SEL activities into everyday teaching. This interactive

approach enables students to practice socio-emotional skills, such as self-regulation, empathy and collaboration, in real-world scenarios.

Together, these initiatives offer a holistic SEL framework that combines assessment, reflection and practical application, enabling teachers to monitor, support and actively develop students' socio-emotional competencies. By integrating both projects, schools can create a more inclusive, responsive and supportive learning environment, ensuring that SEL is not just measured but also meaningfully embedded into daily educational practices.

Both initiatives are anchored in established theoretical models of SEL, well-being and character development, ensuring a structured and research-based approach to fostering students' socio-emotional competencies. The SEL4@11 initiative is based on the CASEL framework, which defines systemic SEL through five core competencies: self-awareness, responsible decision-making, relationship skills, social awareness and self-management (CASEL, 2020). Additionally, the design of the serious game is informed by theoretical models of SEL (Cefai & Cavioni, 2014; Cefai et al., 2021) and character development theories (Cloninger, 2004). The game fosters key socio-emotional skills rooted in frameworks on life skills development (Sala et al., 2020) and positive youth development (Oliva, 2010).

Similarly, the SO-WELL-AWARE project builds on the theoretical conception of students' school-related subjective well-being (Hascher, 2010) with a focus on inclusive education. The corresponding tool assesses students' emotional well-being, social inclusion and academic self-concept using the PIQ (Venetz et al., 2015). The project emphasizes the importance of continuous well-being assessment as an integral component of inclusive education, ensuring that students receive the necessary support to thrive both emotionally and academically.

Both projects provide valuable opportunities to strengthen inclusive education and student well-being. Their integration helps reduce disparities, ensuring that all students, including those from disadvantaged backgrounds, receive the support they need to thrive academically and emotionally. By equipping teachers with user-friendly tools and structured methodologies, these approaches enable proactive interventions that foster resilience, positive relationships and emotional regulation, which are crucial for lifelong success. However, their implementation also presents challenges. Teachers may struggle with time constraints, digital access, or the integration of SEL alongside subject-specific instruction. Ensuring teacher training and institutional support is essential to overcoming these barriers. Additionally, the interpretation and application of well-being data require careful facilitation to ensure that insights translate into effective classroom interventions. By addressing these challenges and leveraging the complementary strengths of both initiatives,

primary school education can move towards a more holistic, student-centred approach, where well-being and academic success go hand in hand.

References

- Almeida, F. (2020). Adoption of a serious game in the developing of emotional intelligence skills. *European Journal of Investigation in Health, Psychology and Education*, 10(1), 30–43. <https://doi.org/10.3390/ejihpe10010004>
- Alotaibi, M. (2024). Game-based learning in early childhood education: A systematic review and meta-analysis. *Frontiers in Psychology*, 15, e1307881. <https://doi.org/10.3389/fpsyg.2024.1307881>
- Banks, T., Sapp, M., & Obiakor, F. E. (2013). Understanding B. F. Skinner: Building emotional competence in students with diverse learning needs. *Multicultural Learning and Teaching*, 9(1), 53–66. <https://doi.org/10.1515/mlt-2013-0021>
- Bierman, K. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., Pinderhughes, E., & Conduct Problems Prevention Research Group. (2010). The effects of a multiyear universal social-emotional learning program: The role of student and school characteristics. *Journal of Consulting and Clinical Psychology*, 78(2), 156–168. <https://doi.org/10.1037/a0018607>
- Boyle, E. A., Connolly, T. M., Hainey, T., & Boyle, J. M. (2012). Engagement in digital entertainment games: A systematic review. *Computers in Human Behavior*, 28(3), 771–780. <https://doi.org/10.1016/j.chb.2011.11.020>
- Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., Lim, T., Ninaus, M., Ribeiro, C., & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers and Education*, 94, 178–192. <https://doi.org/10.1016/j.compedu.2015.11.003>
- Brackett, M. A., Reyes, M. R., Rivers, S. E., Elbertson, N. A., & Salovey, P. (2012). Assessing teachers' beliefs about social and emotional learning. *Journal of Psychoeducational Assessment*, 30(3), 219–236. <https://doi.org/10.1177/0734282911424879>
- Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2012). Effects of school-wide positive behavioral interventions and supports on child behavior problems. *Pediatrics*, 130(5), e1136–e1145. <https://doi.org/10.1542/peds.2012-0243>
- CASEL. (2020). CASEL'S SEL Framework: What are the core competence areas and where are they promoted? <https://casel.org/wp-content/uploads/2020/12/CASEL-SEL-Framework-11.2020.pdf>
- Cefai, C., & Cavioni, V. (2014). *Social and emotional education in primary school: Integrating theory and research into practice*. Springer. <https://doi.org/10.1007/978-1-4614-8752-4>
- Cefai, C., Simoes, C., & Caravita, S. (2021). A Systemic, whole-school approach to mental health and well-being in schools in the EU. NESET Analytical Report. Publications Office of the European Union. <https://doi.org/10.2766/50546>
- Cipriano, C., & McCarthy, M. F. (2023). Towards an inclusive social and emotional learning. *Social and Emotional Learning: Research, Practice, and Policy*, 2(1), e100008. <https://doi.org/10.1016/j.sel.2023.100008>
- Cloninger, C. R. (2004). *FEELING GOOD: The science of well-being*. Oxford University Press.
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2020). *SEL: What are the core competencies?* <https://casel.org>
- De la Barrera, U., Postigo-Zegarra, S., Mónaco, E., Gil-Gómez, J.-A., & Montoya-Castilla, I. (2021). Serious game to promote socioemotional learning and mental health (emoTIC): A study protocol for randomised controlled trial. *BMJ Open*, 11(12), e052491. <https://doi.org/10.1136/bmjopen-2021-052491>
- Denham, S. A. (2019). Emotional competence during childhood and adolescence. In V. LoBue, K. Pérez-Edgar, & K. A. Buss (Eds.), *Handbook of emotional development* (pp. 493–541). Springer. https://doi.org/10.1007/978-3-030-17332-6_20

- DeSmet, A., Van Ryckeghem, D., Compernelle, S., Baranowski, T., Thompson, D., Crombez, G., Poels, K., Van Lippevelde, W., Bastiaenssens, S., Van Cleemput, K., Vandeboosch, H., & De Bourdeaudhuij, I. (2014). A meta-analysis of serious digital games for healthy lifestyle promotion. *Preventive Medicine*, 69, 95–107. <https://doi.org/10.1016/j.ypmed.2014.08.026>
- Domitrovich, C., Durlak, J., Staley, K., & Weissberg, R. (2017). Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Development*, 88(2), 408–416. <https://doi.org/10.1111/cdev.12739>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Eccles, J. S., & Templeton, J. (2002). Extracurricular and other after-school activities for youth. *Review of Research in Education*, 26(1), 113–180. <https://doi.org/10.3102/0091732X026001113>
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), 813–828. <https://doi.org/10.1080/01411926.2010.501096>
- Gage, N. A., Whitford, D. K., & Katsiyannis, A. (2018). A review of schoolwide positive behavior interventions and supports as a framework for reducing disciplinary exclusions. *The Journal of Special Education*, 52(3), 142–151. <https://doi.org/10.1177/0022466918767847>
- Hascher, T. (2010). Wellbeing. In S. Jarvela (Ed.), *Social and emotional aspects of learning* (pp. 99–105). Elsevier.
- Hascher, T. (2012). Well-being and learning in school. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 3453–3456). Springer. https://doi.org/10.1007/978-1-4419-1428-6_1832
- Hassani, S., & Schwab, S. (2021). Social-emotional learning interventions for students with special educational needs: A systematic literature review. *Frontiers in Education*, 6, e808566. <https://doi.org/10.3389/educ.2021.808566>
- Herppich, S., Praetorius, A.-K., Foerster, N., Glogger-Frey, I., Karst, K., Leutner, D., Behrmann, L., Boehmer, M., Ufer, S., Klug, J., Hetmanek, A., Ohle, A., Boehmer, I., Karing, C., Kaiser, J., & Südkamp, A. (2018). Teachers' assessment competence: Integrating knowledge-, process-, and product-oriented approaches into a competence-oriented conceptual model. *Teaching and Teacher Education*, 76, 181–193. <https://doi.org/10.1016/j.tate.2017.12.001>
- Hoferichter, F. (2025). Schulisches Wohlbefinden [School Well-being]. In J. Pfetsch, G. Steffgen, & Böhmer, M. (Eds.), *Schulpsychologie – Ein Lehrbuch für die Praxis* (pp. 161–168). Springer. <https://doi.org/10.1007/978-3-662-71375-4>
- Hoferichter, F., Kulakow, S., & Hufenbach, M. C. (2021). Support from parents, peers, and teachers is differently associated with middle school students' well-being. *Frontiers in Psychology*, 12, e758226. <https://doi.org/10.3389/fpsyg.2021.758226>
- Hoferichter, F., & Schlesier, J. (2024). Striving to learn and feeling well? The effects of students' achievement goal-orientation on their psychological and physical well-being over one school year. *Zeitschrift für Erziehungswissenschaft (ZfE)*, 28(3), 397–418. <https://doi.org/10.1007/s11618-024-01270-3>
- Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for school-wide positive behavior support. *Focus on Exceptional Children*, 42(8), 1–14. <https://doi.org/10.17161/foec.v42i8.6906>
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>
- Kanacri, B., Zuffianò, A., Pastorelli, C., Jiménez-Moya, G., Tirado, L., Thartori, E., Gerbino, M., Cumille, P., & Martínez, M. (2019). Cross-national evidences of a school-based universal programme for promoting prosocial behaviours in peer interactions: Main theoretical communalities and local unicity. *International Journal of Psychology*, 55(S1), 48–59. <https://doi.org/10.1002/ijop.12579>
- Kaspar, K. L., & Massey, S. L. (2022). Implementing social-emotional learning in the elementary classroom. *Early Childhood Education Journal*, 51(4), 641–650. <https://doi.org/10.1007/s10643-022-01324-3>

- Konishi, C., Vargas-Madriz, L. F., & Tesolin, J. (2025). Fostering equity, diversity, and inclusion through social-emotional learning: The role of digital technologies. *Journal of Research on Technology in Education*, 1–13. <https://doi.org/10.1080/15391523.2025.2455054>
- Kraft, M. A., Marinell, W. H., & Yee, D. S. W. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, 53(5), 1411–1449. <https://doi.org/10.3102/0002831216667478>
- McCoy, S., & Banks, J. (2012). Simply academic? Why children with special educational needs don't like school. *European Journal of Special Needs Education*, 27(1), 81–97. <https://doi.org/10.1080/08856257.2011.640487>
- McIntosh, K., Ty, S. V., & Miller, L. (2013). Effects of school-wide positive behavioral interventions and supports on internalizing problems: Current evidence and future directions. *Journal of Positive Behavior Interventions*, 16(4), 209–218. <https://doi.org/10.1177/1098300713491980>
- Mondi, C. F., Giovanelli, A., & Reynolds, A. J. (2021). Fostering socio-emotional learning through early childhood intervention. *International Journal of Child Care and Education Policy*, 15(6), 1–43. <https://doi.org/10.1186/s40723-021-00084-8>
- Morganti, A., Pascoletti, S., & Signorelli, A. (2019). *Index for social and emotional technologies: Challenging approaches to inclusive education*. Routledge. <https://doi.org/10.4324/9781351185073>
- OECD. (2021). *Beyond academic learning: First results from the survey of social and emotional skills*. OECD Publishing. <https://doi.org/10.1787/92a11084-en>
- Oliva, A., Ríos, M., Antolín, L., Parra, A., Hernando, A., & Pertegal, M.-A. (2010). Beyond the deficit: Building a model of positive youth development. *Infancia y Aprendizaje*, 33(2), 223–234. <https://doi.org/10.1174/021037010791114562>
- Pan, Q., Trang, K., Love, H., & Templin, J. (2019). School readiness profiles and growth in academic achievement. *Frontiers in Education*, 4, e127. <https://doi.org/10.3389/feduc.2019.00127>
- Panadero, E., Jonsson, A., & Botella, J. (2017). Effects of self-assessment on self-regulated learning and self-efficacy: Four meta-analyses. *Educational Research Review*, 22, 74–98. <https://doi.org/10.1016/j.edurev.2017.08.004>
- Price, A. (2019). Using outdoor learning to augment social and emotional learning (SEL) skills in young people with social, emotional and behavioural difficulties (SEBD). *Journal of Adventure Education and Outdoor Learning*, 19(4), 315–328. <https://doi.org/10.1080/14729679.2018.1548362>
- Prince, E. J., & Hadwin, J. (2013). The role of a sense of school belonging in understanding the effectiveness of inclusion of children with special educational needs. *International Journal of Inclusive Education*, 17(3), 238–262. <https://doi.org/10.1080/13603116.2012.676081>
- Ross, K. M., & Tolan, P. (2017). Social and emotional learning in adolescence: Testing the CA-SEL model in a normative sample. *Journal of Early Adolescence*, 38(8), 1170–1199. <https://doi.org/10.1177/0272431617725198>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Sala, A., Punie, Y., Garkov, V., & Cabrera Giraldez, M. (2020). *LifeComp: The european framework for personal, social and learning to learn key competence publications*. Office of the European Union. <https://doi.org/10.2760/302967>
- Saleme, P., Dietrich, T., Pang, B., & Parkinson, J. (2021). Design of a digital game intervention to promote socio-emotional skills and prosocial behavior in children. *Multimodal Technologies and Interaction*, 5(10), Article 58. <https://doi.org/10.3390/mti5100058>
- Schwarzenthal, M., Schachner, M. K., Juang, L. P., & van de Vijver, F. J. R. (2020). Reaping the benefits of cultural diversity: Classroom cultural diversity climate and students' intercultural competence. *European Journal of Social Psychology*, 50(2), 323–346. <https://doi.org/10.1002/ejsp.2617>
- Shriver, T., & Weissberg, R. (2020). A response to constructive criticism of social and emotional learning. *Phi Delta Kappan*, 101(7), 52–57. <https://doi.org/10.1177/0031721720917543>

- UNESCO. (2024). *Why the world needs happy schools: Global report on happiness in and for learning*. United Nations Educational, Scientific and Cultural Organization. <https://doi.org/10.54675/NPEQ5495>
- United Nations. (2006). *Convention on the rights of persons with disabilities*. United Nations. <https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>
- Urhahne, D., & Wijnia, L. (2021). A review on the accuracy of teacher judgments. *Educational Research Review*, 32(4), Article 100374. <https://doi.org/10.1016/j.edurev.2020.100374>
- Venet, M., Zurbriggen, C. L. A., Eckhart, M., Schwab, S., & Hessels, M. G. P. (2015). *The Perceptions of inclusion questionnaire (PIQ)*. www.piqinfo.ch
- Viner, R. M., Allen, N. B., & Patton, G. C. (2017). Puberty, developmental processes, and health interventions. In D. A. P. Bundy, N. de Silva, S. Horton, D. T. Jamison, & G. C. Patton (Eds.), *Child and adolescent health and development* (3rd ed.) (Chapter 9). The International Bank for Reconstruction and Development/The World Bank. https://10.1596/978-1-4648-0423-6_ch9
- Warschauer, M., & Matuchniak, T. (2010). New technology and digital worlds: Analyzing evidence of equity in access, use, and outcomes. *Review of Research in Education*, 34(1), 179–225. <https://doi.org/10.3102/0091732X09349791>
- Weist, M. D., Splett, J. W., Halliday, C. A., Gage, N. A., Seaman, M. A., Perkins, K. A., Perales, K., Miller, E., Collins, D., & DiStefano, C. (2022). A randomized controlled trial on the interconnected systems framework for school mental health and PBIS: Focus on proximal variables and school discipline. *Journal of School Psychology*, 94, 49–65. <https://doi.org/10.1016/j.jsp.2022.08.002>
- Wills, H., Kamps, D., Fleming, K., & Hansen, B. (2016). Student and teacher outcomes of the class-wide function-related intervention team efficacy trial. *Exceptional Children*, 83(1), 58–76. <https://doi.org/10.1177/0014402916658658>
- Yu, Z. (2019). A meta-analysis of use of serious games in education over a decade. *International Journal of Computer Games Technology*, 2019, Article 797032. <https://doi.org/10.1155/2019/4797032>
- Zheng, L., Oberle, C., Hawkes-Robinson, W. A., & Daniau, S. (2021). Serious games as a complementary tool for social skill development in young people: A systematic review of the literature. *Simulation & Gaming*, 52(6), 686–714. <https://doi.org/10.1177/10468781211031283>
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* Teachers College Press.
- Zurbriggen, C. L. A., Nusser, L., Krischler, M., & Schmitt, M. (2023). Teachers' judgment accuracy of students' subjective well-being in school: In search of explanatory factors. *Teaching and Teacher Education*, 133(4), Article 104304. <https://doi.org/10.1016/j.tate.2023.104304>
- Zurbriggen, C. L. A., Venetz, M., Schwab, S., & Hessels, M. G. P. (2019). A psychometric analysis of the student version of the perceptions of inclusion questionnaire (PIQ). *European Journal of Psychological Assessment*, 35(5), 641–649. <https://doi.org/10.1027/1015-5759/a000443>

Author Information

Hoferichter, Frances, Dr.

University of Greifswald

Department of Educational Science

Areas of Expertise: Student and Teacher Well-Being, Socio-Emotional Development of Students, Social Relationships, Motivation

Address: Ernst-Lohmeyer-Platz 3

17489 Greifswald, Germany

E-Mail: frances.hoferichter@uni-greifswald.de

ORCID: 0000-0002-6537-6952

Savolainen, Hannu, Prof. Dr.

University of Eastern Finland
Department of Special Education

Areas of Expertise: Multi-Tiered Behavior Support, Teacher Self-Efficacy, Teacher Attitudes towards Inclusive Education, Effect of Support on Student Learning and Well-Being

Address: University of Eastern Finland,
Yliopistokatu 2, Joensuu
PL 111, 80101 Joensuu, Finland

E-Mail: hannu.savolainen@uef.fi

ORCID: 0000-0002-1264-3746

Zurbriggen, Carmen, Prof. Dr.

University of Fribourg
Special Education

Areas of Expertise: Inclusive Education, Student Well-Being and Emotional Experience, Social Participation in the Context of Disability and Special Educational Needs

Address: University of Fribourg
Department of Special Education
Rue Saint Pierre-Canisius 21
CH 1700 Fribourg, Switzerland

E-Mail: carmen.zurbriggen@unifr.ch

ORCID: 0000-0002-0906-2000

Schoeps, Konstanze, Ass. Prof. Dr.

University of Valencia
Department of Personality, Evaluation and Psychological Treatment

Areas of Expertise: Social and Emotional Education, serious-game interventions in educational contexts, teacher well-being, burnout and mental health.

Address: University of Valencia
Avenida Blasco Ibáñez 21
46010 Valencia, Spain

E-Mail: Konstanze.schoeps@uv.es

ORCID: 0000-0002-6312-7055