R1: Specification of the EduCardia assessment methodology

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1. Introduction

This document presents a detailed overview of the EduCardia assessment methodology to assess and improve socio-emotional competencies of students in primary and secondary educational level. The methodology consists of a set of steps that consider both assessment of social and emotional competencies and the application of activities to improve them. Some periodicity is introduced to make available the assessment results at various time periods, considering the impact that can be produced based on the application of specific social and emotional learning activities. Our vision is to promote social and emotional learning into schools by providing high quality and user-friendly Information and Communication Technology (ICT) tools to the teachers that are based on strong theoretical foundations. In this way, teachers will have useful guidance on adopting and following the various steps of the EduCardia methodology, while the overall methodology can be applied to both in-person and online groups. The detailed methodology and all the relevant produced materials are open-access and can be adopted by any interested party within the schools and the wider educational communities.

The remainder of this document is structured as follows. Section 2 presents a high-level overview of the EduCardia assessment methodology. Section 3 provides information about how teachers should be trained before applying social and emotional training activities into their classrooms. Special focus is given to the competences that the teachers should develop as well as the didactic strategies that can help them to better apply the SEL activities to their classrooms. Section 4 and 5 present how the assessment of the students takes place and how teachers can access the results of the assessment process. Section 6 focuses on the EduCardia repository of SEL activities, highlighting two innovative features that are under implementation, namely a recommendation engine and a group partitioning tool. The activities' recommendation engine helps the teacher to better choose the activities that fit the classroom needs. With the group partitioning tool, it is possible to partition the classroom into smaller working groups, having in mind the social dynamics and the emotional competencies of the students. Section 7 provides information on how EduCardia aims to build an open community of teachers and developers through the evaluation processes applied in the provided Social and Emotional Learning (SEL) activities evaluation and the contribution to the produced open-source code repositories. Section 8 highlights how our methodology contributes to the research of both pedagogical and computer science fields. This document comes to its end with the conclusions section that includes the next steps that will be followed until the end of the project.

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2. Methodology Overview

Existing research outcomes have come up with evidence that high quality Social and Emotional Learning (SEL) programs help children and adults to grow and practise their emotional intelligence [1]. The strengthening of emotional intelligence characteristics has a further positive impact on improving the students' academic performance [2], the development of social competencies [3] and the elimination of deviant behaviour at school [4]. In addition to improvements on individual characteristics per student, strengthening of emotional intelligence also contributes towards the development of a collaborative and inclusive school climate [5] and the building of collective emotional intelligence [6].

Nowadays, even if various research outcomes are available for the development of SEL material along with guidelines for implementing SEL training within the classroom, few methodologies and tools are made openly available for the assessment part. Practitioners use SEL because they trust the research outcomes and feel that this helps children to better handle stress, have better classroom behaviour, and improve their academic performance. But they have limited access to assessment tools that can help them achieve a close follow up between the emotional training sessions that they implement and the impact that they have on their groups, both at emotional and social level. For instance, according to the report of the World Economic Forum entitled "New Vision for Education: Fostering Social and Emotional Learning Through Technology" [7], application of SEL activities is held back -among other reasons- by the lack of valid and reliable SEL measurements. The report includes specific product features that are highly correlated with ten competencies and character qualities (e.g., adaptability, leadership, collaboration) and identifies technology trends (e.g., advanced analytics, machine learning and affective computing) that extend ways of fostering SEL and also offer potential for exciting new learning strategies.

Under this perspective, the EduCardia methodology tackles both the development of SEL material and a set of digital tools that enable teachers to efficiently apply assessment processes within their classrooms and track the development of socioemotional competencies of students. By having access to assessment results, targeted group-based educational activities can be planned to improve the inclusion of the students and the social cohesion of the group. We claim that the Educardia methodology provides an end-to-end process to empower the socioemotional competences of the students in a measurable way. Following, we present in detail the steps of the EduCardia methodology and the supported material and tools that can be used to facilitate its ease adoption.

The EduCardia assessment methodology consists of a set of procedures that should be followed by teachers to assess and improve the socio-emotional skills of the students (see Figure 1). Based on the methodology, the necessary theoretical background is provided to teachers to get accustomed with the aspects of emotional intelligence and its positive effects. The Educardia assessment methodology is composed of seven steps, part of which can be applied in a periodical way. It is targeted to students in primary and secondary schools, while it can be applied within the classroom or in an online mode.

The **first step** regards the familiarisation of the teachers with the EduCardia pedagogical material and tools. In this phase, the teachers are trained based on the developed SEL material and enrich their knowledge on aspects related to emotional intelligence, emotional education and assessment techniques. The teachers are also trained on the usage and configuration of the developed ICT tools.

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Following, in the **second step**, the assessment process takes place. To achieve so, the developed EmoSocio Inventory and the EmoSociograms psychometric tool are used. The EmoSocio Inventory includes a set of items that are used for assessing social and emotional competencies of the students, while EmoSociograms regards a software tool used for collecting the students' preferences in a straightforward and online way.

In the **third step**, the assessment results are produced and made available to the teacher of the classroom. Through a set of analysis results and intuitive visualisations, the teacher may observe better the social dynamics of the classroom as well as the social and emotional competences of the students. In this way, identification of persons in need may take place, while assessment of group-based indexes is also provided (e.g., status of the classroom climate).

Based on the assessment results and their interpretation, in the **fourth step**, interventions can be selected to improve specific competencies at individual and group level. An SEL activities Repository is going to be made available, where searching of targeted activities may take place, while intelligent recommendations are also going to be provided in an automated way to teachers by considering the socioemotional profile of the classroom students.

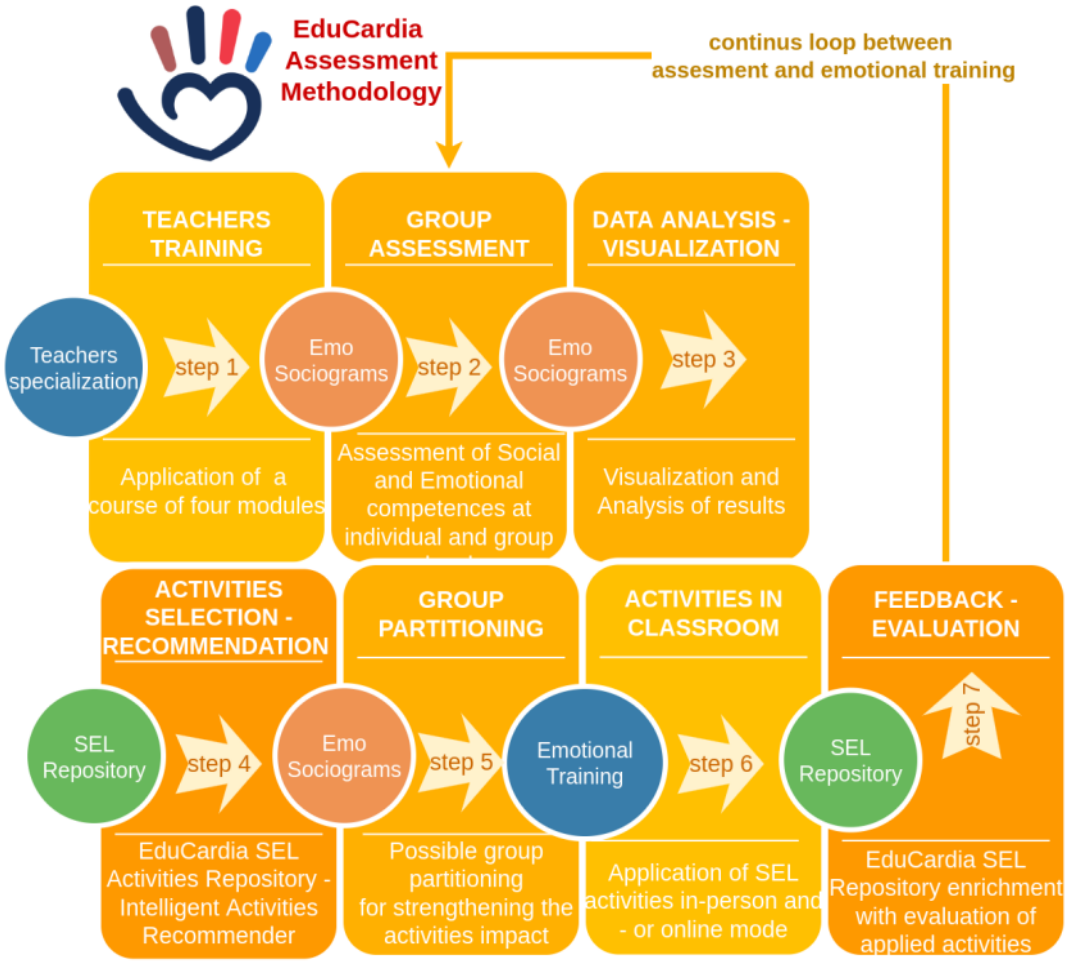

Figure 1 -EduCardia Assessment Methodology.

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Given that many of the activities demand the splitting of the classroom in working subgroups, at the fifth step, an automatic splitting (sub-grouping) of the classroom is proposed based on the sociometric characteristics of the group. To achieve so, graph analysis algorithms are applied, aiming to provide optimal solutions in terms of partitioning of the overall classroom to smaller groups to achieve specific objectives (e.g., improvement in the average empathy index).

At the **sixth step**, the selected SEL activities are applied in the in-person or online groups of students. Supervision of the students during such activities is important to guarantee the proper application of the socio-emotional interventions. Upon each activity completion, in the **seventh step**, both teachers and optionally the students can evaluate the applied activity. Based on the collected feedback, rating of the provided SEL activities in the Activities Repository is going to be provided, facilitating teachers to select the more effective and qualitative activities to be applied in their classrooms.

The application of activities can be repeated many times. The assessment process can be realised periodically so as to track the evolution of the social and emotional competencies of students. The frequency of the assessment depends on the type and the needs of each classroom. The objective is to be able to identify changes in the assessed competencies, to proceed to corrective actions (e.g., application of further activities) and to support the development of a supportive school climate. In addition, teachers may contribute to the enrichment of the SEL activities repository by adding new activities and/or modifying the existing ones. Possible modifications could include the differentiation of specific activities depending on the groups' unique characteristics (e.g., special needs or multicultural diversity).

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3. Teachers Training

To properly apply the EduCardia methodology, it is important to apply SEL-oriented training activities targeted to teachers. Teachers with high emotional intelligence can better motivate their students and understand their students' behavioural and psychological well-being [8]. Therefore, one of the main steps of the EduCardia methodology is the training of the involved teachers.

The developed training material for teachers is modular and covers four main topics (Table 1). Firstly, teachers enrich their knowledge around the concept of Emotional Intelligence (EI) and get familiarised with the EmoSocio EI model. As part of this experience, they are prompted to apply the EmoSocio to assess their individual competencies and reflect on their own strengths and weaknesses regarding their emotional profile. Additionally, at the second module, teachers are trained on how to adopt the EduCardia methodology, use the EmoSociograms psychometric tool as well as the SEL activities repository. At the third module, teachers get familiarised with the social and emotional learning along with the pedagogical approaches of experiential learning and S.A.F.E. At the fourth module, teachers work on their own soft skills and attitudes as tutors. Teachers are guided to explore their positioning regarding their level of acceptance, empathy, authenticity and collaboration. Furthermore, they reflect on their communication skills such as their capacity for active listening, assertive communication, observation, feedback and reflection.

The teachers' training course is organised in a two-day's session and the indicative program can be seen at Table 1. More details about the course thematic units and the developed material so far can be found at the deliverable "R3.a - Development of SEL training material for teachers".

As seen at the course contents, the teachers apart from getting familiarised with the results of the EduCardia project, they are also empowered from a pedagogical perspective. The teachers are invited to reflect on their competencies to be SEL instructors and at the same time they get access to a variety of didactic strategies that can be used as basis for the application of the proposed SEL activities.

Table 1-Teachers Training Course structure.

Session	Name	Module	Duration
First day Training (duration: 8 hours)			
1	Introduction to SEL	EI training	90 minutes
2	Research Results and European Key Competences (focus on the positive impact of SEL)	EI training	15 minutes
3	EmoSocio EI Model (Emo, Socio, CEI constructs)	EI training	45 minutes
4	EmoSocio Model adapted to specific target groups	EI training	1 hour
5	WORKSHOP: Teachers Assessment within EmoSociograms	EI training	2 hours

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6	Overview of the EduCardia assessment methodology	EduCardia methodology and software tools	1 hour
Second day Training (duration: 8 hours)			
1	WORKSHOP: EduCardia Tools usage (EmoSociograms & Activities Repository)	EduCardia methodology and software tools	90 minutes
2	Teachers' professional competencies	Soft skills development	1 hour
3	Emotional competencies training program for students, including examples with SEL activities.	Pedagogical approaches	4 hours

3.1. Teachers Competencies (Soft skills)

The EduCardia assessment methodology can maximise its impact when it is conducted by highly qualified teachers in terms of soft skills. Active Listening, assertive communication, giving feedback, empathic abilities, observational attitudes and emotional regulation (Figure 2) are some of the competencies that can facilitate the pedagogical process, and are therefore of special importance in the EduCardia assessment methodology.

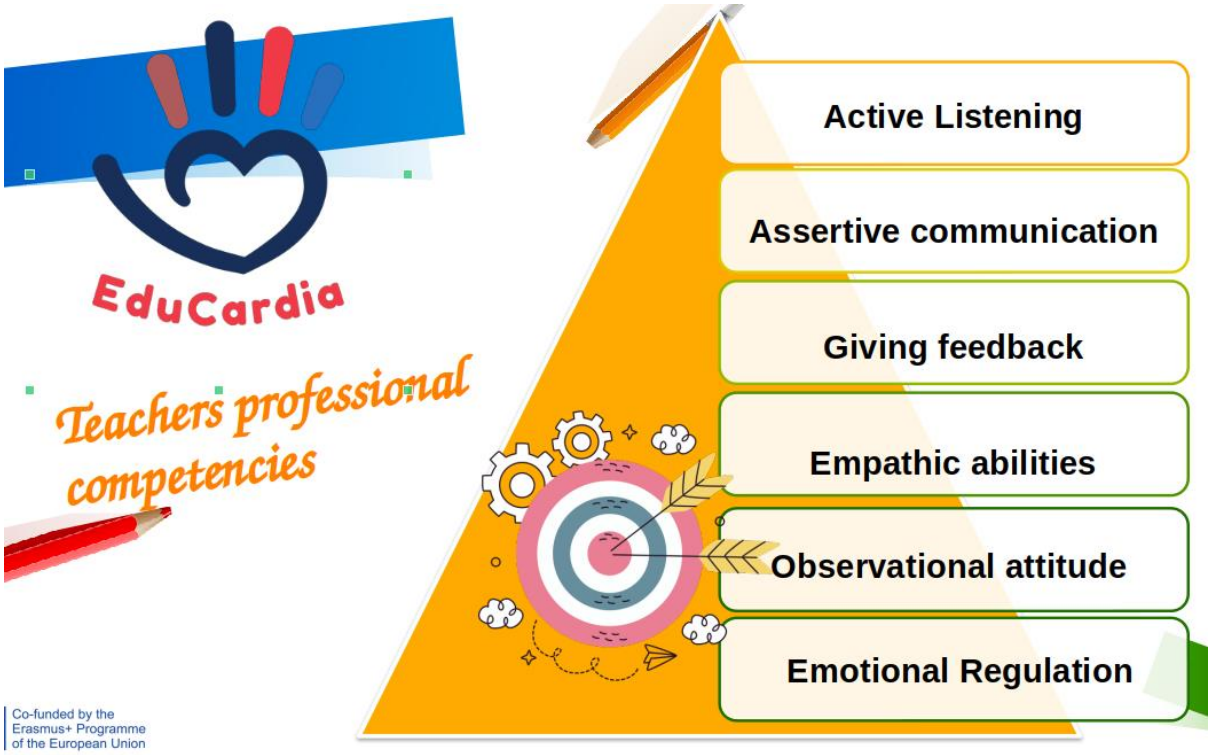

Figure 2 -Teachers Emotional Competencies

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Active listening is an essential element of interpersonal communication skills. It requires giving the other person enough time to express their thoughts and feelings, and this should be respected. The process of active listening involves several steps, such as commenting, asking appropriate questions, paraphrasing, and summarising to show complete comprehension and validate what has been said. It also involves maintaining eye contact, refraining from interrupting the speaker, and using nonverbal gestures like nodding or smiling to encourage communication. Teachers are taught specific exercises with examples to help them adopt verbal and nonverbal cues that promote active listening when attending to their students' needs. They also examine their existing behaviours to identify any signs that may hinder their ability to listen effectively.

The next skill to prioritise is **assertive communication**, which involves expressing one's viewpoint in a clear and straightforward manner while showing respect for others. Using assertive communication techniques can help teachers reduce conflicts, manage their anger, fulfil their needs more effectively, and establish positive relationships with their students. Since assertiveness is a communication style that many people struggle to implement due to a lack of clarity about its exact meaning, teachers receive specific examples and tips to help them practise being assertive.

Feedback is distinct from advice, praise, or evaluation. It refers to information about how one is progressing towards a goal. Providing constructive feedback offers numerous benefits, such as motivating and boosting self-esteem, enhancing interpersonal relationships, and facilitating academic and personal growth. Teachers contemplate how feedback can be either constructive or destructive, and focus on techniques to improve the quality of feedback provided to their students. Similarly, teachers are equipped with tools like question sets, templates, and evaluation tips to help them **observe behavioural patterns** with high emotional content in a more sensitive manner.

The role of **emotional regulation** is often misunderstood in educational settings. It is not about eliminating negative emotions and replacing them with positive ones but instead influencing the emotion's dynamic to produce a response or reaction that is appropriate for the environment. Teachers receive training to help them remember cognitive (cognitive reappraisal, rumination, perspective taking, refocus on planning), behavioural (seeking social support, distraction), and experiential strategies (emotional acceptance) to better cope with their students' needs.

Finally, **empathy** is considered a crucial skill for teachers as it allows them to connect with their students and understand their emotions by sensing what they might be thinking or feeling. Empathy is a powerful tool that enables teachers to better comprehend the driving forces behind their students' behaviour.

3.2. Didactic Strategies

The Educardia assessment methodology is effective when combined with well-designed, theoretically sound social and emotional training activities based on specific didactic strategies, as depicted in Figure 3. As part of our methodology design process, we compile a list of effective didactic strategies to serve as a foundation for the SEL activities proposed to schools. Experiential learning has been selected as a general umbrella strategy due to its proven positive impact on students' cognitive development. Experiential education is a philosophy and methodology in which educators actively engage with learners in direct experiences and focused reflection to enhance knowledge, skill

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development, and value clarification. Experiential learning includes elements such as reflection, critical analysis and synthesis, opportunities for decision-making and accountability, and engagement intellectually, creatively, emotionally, socially, or physically. It also involves a structured learning experience that allows learners to learn from natural consequences, mistakes, and successes. The experiential learning process is cyclical, where learners participate in an experience, reflect on it, learn from new ideas based on those reflections, and apply and test these new ideas in a different situation, beginning the cycle anew.

Figure 3 - EduCardia Didactic strategies

All activities designed within the EduCardia methodology follow the principles of experiential learning (act, reflect, learn, apply) and combine one or more didactic strategies based on the content of the activity. The following are the twelve didactic strategies that are identified as the most suitable for the developed activities.

Peer-to-peer learning is a collaborative educational strategy where participants at the same level engage in mutual learning and training. **Gamification** in learning incorporates game-based elements,

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such as point scoring, peer competition, teamwork, and score tables, to increase engagement, assist students in assimilating new information, and test their knowledge. **Role-play** is a form of experiential learning [9] where students take on assigned roles and act out those roles through a scripted play. The role-play can be done individually, known as individual role-play, or as a group with each member taking on a specific role/character.

Project-based learning (PBL) is an instructional approach that provides students with the opportunity to develop knowledge and skills through engaging projects that present challenges and problems they may encounter in the real world. **Collaborative learning** encompasses a variety of educational approaches that involve joint intellectual effort by students, or students and teachers working together. In these approaches, students typically work in groups of two or more, searching for understanding, solutions, or meanings, or creating a product. **Case studies** are a method of instruction that involve assigned scenarios based on real-world situations in which students observe, analyse, record, implement, conclude, summarise, or recommend. They are used as a tool for analysis and discussion.

Problem-based learning (PBL) is an instructional approach that empowers students to take control of their learning. It involves using complex, real-world problems as the central focus of classroom instruction to encourage students to develop problem-solving skills and conceptual understanding rather than simply memorising facts. Another effective didactic strategy is **Remind**, which stands for Relaxation, Respiration, Meditation, and Mindfulness. Recent research suggests that mindfulness education, which teaches techniques for calming the mind and body, can reduce the negative impacts of stress, improve students' engagement, and help them perform better academically while avoiding behaviour problems. Additionally, **Out of School Time (OST)** refers to supervised programs that students regularly attend when school is not in session, such as before- and after-school programs, academic programs (e.g., reading or maths focused programs), specialty programs (e.g., sports teams, STEM, arts enrichment), and multipurpose programs that offer a range of activities.

Cross-curricular instruction is a teaching approach that enables educators to create lesson plans that integrate multiple subject areas. This method allows students to expand their understanding and apply the skills they acquire in various subjects to gain a deeper comprehension and establish real-world connections. Additionally, cross-curricular instruction provides students with opportunities to learn skills in different contexts. For instance, if a student enjoys science, they may be more enthusiastic about applying mathematical concepts they have learned. By integrating writing into social studies, students who may be reluctant to write can increase their engagement with the skill by working on their passion for history. Cross-curricular instruction is also conducive to project-based learning, which allows students to apply the skills they have learned in their studies to real-world situations. This approach provides a meaningful learning experience where students can connect each curricular area and see the learning experience as a whole.

Arts-based learning is the instrumental use of artistic skills, processes and experiences as educational tools to foster learning in non-artistic disciplines and domains. Finally, the **Comprehensive model 24/7** objective is to provide 'authentic learning', i.e., "a wide variety of educational techniques that enable students to relate to, and probably solve real life problems", as defined in the Glossary of Education Reform [10].

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4. Students Assessment

Upon the teachers training phase, the second step of the EduCardia methodology is the assessment of the students regarding their social and emotional competences at individual and group level. To do so, in the frame of the project we extended the EmoSocio Emotional intelligence [6] model to support children and adolescents from 6 to 18 years old.

4.1. Theoretical Background

The theoretical background of the EmoSocio model is given in more detail in the deliverable "R2.a - Release of the EmoSocio EI Model, Ontology and Inventory". In a nutshell, the students' assessment is done via three types of inventories that evaluate the emotional competencies of the students.

The Emo Inventory (Emo) [11] (Figure 4) is built upon a detailed comparison and synthesis of the main constructs represented in widely-accepted EI models. The individual Emo constructs are classified in two categories as intrapersonal or interpersonal. The intrapersonal EI constructs are self-awareness, emotional regulation, self-motivation, optimism and self-esteem. The interpersonal EI constructs are empathy, teamwork, flexibility, emotional expression, assertiveness, influence and relationships.

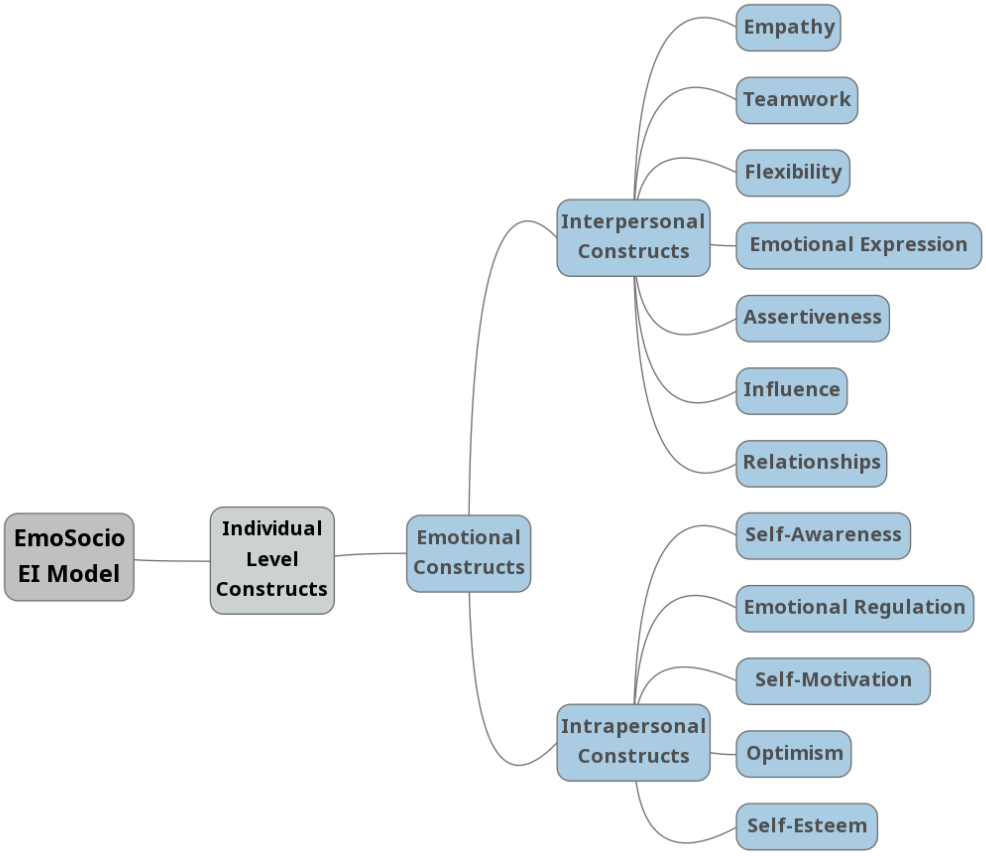

Figure 4 - Emo EI model

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Socio constructs [6,11] (figure 5-6) are meaningful within a specific group context (e.g., an individual may be popular in one group and unpopular in another group). It focuses on the positioning of a member within a group, considering its relationship with the group members. The defined constructs are popularity, antipathy, affective connection, sociometric status, social expansion and realistic perception. At group level, social cohesion is observed as a multi-dimensional construct that reflects the tendency of the group members to stick together and remain united. Concepts specified in the sociometry and social network analysis theory are applied for the measurement of different dimensions of social cohesion.

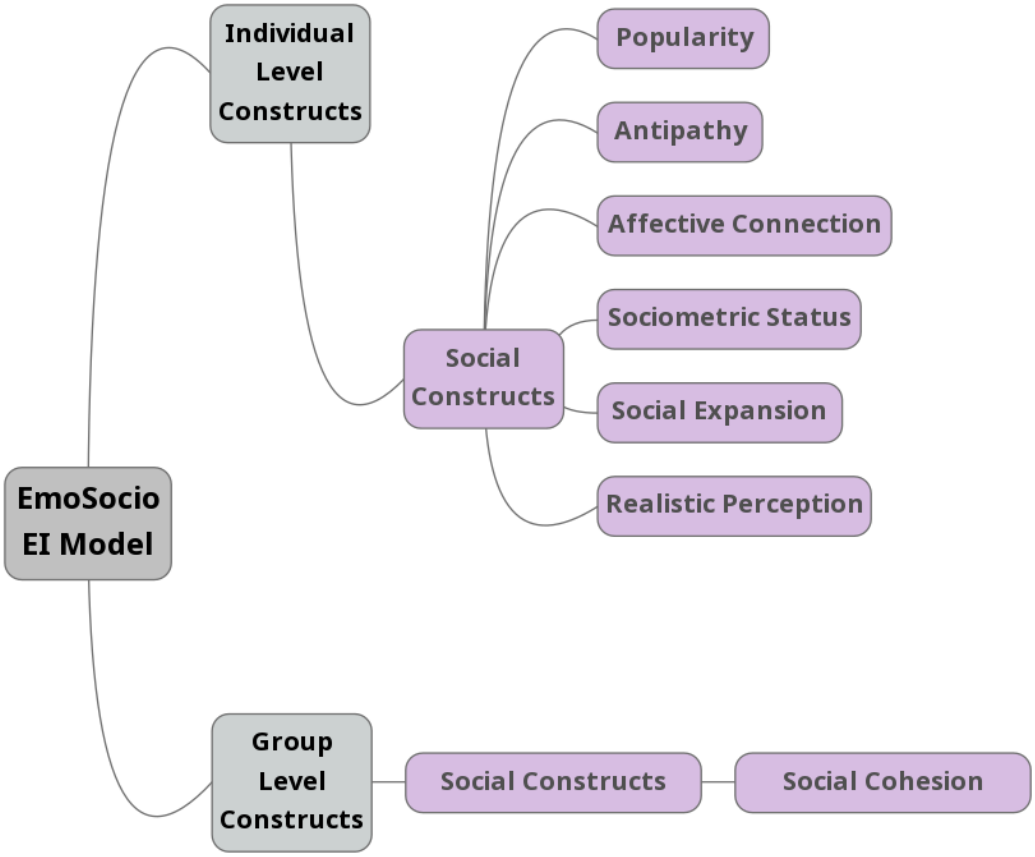

Figure 5 - Socio model

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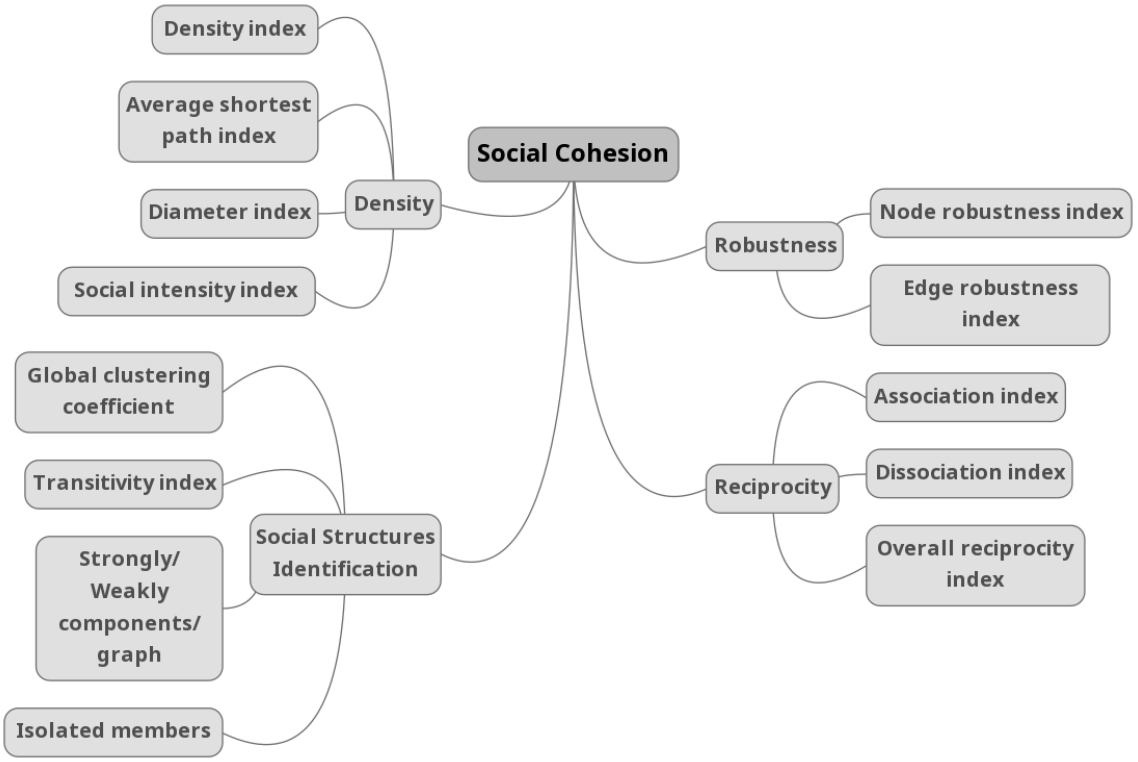

Figure 6 - Social cohesion metrics

Collective Emotional Intelligence CEI [6] (Figure 7) focuses on the collective emotional competencies of the group as a whole. Three main constructs are considered, namely group emotional awareness, group emotional regulation and group emotional climate. The specification of each derived construct is based on the synthesis of the associated definitions of the relevant constructs in a set of examined models offered by the literature review.

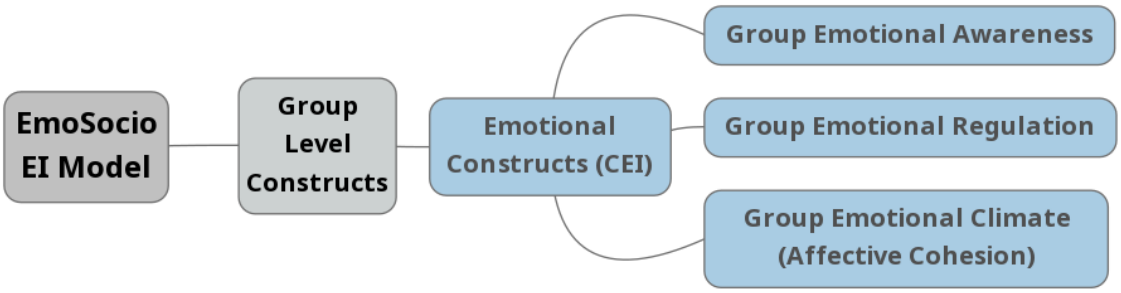

Figure 7 - CEI EI model

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4.2. EmoSocio Inventories

The EmoSocio inventories of Emo, Socio and CEI are adapted depending on the age of the students. Currently four target age groups are covered by the EmoSocio model. All the models are based on the EmoSocio EI model [6], while the versions for the ages of 6-8, 9-12 and 13 -18 regard adaptations of the EmoSocio EI model [6], as they are provided by the University of Barcelona group of EduCardia (Èlia López-Cassà, Jordi Méndez Ulrich, Salvador Oriola, Núria Pérez-Escoda, Mercedes Reguant and Dorys Sabando).

EmoSocio 18+

EmoSocio 18+ is an inventory aimed at evaluating adults' socioemotional competences, both at individual and group level (collective). EmoSocio 18+ consists of a set of items or questions divided into 16 dimensions, which correspond to the constructs of the Emosocio Emotional Intelligence model [6].

EmoSocio 13-18

EmoSocio 13-18 is an inventory aimed at evaluating 13-to-18-year-old children's socioemotional competences, both at individual and group level (collective). EmoSocio 13-18 consists of a set of items or questions divided into 16 dimensions, which correspond to the constructs of the Emosocio Emotional Intelligence model.

EmoSocio 9-12

EmoSocio 9-12 is an inventory aimed at evaluating 9-to-12-year-old children's socioemotional competences, both individual and collective. EmoSocio 9-12 consists of a set of items or questions divided into 16 dimensions, which correspond to the constructs of the Emosocio Emotional Intelligence model.

EmoSocio 6-8

Emosocio 6-8 is an inventory aimed at evaluating the socioemotional competences, both individual and collective, of first years of primary school kids (from 6 to 8 years old). Emosocio 6-8 consists of a set of items or questions divided into 16 dimensions, which correspond to the constructs of the Emosocio Emotional Intelligence model.

In Table 2, we briefly present some details of the current status of the inventories. The inventories are in a validation process and their items will be slightly updated in the upcoming months.

Table 2 - EmoSocio Inventories.

Age	Questionnaire	Details
	Emo-Tutor	Observation scale (40 items). The teacher is in charge of answering on behalf of the students. The scale is from 0 to 10 (0=Never, 10=Always) for each item.

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6-8 years old	CEI-Tutor	Observation scale (7 items). The teacher is in charge of answering on behalf of the students. The scale is from 0 to 10 (0=Never, 10=Always) for each item.
	Emo-DECREA-EVAL	Observation scale (8 items). The teacher is in charge of answering on behalf of the students. The scale is from 0 to 3 (0=Never, 3=Always) for each item.
	Socio(S)-YoungChild	Individual questionnaire with 4 sociometric questions addressed to the students. The students can answer with the help of the teacher.
9-12 years old	Emo-Child	Answered by students. Individual questionnaire with 39 items scoring between 0 and 10 (0 = Never, 10 = Always).
	CEI-Child	Answered by students. Individual questionnaire with 9 items scoring between 0 and 10 (0 = Never, 10 = Always).
	Socio(S)-Child Socio(W)-Child	Answered by students. Individual questionnaire with 4 sociometric questions. Answered by students. Individual questionnaire with 4 sociometric questions.
	EmoTEIQue-CSF-EVAL	Answered by students. Individual questionnaire with 36 items scoring between 0 and 4 (0 = Completely Disagree, 4 = Completely agree).
13-18 years old	Emo-Adolescent	Answered by students. Individual questionnaire with 44 items scoring between 0 and 10 (0 = Never, 10 = Always).
	CEI-Adolescent	Answered by students. Individual questionnaire with 9 items scoring between 0 and 10 (0 = Never, 10 = Always).
	Socio(S)-Adolescent Socio(W)-Adolescent	Answered by students. Individual questionnaire with 4 sociometric questions. Answered by students. Individual questionnaire with 4 sociometric questions.
	EmoTEIQue-ASF-EVAL	Answered by students. Individual questionnaire with 30 items scoring between 0 and 4 (0 = Completely Disagree, 4 = Completely agree).

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5. Assessment Results

The third step of the Educardia assessment methodology highlights the importance of having access to high quality results that are well visualised and easily interpreted by the teachers. For that reason, the EmoSociograms psychometric software tool has been designed. The EmoSociograms tool is described in detail at the deliverable "R5.a - Release of the open-source psychometric toolkit (EmoSociograms) and the relevant documentation". The assessment results provided by the EmoSociogram tool are differentiated depending on the questionnaire type that is responded on behalf of the students.

For the results that refer to the emotional competences of the students at individual and group level, the results are mostly bar plots that present each student scoring at each emotional competence. For instance, at the following screenshot (Figure 8), Mary has a scoring of 63% on the empathy competence.

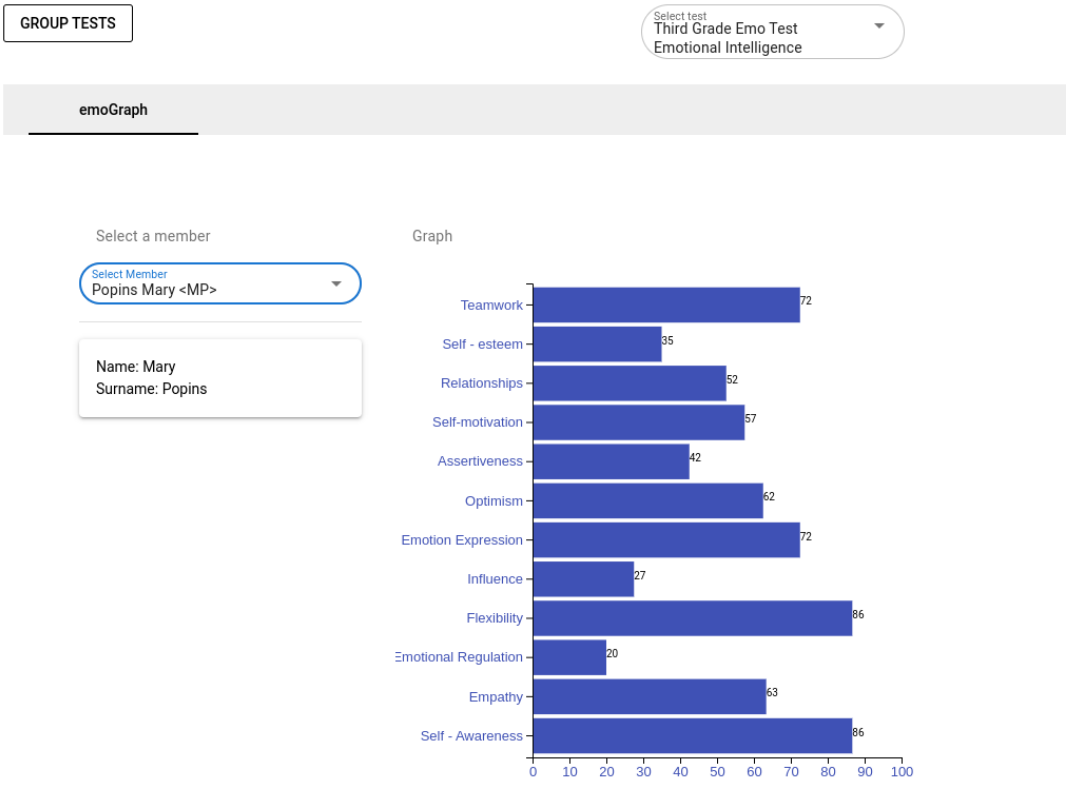

Figure 8 - Indicative Emo Results

For the socio results, the teacher can interact with the social graph of the classroom (Figure 9). He/she can zoom in and out the sociometric graph by moving the mouse roller and can check out all the different tabs to get more information about the social dynamic of the classroom. Among others, the teacher can visualise the preferences between the students, their rejections and perception about their sociometric status. The teacher has also access to the association and dissociation indexes of the classroom as well as the individual sociometric indexes of the students (e.g., popularity, antipathy, affective connection, sociometric status, positive expansion, positive expansion, realistic perception).

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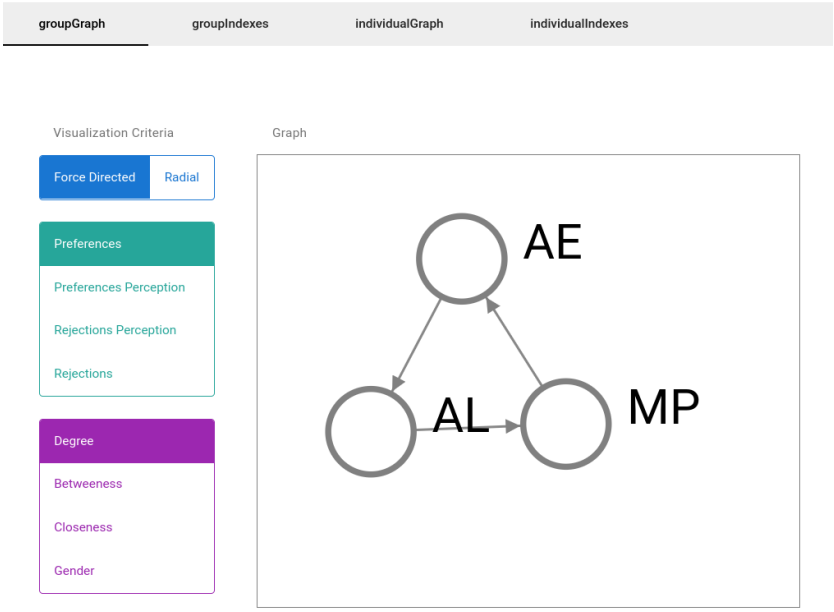

Figure 9 - Indicative Socio Results

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6. EduCardia SEL Activities

After the students' assessment, the next step is to empower the teacher with a set of SEL activities that he/she can bring into the classroom. Depending on the emotional needs of their students, the teachers can select the activities that best fit into their classroom.

6.1. EduCardia Repository

To support this process, we are developing an online repository with SEL activities that are associated with the EmoSocio model and the didactic strategies followed by the project. The EduCardia SEL activities repository is described in detail at the deliverable "R4.a - In-person and online activities development and provision through a digital repository".

The SEL activities created by EduCardia are based on the EmoSocio model and aim to develop emotional competencies for individuals and groups. These activities can be used in both online and in-person classrooms and are available in an open-access repository. The repository allows users to search for activities based on different criteria, such as language, age, and the competencies targeted. The goal is to provide scientifically-valid SEL activities to the educational community that can be easily adopted by schools and other educational organisations.

6.2. Activities Recommendation

Currently, the EduCardia SEL activities repository has various filters (shown in Figure 10) to help the teachers to find activities that fit their classroom needs. However, this process requires manual effort from teachers, who need to combine assessment results with suitable interventions. The goal is to provide teachers with an intelligent recommender system that suggests activities based on a group's evaluation results. To achieve this, a combination of Recommender Systems and Machine Learning technologies can be used to design self-learning tools that recommend activities aligned with the social and emotional needs of educational groups. The EduCardia team is currently working on an interactive Recommender System model that uses Reinforcement Learning techniques to suggest educational activities to tutors for improving students' social and emotional competencies. The model considers the development of students' social and emotional characteristics and feedback provided through a set of interactions.

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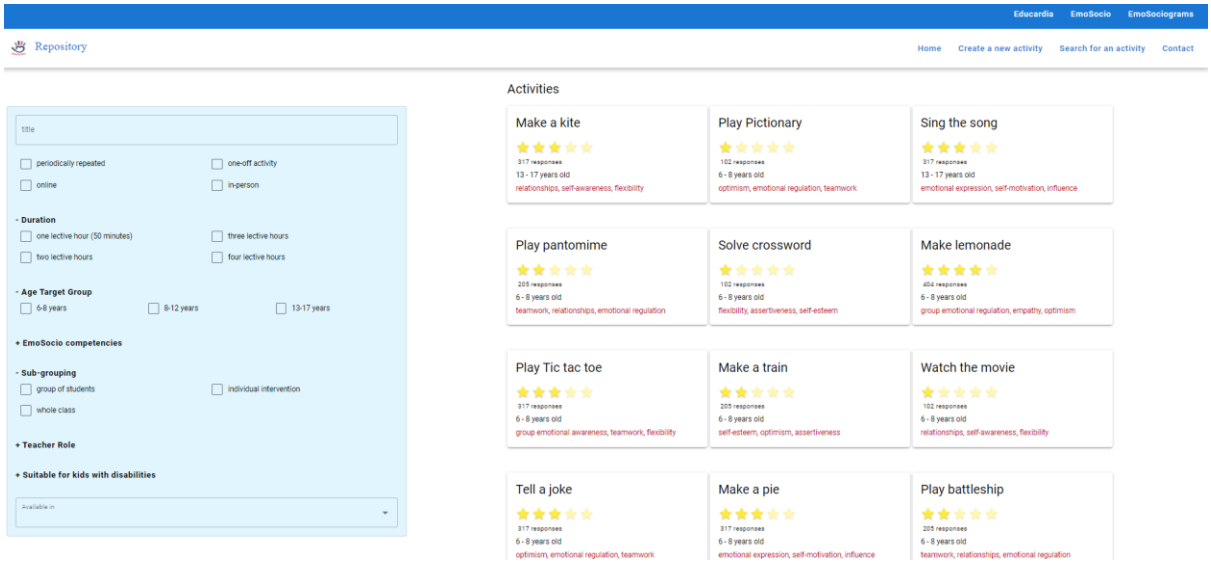

Figure 10 – Searching for Activities

6.3. Classroom Partitioning

Partially, activity recommendations can assist teachers, but they still need to divide the class into smaller groups for certain activities. While some activities involve the entire class, a significant percentage require groups of varying sizes, such as 3-4 students per group. Therefore, it would be useful to recommend to teachers how to group students based on the social dynamics and emotional profiles of the class. A group partitioning recommendation engine is currently being developed and will be included in the next version of the EmoSociograms psychometric tool, which is described in the "R5.a - Release of the open-source psychometric toolkit (EmoSociograms) and the relevant documentation" deliverable.

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7. Building the EduCardia Community

Our vision is to build a community around the EduCardia project that will make possible the continued interaction between teachers, emotional intelligence researchers and software developers. To do so we have taken two major decisions regarding the proposed methodology. From one hand, through the repository of SEL activities, we permit the teachers to evaluate the existing activities as well as create new ones and offer them to the community. On the other hand, all the tools developed within the project are of open use and source. This means that any interested party can freely use the development software without any licence or charge. Furthermore, if an entity wishes can use the offered code and expand it as it wishes.

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8. Next Steps and Conclusion

The detailed EduCardia methodology regards a novel approach for tackling both the development and assessment of social and emotional competencies of students, taking advantage of a set of digital tools. The overall approach is presented, including its breakdown into a set of steps. In all steps, the need for convergence of information and communication technologies (ICT) with emerging approaches in the areas of emotional intelligence development and SEL training in schools is highlighted. Based on the specification of the EduCardia methodology, it is in our future plans to develop the tools and the material that is envisaged per step and make it openly available to the educational community. Useful results related to the applicability of the proposed approach in diverse educational settings -focusing on primary and secondary education schools- are envisaged to be produced, leading to fine-tuning actions. Where applicable, the exploitation of Machine Learning (ML) techniques for information management and analysis is going to be considered.

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