

Received Date: December 20, 2025

Accepted Date: January 12, 2026

Published Date: February 01, 2026

## **Developing social and emotional skills through play: study of a programme inspired by the CASEL model in Year 5**

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### **Abstract**

This study investigates the impact of play on the development of social and emotional competencies among two groups of 4th-grade students (CM1). The study is based on the implementation of an experimental program, *Ludo-SEL*, which offers structured play-based activities designed around the five core competencies of the CASEL framework (self-awareness, self-management, social awareness, relationship skills, and responsible decision-making). Recognized internationally, the CASEL model provides a solid theoretical foundation for the integration of Social and Emotional Learning (SEL) into educational practices.

Through an analytical and comparative methodology, the results highlight the positive effects of the program on several socio-emotional skills, particularly emotional regulation and the quality of peer interactions. This research thus underlines the relevance of play as a pedagogical tool, capable of enhancing student engagement and supporting holistic development. It encourages a rethinking of education through a more human, inclusive, and trans-versal approach, placing emotional well-being at the heart of the learning process.

**Keywords:** Social and Emotional Learning (SEL), play-based learning, CASEL framework emotional regulation, socio-emotional competencies, primary education.

### **Introduction**

Children's fundamental academic learning is often limited to strictly cognitive skills. Learning to live together, regulate emotions, interact with others and make responsible choices are all essential aspects of children's overall development. Long relegated to the background in education systems, social and emotional learning (SEL) is now recognised as an essential lever for well-being, social adaptation and academic success (Denham, 2006; Durlak et al., 2011; Jones et al., 2015). However, despite abundant scientific literature and institutional calls for their integration, these skills are still not widely incorporated in an explicit manner in school curricula, particularly in the Moroccan context.

Faced with this shortcoming, it is essential to rethink teaching practices and offer alternative approaches focused on students' emotional and relational development. Among these, play is a powerful educational tool. Far from being mere entertainment, play promotes a wide range of skills such as commitment, cooperation, perspective-taking, emotional regulation and empathy. Pioneering work by Vygotsky, Mead and Gopnik has highlighted the cognitive and social richness of play, which offers children a space to experiment with social life, build their identity and adjust their behaviour.

This research aims to evaluate the effects of an experimental programme called *Ludo-SEL*, which is based on play and

designed using the CASEL (Collaborative for Academic, Social and Emotional Learning) theoretical model. This internationally recognised model organises social and emotional skills into five fundamental dimensions: self-awareness, self-management, social awareness, relationship skills and responsible decision-making. The Ludo-SEL programme offers fun activities targeting each of these skills as part of an intervention carried out with Year 5 pupils in a Moroccan school.

This study is part of an effort to better understand the role of play in social-emotional learning in schools. It focuses on the following question: To what extent can a play-based programme such as Ludo-SEL contribute to the development of social-emotional skills in Year 5 pupils?

To answer this question, we have formulated the following general hypothesis: The use of games, within the framework of the Ludo-SEL programme, significantly improves the socio-emotional skills of Year 5 pupils, compared to those who have not followed the programme.

Two sub-hypotheses refine this proposition:

**Sub-hypothesis 1:** Pupils with a lower initial level of social and emotional skills show more marked progress after participating in the Ludo-SEL programme.

**Sub-hypothesis 2:** The control group of pupils, who did not participate in the Ludo-SEL programme, made little or no progress, as the traditional school curriculum does not explicitly develop socio-emotional skills.

The following article presents the experimental protocol adopted and analyses the results obtained, with a view to identifying concrete pedagogical approaches for better consideration of socio-emotional development in primary school.

## Methodology

This study was conducted with Year 5 pupils from a private school in Casablanca, Morocco. Two classes took part in the experiment: one was an experimental group of 14 pupils who benefited from the Ludo-SEL programme, and the second was a control group of 14 pupils who only pursued the usual educational activities without benefiting from the programme. The participants, aged 9 to 10, were all educated in a relatively socio-economically homogeneous environment.

The educational intervention in this study was based on an original programme called Ludo-SEL, designed to promote the development of social and emotional skills through fun

activities. This programme is structured around the five components of the CASEL model:

1. Self-awareness,
2. Self-management,
3. Social awareness,
4. Relationship skills,
5. Responsible decision-making.

Each skill was covered in two targeted sessions, for a total of ten sessions spread over four weeks, at a rate of two to three sessions per week. The activities offered were based on different types of games (symbolic, cooperative, motor, role-playing, etc.), followed by time for verbalisation and transfer to everyday life. All of the sessions were led by the researcher herself, within the usual school setting.

In order to evaluate the impact of the programme, three validated instruments were used, administered before and after the intervention:

1. The **EAQ-30** (Emotional Abilities Questionnaire – French version), which assesses the understanding, expression, regulation and use of emotions.
2. The **ERQ-CA** (Emotion Regulation Questionnaire – Child and Adolescent version), to explore emotional regulation strategies, namely cognitive reappraisal and expressive suppression.
3. The **SDQ-FR** (Strengths and Difficulties Questionnaire – French version), to measure socio-emotional difficulties (hyperactivity, conduct disorders, emotional symptoms, problems with peers) and prosocial behaviours.

The three tools used in this study cover the main skills of the CASEL model. The EAQ-30 FR assesses self-awareness through students' ability to identify, understand and express their emotions. The ERQ-CA measures self-management, focusing on emotional regulation strategies such as cognitive reappraisal and expressive suppression. Finally, the SDQ-FR provides a more comprehensive assessment by covering all five competencies of the CASEL model, including self-awareness, self-management, social awareness, relationship skills and responsible decision-making. Used in conjunction, these tools provide a comprehensive and complementary analysis of students' social and emotional development.

The three tests were completed individually by the pupils with support, in a calm and identical setting during both sessions.

## Results

Analysis of the data from the three tests administered (EAQ-30, ERQ-CA, SDQ-FR) revealed a between the two groups in the main areas targeted by the Ludo-SEL programme. The results are summarised in the table below.

**Table 1:** Comparison of pre-test and post-test averages for the experimental and control groups on the EAQ-30 FR, ERQ-CA, and SDQ-FR tests.

Test	Groupe	La moyenne du Pré-test	La moyenne du Post-test
EAQ-30 FR	Groupe expérimental	2,16	2,34
	Groupe témoin	2,26	2,29
ERQ-CA	Groupe expérimental	3,3	3,5
	Groupe témoin	3,57	3,57
SDQ-FR	Groupe expérimental	Difficultés : 3,5	Difficultés : 3,5
		Comportement Prosocial : 5,24	Comportement Prosocial : 5,24
	Groupe témoin	Difficultés : 5,25	Difficultés : 5,35
		Comportement Prosocial : 7,71	Comportement Prosocial : 7,61

### 1. EAQ-3 test results

The pupils in the experimental group showed significant progress in the following areas:

**Emotional expression:** significant improvement in post-test average scores, reflecting an increased ability to verbalise their emotions.

**Emotional regulation at home:** measured gains in managing unpleasant emotions.

**Use of emotions:** slight improvement in the mobilisation of emotions for constructive purposes.

The control group, on the other hand, showed little or no change across all dimensions assessed.

### 2. ERQ-CA test results

Regarding emotional regulation strategies:

**Cognitive reappraisal:** the experimental group's scores increased from a moderate level to a high level after the intervention.

**Emotional suppression:** a slight decrease was observed, suggesting a reduction in this generally less favourable strategy.

The control group maintained stable scores on both subscales.

### 3. SDQ-FR test results

Pupils who participated in the programme showed:

- A decrease in scores on the conduct problems and hyperactivity subscales,
- A moderate decrease in emotional symptoms,
- A marked improvement in prosocial behaviours.

These results contrast with those of the control group, for which few changes were observed.

Beyond a simple comparison of pre- and post-test averages between the two groups, a more detailed analysis was conducted, incorporating several variables likely to influence the students' progress. This approach provided a better understanding of the heterogeneity of the effects observed.

#### 1. Influence of initial level

Analysis of the results based on the students' initial level (low, medium, high) indicates that students with a low initial level of social-emotional skills benefited from the most significant progress, particularly in recognising and verbalising emotions. This result confirms one of the study's sub-hypotheses.

#### 2. Gender and engagement

The results also highlighted certain variations according to gender. Girls achieved slightly higher gains in dimensions related to emotional expression and prosocial behaviour, while boys made greater progress in emotional regulation skills, particularly through motor games.

The level of engagement observed during the sessions proved to be a determining factor, as the pupils who were most actively involved in the activities showed the greatest progress across all dimensions. This reinforces the idea that the participatory nature of the game is central to the programme's effectiveness.

### 3. Behaviours observed during the sessions

Qualitative monitoring identified that some pupils, despite performing poorly in the initial tests, exhibited prosocial behaviours (listening, helping others, cooperating) during the sessions, which enriched the analysis of progress. These observational elements provided a better understanding of certain discrepancies between quantitative results and actual perceived progress.

### 4. Analysis of standard deviations in post-tests

Beyond the observed averages, the analysis of standard deviations provides additional insight into the dispersion of results within each group. On the EAQ-30 FR test, the standard deviation of the experimental group is 0.27, compared to 0.18 for the control group. This slight increase in dispersion in the experimental group can be interpreted as a diversification of the programme's effects, with some pupils clearly benefiting more from the intervention than others.

In the ERQ-CA test, the standard deviation for the experimental group is 0.43, compared to 0.33 for the control group. This greater variability could indicate that the Ludo-SEL programme elicited different emotional regulation strategies depending on the profiles of the pupils, reinforcing certain skills in some, with no noticeable impact on others., reinforcing certain skills in some pupils without having a noticeable impact on others.

With regard to the SDQ-FR, the standard deviation for the Difficulties dimension remains stable in the experimental group (0.74), while it increases slightly in the control group (0.79). This suggests a relative homogenisation of difficulty levels in the group that followed the programme, unlike the control group, where the differences increased.

Finally, for prosocial behaviour, the experimental group had a standard deviation of 0.64, compared to 0.79 in the control group. This notable difference could reflect a regulatory effect of the programme, which seems to have reinforced prosocial behaviour more uniformly among the pupils monitored, whereas the control group shows greater differences and even regression for some pupils.

## Discussion

The results of this study largely confirm the general hypothesis that the integration of educational games contributes significantly to the development of socio-emotional skills in Year 5 pupils. In line with recent studies (Taylor et al., 2017; Malti & Schick, 2022), the progress observed in the experimental group, particularly in the areas

of emotional expression, emotion regulation and prosocial behaviour, demonstrates the effectiveness of structured play-based approaches when integrated into a deliberate educational framework.

In line with the first sub-hypothesis, the data show that pupils with low initial levels of socio-emotional skills benefited particularly significantly from the programme. This finding is consistent with the results of Garaigordobil and Peña-Sarrionandia (2022), who observed a significant improvement in social and emotional skills among children with initial difficulties after participating in a structured play programme. The case of one student in the experimental group (A.A.), who showed an average improvement of +16.1% across all subscales of the EAQ-30 FR test, illustrates this phenomenon of accelerated development among the most vulnerable profiles. Play, as an educational mediator, seems to offer a safe and engaging space that facilitates self-expression, the verbalisation of emotions, and the building of emotional confidence.

Furthermore, the second sub-hypothesis, according to which pupils in the control group who did not benefit from the programme would show little or no progress, was also confirmed. The results indicate notable stability, or even a slight regression in certain areas, such as prosocial behaviour. This lack of progress suggests that, without explicit intervention, social-emotional skills do not necessarily develop spontaneously in traditional school environments. This finding is consistent with the conclusions of Durlak et al. (2011), according to which planned and intentional SEL programmes have a significant impact compared to traditional teaching.

The gender-differentiated effects also reflect trends highlighted in the literature: girls made greater progress in emotional expression and prosocial behaviour, while boys showed greater gains in emotional regulation, particularly through motor games. These differences can be attributed to socially favoured modes of emotional expression according to gender, as noted by Davis & Wigelsworth (2018), and demonstrate the value of a differentiated and inclusive approach in SEL programmes.

The effect of engagement level is another highlight of the study. The students who were most active during the sessions showed marked progress, confirming that involvement in playful activities is a key factor in social-emotional learning. This corroborates the observations of Denham et al. (2012), who emphasise that active and experiential learning environments promote better integration of emotional and social skills.

Finally, qualitative data from classroom observations complement the quantitative results by highlighting manifestations of prosocial behaviour not captured by standardised tools. This triangulation of data is in line with recent methodological recommendations (Jennings et al., 2019) that call for a combination of approaches to better understand the complexity of children's social-emotional development.

Ultimately, the results of this research are part of a broader dynamic, supported by the literature, which advocates the integration of play as an educational lever for socio-emotional development. Although still subject to improvement, the Ludo-SEL programme shows promising effectiveness, particularly in strengthening self-awareness, emotional regulation and interpersonal skills – essential pillars for students' personal and academic development.

### **Limitations of the research**

The results obtained in this study are consistent with previous research highlighting the structuring role of play in the acquisition of socio-emotional skills (Taylor et al., 2017; Garaigordobil & Peña-Sarrionandia, 2022). The Ludo-SEL programme appears to have promoted emotional expression, affective regulation and prosocial behaviour, particularly among pupils with low initial levels. However, it is important to note that certain contextual variables, such as classroom climate, pre-existing interpersonal relationships and pupil emotional availability, were not formally measured. Similarly, the long-term effects of the programme could not be evaluated, which limits the scope of the conclusions. That said, the results of this research, although promising, should be interpreted with caution.

Firstly, the difference in initial levels between the groups represents a significant methodological limitation. The experimental group generally presented fewer behavioural difficulties in the pre-test, particularly on the SDQ-FR, which may have influenced the magnitude of the results observed after the intervention. In addition, the language constraint posed a significant challenge: as the majority of pupils did not have English as their mother tongue, certain items had to be reworded to ensure the validity of the responses. This situation, which is typical of multilingual contexts, highlights the need to develop standardised tools in Arabic that are better adapted to the cultural and linguistic realities of the pupils.

Other contextual limitations were also noted. The relatively short duration of the intervention did not allow for an assessment of the stability or transferability of the skills acquired to other areas of the children's lives (family, leisure,

informal relationships), even though socio-emotional skills are part of a continuous learning process. Without cross-curricular support, these skills risk remaining confined to the school environment, reducing their long-term impact.

In addition, internal limitations within the Ludo-SEL programme itself have been identified. Certain skills, such as social awareness, were addressed in an introductory manner, without going into more complex dimensions such as reading sensitive social situations (injustice, exclusion, social influence). Similarly, interpersonal skills improved among the majority of pupils thanks to cooperative activities, but remained superficial among the more reserved pupils, revealing the need to better differentiate activities according to profiles. Responsible decision-making proved to be the most difficult area to address: although games prompted reflection on the consequences of choices, the transfer to real-life situations remained limited.

Finally, certain uncontrolled variables such as the classroom climate, peer relationships, and the emotional availability of certain pupils may have had a diffuse impact on the results. The relatively small sample size and the specific sociocultural context in which the experiment took place also call for caution when generalising the results.

Taken together, these elements highlight the relevance of the Ludo-SEL programme, but also the need for a more structured, progressive and contextually appropriate approach. They call for further research over longer periods, in a variety of contexts, and with more localised tools to ensure the continuity, transferability and sustainability of social and emotional learning.

### **Conclusion**

This research aimed to highlight the central role of play in the development of socio-emotional skills, as well as the importance of these skills in children's educational journey. Through the Ludo-SEL programme, designed according to the principles of the CASEL model, a series of playful activities was implemented to stimulate the five key dimensions: self-awareness, self-management, responsible decision-making, and social awareness, interpersonal skills and responsible decision-making. The results of the study confirm that play is not simply an attractive teaching method, but a real educational lever that provides a safe space for expressing emotions, building self-esteem and developing positive relationships.

From this perspective, social and emotional learning can no longer be considered a secondary component of education, but

rather a fundamental necessity. It is imperative to explicitly integrate these skills into school curricula at a time when they are still too often relegated to optional or supplementary status. However, current literature strongly emphasises their close link with academic success, student well-being and social adaptability.

That said, the limitations of this study remind us that socio-emotional skills, which are cross-curricular in nature, cannot be fully developed in the school setting alone. They must be supported in a comprehensive and consistent manner, involving families, extracurricular activities and social environments as a whole. This work therefore advocates for a more holistic education, in tune with children's emotional and relational needs and rooted in their everyday reality.

Finally, for socio-emotional education to truly contribute to lasting educational and human transformation, it is up to all educational stakeholders – teachers, researchers, institutions – to promote dialogue between scientific knowledge, teaching practices and social contexts, in order to build solid bridges between school and life.

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