

# Table Soccer At School:

## A means of social integration at school and a physical activity to combat sedentary lifestyles

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Author:

Diana Ruiz Vicente  
Teresa García Pastor  
Verónica Giráldez Costas  
Sara Zafra Díaz  
María Menchén Rubio  
Alicia Calvo Pérez

Institutional level: University Camilo José Cela

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## Introduction

In recent years, sedentary lifestyles among children and adolescents have become a growing concern across Europe, a trend that has been further exacerbated by the COVID-19 pandemic and the associated increase in screen-based activities. As highlighted in the project documentation, physical activity has increasingly been replaced by digital leisure, contributing to negative outcomes in physical, mental, and social health. International organizations such as the World Health Organization (WHO) and UNICEF have repeatedly emphasized the urgent need to promote active lifestyles and reduce sedentary behaviors in young populations (WHO, 2020; UNICEF, 2019).

Regular physical activity is widely recognized as a key determinant of healthy development. Beyond its well-documented physiological benefits—such as improving cardiovascular fitness, preventing obesity, and enhancing bone health—it also plays a crucial role in cognitive development, academic performance, and psychosocial well-being (Janssen & LeBlanc, 2010; Donnelly et al., 2016). Furthermore, participation in structured or semi-structured physical activities provides a valuable context for the development of social skills, cooperation, inclusion, and respect for diversity (Bailey, 2006; UNESCO, 2015). In this regard, schools are uniquely positioned as universal and inclusive environments where all children, regardless of their abilities or backgrounds, can engage in health-promoting activities (Sallis et al., 2012).

However, traditional sports and physical education models do not always succeed in engaging all students equally. Highly competitive, physically demanding, or skill-intensive activities may exclude those with lower motor competence, disabilities, low self-confidence, or limited motivation toward sport (Biddle et al., 2011). This challenge highlights the need for innovative, low-threshold approaches that broaden participation and create inclusive opportunities for engagement.

Within this context, the Erasmus+ project Table Soccer at Schools (TSAS) emerges as an innovative response to these challenges. As described in the project framework, table soccer (foosball) is conceptualized not merely as a recreational activity, but as a socio-educational tool with the potential to foster inclusion, improve school coexistence, and activate students who are otherwise disengaged from physical activity. Despite often being perceived as a simple leisure activity, table soccer involves a combination of motor coordination, cognitive engagement, strategic thinking, and social interaction, making it a versatile pedagogical resource.

Importantly, table soccer represents a “low-barrier” activity: it does not require high levels of physical fitness, minimizes body contact, and allows participation regardless of gender, physical condition, or skill level. As evidenced in the project implementation across different European contexts, this characteristic facilitates the inclusion of diverse student profiles, including those with special educational needs, migrant backgrounds, or limited prior engagement in sports. Moreover, its structured yet accessible nature supports the

development of key social competencies such as turn-taking, rule adherence, emotional regulation, and teamwork.

Emerging research supports the value of such inclusive and non-traditional physical activities in promoting engagement and reducing sedentary behavior. Rather than focusing solely on high-intensity exercise, recent approaches emphasize the importance of “behavioral activation” and sustained participation as critical factors in combating sedentary lifestyles (Lubans et al., 2016). In this sense, activities like table soccer can play a complementary role by diversifying how students spend their free time and by offering meaningful alternatives to passive or screen-based behaviors.

Furthermore, the European policy framework increasingly recognizes the role of sport and physical activity in fostering social inclusion, equality, and active citizenship. Initiatives aligned with the Erasmus+ Programme highlight the importance of inclusive, accessible, and innovative practices that contribute to social cohesion and well-being across diverse educational contexts (European Commission, 2021). The TSAS project aligns closely with these priorities by promoting an activity that is scalable, adaptable, and capable of being integrated into both curricular and extracurricular settings.

In summary, the TSAS project responds to a dual societal need: addressing the rise of sedentary lifestyles among young people and promoting inclusive educational environments that support the holistic development of all students. By repositioning table soccer as a structured socio-educational intervention rather than a purely recreational activity, the project contributes to expanding the repertoire of school-based strategies aimed at enhancing participation, inclusion, and well-being in contemporary European education systems.

This report presents the key outcomes derived from the implementation of the TSAS project in a total of twelve educational centers across four different European countries. The findings are based on a mixed-methods approach that combines quantitative data collected through questionnaires administered to both students and teachers, with qualitative evidence obtained from focus groups conducted in each participating country. These focus groups brought together program coordinators and school-level practitioners, allowing for a comprehensive and contextualized analysis of the experiences, perceptions, and observed impacts of table soccer within diverse educational settings. By triangulating these sources of information, the report offers an integrated overview of the educational, social, and behavioral effects of introducing table soccer in schools, highlighting common patterns, country-specific nuances, and core lessons relevant for future implementation and scalability.

# 1. Implementation of the TSAS Project

## 1.1 Characterization of schools

	Germany	France	Spain	Bulgaria
<b>Size</b>	Small to large	Small to very small	Medium to large	Very small to large
<b>Public/private</b>	Public	Private	Public and semi-private (state-funded private schools)	Public
<b>Other aspects</b>	Special Education + multi-grade classrooms + mostly boys. German as a second language (migrants). Cultural diversity.	Rural/semi-rural context. Multi-grade classrooms (2 of the schools)	High levels of cultural diversity. SEN inclusion (ASD/TEA, motor and intellectual disabilities). Primary and Secondary integration (CEIPSO model).	Urban context. High social/cultural diversity. Inclusion facilities: some Students with special needs / marginalized origin.

## 1.2 Implementation in the different countries

### 1.2.1 Germany

In Germany, the TSAS project was implemented primarily as an **inclusive social tool** within diverse school environments (special education and integrated comprehensive schools). The model prioritized "low-threshold" (niederschwellig) access to foster social interaction over strict athletic performance.

**Strategic Focus:** The motivation was twofold: providing an analogue alternative to digital devices (tablets/smartphones) and offering a channel for "emotional stabilization" and impulse control. It was culturally framed as a "normalization" tool for students with behavioral challenges or language barriers (DAZ - German as a second language).

**Responsibility System:** Some centers assigned one ball per class/group with the students' names written on them to teach responsibility and prevent the loss of equipment.

**Integration Levels:** Used for "time-outs" during regular lessons when students needed mental activation or to release tension.

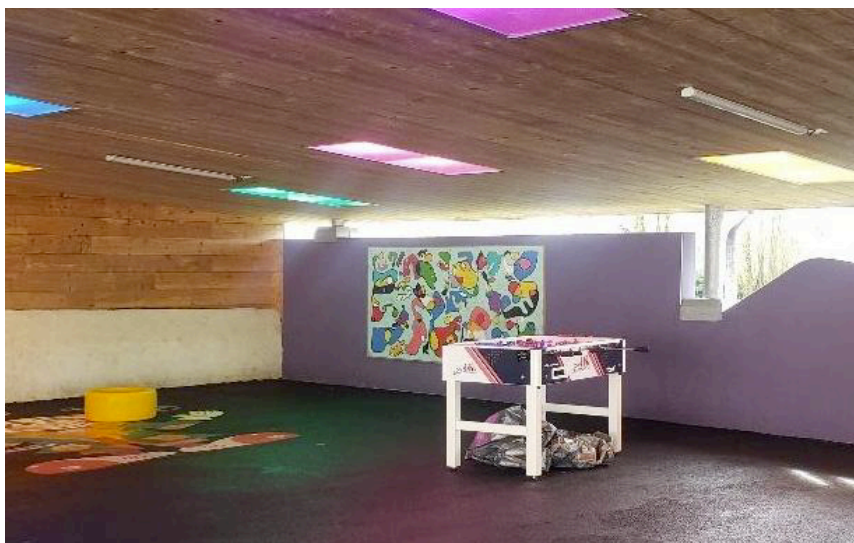


*Jakob Muth Schule (Germany). Picture provided by the own school.*

### 1.2.2 France

In France, the TSAS project was implemented in private schools (*sous contrat*) within rural or semi-rural contexts. A key challenge was overcoming the strong cultural association of table soccer with leisure contexts such as bars and social gatherings, in order to establish it as a legitimate educational activity.

**Strategic Focus (Compensatory/Educational):** In several cases, the project was chosen to "compensate" classes that had missed out on traditional sports like swimming or ice skating. The goal was to prove the "sporting legitimacy" of table soccer to skeptical families through a structured pedagogical documentation.



*École Montfort Frossay (France). Picture provided by the own school.*

### 1.2.3 Spain

In Spain, the TSAS project was implemented across public and semi- private (concertado) schools, using a hybrid model combining curricular and recreational contexts. Unlike the purely guided French model or the purely open German model, Spain opted for initial pedagogical validation in the classroom to enable subsequent autonomy in the playground.

**Curricular Integration:** The activity was formally integrated into Physical Education (PE) and Values subjects. It was used not only as physical exercise but also as a vehicle to study the history of the sport and to co-create internal sets of rules.



*Colegio Santa Isabel (Spain). Picture provided by the own school.*

### 1.2.4 Bulgaria

In Bulgaria, the TSAS project was implemented in three Sofia-based public/municipal schools (primary and secondary) mainly through supervised use of the table during sports lessons and active breaks. Across the three cases, table soccer was treated as an additional structured opportunity for activity and social interaction, rather than as a formal curricular sport.

**Curricular integration:**

The table was used during sports lessons as one activity option within the gym/fitness space (together with other activities such as basketball/football/fitness). Schools explicitly noted that table soccer is not part of the formal PE curriculum, so integration was framed mainly as a school-based activity during lessons and/or structured active breaks.

## 1.3 Methodological design

This study collected qualitative data through online focus groups in Germany, France and Spain, and through written institutional feedback questionnaires in Bulgaria. The focus groups brought together key school stakeholders involved in the TSAS implementation (teachers, PE specialists, school leadership and support staff).

The objective was to assess the implementation of the program and its perceived impact terms of:

- Social inclusion
- School coexistence
- Student participation
- Physical activity and sports motivation

All focus groups were recorded and transcribed. Bulgarian data were collected as written responses to the guiding-question template and analysed as submitted. A thematic categorization approach was used to identify recurring patterns and country-specific differences.

### 1.3.1 Discussion guide

The focus groups were structured around the following thematic blocks:

- **School context**
  - Type of school and socio-economic environment
  - Student profile
- **Project implementation**
  - Organization of sessions
  - Participating groups
  - Role of the external instructor
  - Location and use of the table soccer equipment
- **Initial reception**
  - Teachers' perceptions
  - Students' reactions
  - Families perceptions
- **Educational and inclusive impact**
  - Group dynamics
  - Participation of girls and boys
  - Turn-taking and rule management
  - Conflict resolution and coexistence
- **Physical activity dimension**
  - Perception of table soccer as physical activity
  - Comparison with other sports practices
- **Outcomes and recommendations**
  - Observed learning outcomes
  - Challenges encountered
  - Suggestions for improvement

## 2. Initial experience and expectation

### 2.1 Inclusion and diversity : anticipated vs emergent dimensions

At the outset, inclusion was rarely framed in formal pedagogical terms (e.g., disability inclusion or structured coexistence programs). Instead, initial motivations tended to focus on:

- Offering an accessible activity regardless of physical condition
- Providing an alternative to highly competitive or physically demanding sports
- Creating a low-threshold entry point for participation

In Spain, teachers expected table soccer to act as a “bridge” within highly diverse school contexts, particularly those with significant migrant populations. In Germany, especially in schools working with emotionally vulnerable students, the activity was perceived as supportive, though not explicitly framed as therapeutic or inclusion oriented. In France, inclusion was not a primary expectation and emerged later as a secondary outcome. In Bulgaria, expectations varied depending on the school context. In larger schools, inclusion was considered a potential long-term outcome, whereas in smaller and more culturally diverse settings, table soccer was expected to function as a shared, low-language interaction space. Its non-verbal nature reduced linguistic barriers and facilitated peer interaction. However, in most cases, inclusion depended on teacher mediation rather than being embedded within a structured pedagogical strategy.

#### France

*“I didn’t really have expectations either. For us it was really more to fill the gap that they had neither swimming nor ice-skating, unlike all the other classes in the school and elsewhere.” (France, private school, Teacher – programme coordinator)*

#### Germany

*“I think it’s important to engage in an activity at all—and foosball really plays a role there. Not a sporting one, but simply taking part in an activity in a group.” (Germany, public school, Deputy headmaster)*

#### Spain

*“A bridge that connects all the diversity we have, and I think it has helped a lot with that.” (Spain, public school, implemented the project)*

*“It’s been really good because we always have injured kids, kids with asthma, kids who can’t move. So in those situations they were just one more—there was no excuse not to be able to take part.” (Spain, semi-private school, integrated the project into PE/values and recess)*

## 2.2 Shared starting point, divergent pathways

Despite contextual differences, the participating countries converge on a common starting point: table soccer was not initially envisioned as a fully developed pedagogical tool. The main divergence lies in how this low-expectation baseline manifested:

- As explicit skepticism requiring legitimization (France).
- As normalized but educationally undefined practice (Germany).
- As an innovative but still loosely framed alternative within school coexistence strategies (Spain).
- Or as a positively accepted but functionally framed activity introduced through institutional channels (Bulgaria).

In all cases, initial expectations were shaped less by the intrinsic characteristics of the activity and more by how it was culturally perceived and institutionally introduced. The educational potential of table soccer, therefore, was not assumed from the outset but gradually constructed through practice.

### France

*“For me it’s not a PE activity; it’s a recreational activity they can do during break time. In my planning I haven’t put table football, and I think I never will.” (France, private school, Teacher – programme coordinator)*

### Germany

*“At first, I was mainly curious to see how many of my students could handle it and whether foosball is still something current... And I saw it as a really good alternative to stepping away from the usual everyday classroom routine.” (Germany, public school, supervised and implemented the activity)*

Table soccer demonstrates strong potential as a social levelling tool within school environments. It reduces physical barriers, diversifies playground hierarchies, and creates small-scale interaction spaces governed by visible rules.

However, its transformative capacity is not automatic. The strongest impacts on inclusion and coexistence emerge when the activity is intentionally embedded within a pedagogical framework that combines:

- Adult guidance
- Structured rotation systems
- Explicit norm reinforcement
- Opportunities for peer leadership

When these conditions are met, table soccer moves beyond recreation and becomes an effective instrument for strengthening social cohesion and everyday coexistence within diverse school communities.

## Spain

*“We’ve been giving points for fair play, for respecting referees, rules... Those are points that prevent it from being 100% competition and competitiveness.” (Spain, public school, Head of Studies; involved in coordinating the project)*

## 3. Impact of the program

### 3.1 Social inclusion and school coexistence

Across contexts, table soccer demonstrated a strong potential to create shared interaction spaces that reduce physical, symbolic, and relational barriers. Yet the scope and depth of inclusion varied considerably depending on whether participation was structured or left to voluntary engagement.

#### 3.1.1 Gender inclusion and the “levelling effect”

One of the most frequently observed mechanisms of inclusion related to gender dynamics, as table soccer and traditional soccer are associated with characteristics that correspond more to male roles than female roles.

Table soccer was frequently contrasted with traditional playground soccer, which was described as:

- Physically demanding and strength-oriented
- Associated with body contact and higher conflict level
- Symbolically male-dominated

By contrast, table soccer was repeatedly characterized as:

- Non-contact and therefore perceived as “safer”
- Less dependent on physical strength
- Providing equal access to performance regardless of body type

In more structured implementation models, girls who initially expressed hesitation progressively engaged and reported positive experiences, often surprising both themselves and their teachers. The activity functioned as a levelling mechanism, reducing visible physical differences and redistributing legitimacy within the play space.

However, where participation was purely voluntary and unstructured, gender patterns tended to reproduce pre-existing preferences. In such contexts, participation remained somewhat self-selective, benefiting those already interested rather than transforming gender dynamics systematically.

Evidence from Bulgaria reinforces this distinction. While the activity was generally accessible to all students, at least one school explicitly reported lower female participation. In contexts where table soccer operated primarily as a voluntary break-time option, engagement appeared to reflect existing gender preferences rather than actively reshaping them. Conversely, in schools where teachers intentionally organized mixed groups and supervised participation, the potential for more balanced engagement was described as higher, though not systematically measured.

The evidence suggests that table soccer has strong gender-inclusive potential, but that this potential becomes transformative only when participation is intentionally organized and monitored.

### France

*“I’d also say it’s more ‘safe’ because on a football pitch some children, boys or girls, aren’t comfortable because there is body contact, whereas here there isn’t. I find that changes things.” (France, private school, Teacher – programme coordinator)*

*“In summary: unlike other playground sports, it allows everyone to play starting from the same basis, so everyone has the same chances. That allows everyone to participate in a relaxed way, without preconceptions like ‘I’m bad,’ ‘I’m not bad,’ ‘I don’t run fast enough,’ or whatever.” (France, private school, Teacher – programme coordinator)*

### Spain

*“It’s been really motivating, even for the girls, because it’s true that boys play and talk about football more, but the girls don’t—and they’ve been super motivated and super involved in the project.” (Spain, public school, co-implemented the project)*

## 3.1.2 Inclusion of students with special educational needs and vulnerabilities

Table soccer also served as an effective inclusion tool for students with diverse educational profiles, including:

- Students with motor disabilities
- Students with ASD/TEA
- Students with Down Syndrome
- Students with emotional or behavioral regulation challenges
- Students with low self-esteem or histories of academic disengagement

In more pedagogically structured environments, inclusion was actively facilitated through adaptations such as:

- Visual supports (e.g., pictograms)
- Collective rule modifications (e.g., entire groups playing one-handed to support a peer)
- Explicit norm-setting and teacher mediation

In such cases, inclusion was systemic and intentional. Vulnerable students were not merely allowed to participate; they were meaningfully integrated into the group dynamic.

Evidence from Bulgaria aligns partially with this pattern, though in a less formalized manner. Across the three Bulgarian schools, students with special educational needs or lower social skills were encouraged to participate, often with teacher supervision or peer support. In some cases, students with specific needs were assigned adapted roles (e.g., goalkeeper position), facilitating participation without requiring formal structural modifications. However, explicit pedagogical adaptations (such as rule redesign or visual supports) were not systematically

reported. Inclusion appeared to depend primarily on teacher mediation rather than on embedded structural adjustments.

By contrast, in more open-access models, inclusion was organic but uneven. Students who lacked confidence or motivation were less likely to self-select into participation. While the activity offered a low-threshold entry point, adult prompting was often necessary to bring more withdrawn students into the shared space. Without that intervention, inclusion remained partial.

This pattern was also visible in Bulgaria. In schools where participation operated mainly as a voluntary break-time option, engagement tended to reflect pre-existing motivation. Teachers noted that supervision and encouragement were essential to ensure broader inclusion, particularly for students with fewer social skills or from migrant backgrounds.

Comparative evidence indicates that table soccer can function as a powerful inclusion bridge—particularly for students who struggle in highly competitive or physically intense environments— but that structured facilitation significantly increases its reach.

### France

*“Among them there was at least one who was really struggling academically. I thought it was really a plus for her.” (France, private school, Teacher – programme coordinator)*

### Spain

*“We have a girl with a motor disability—she’s missing an arm and wears a prosthesis... instead of making her adapt, you can make the group adapt, for example by playing with only one hand.” (Spain, public school, Head of Studies; involved in coordinating the project)*

### Bulgaria

*“They encourage the students to take turns, to give opportunity to everybody in one group/team to play, to understand the needs of the others and to include in the game even students with special needs.” (Bulgaria, public primary school, Responsible for implementing the activity)*

*“The students with special needs usually play the goalkeeper position.” (Bulgaria, public primary school, Responsible for implementing the activity)*

## 3.1.3 Cross-age and skill-level interaction

Where group composition allowed it, table soccer facilitated interaction across:

- Age groups
- Skill levels
- Cultural backgrounds.

Peer mentoring emerged naturally in several contexts, particularly when older or more experienced players began teaching others during and beyond formal sessions. In structured

implementations, this spillover into playground autonomy was perceived as a meaningful educational gain.

In Bulgaria, cross-age interaction was more strongly anticipated in larger secondary settings, where teachers described the potential for older students to model positive behavior in mixed tournaments. In smaller and culturally diverse schools, the most visible effect was cross-cultural interaction, particularly where students with migrant backgrounds engaged in non-verbal cooperation with peers.

In more informal models, cross-age interaction occurred but was less systematically encouraged. Again, the presence or absence of adult guidance shaped the depth of inclusion.

### France

*“What’s interesting is that... my pupils were able to introduce the Cycle 2 pupils to table football by explaining the rules we’d learned... It was really interesting because there was sharing from the older pupils to the younger ones, and that was really nice.” (France, private school, Teacher – programme coordinator)*

### Germany

*“When my older students interact or play with a student from the primary level class, I find they react much more patiently and empathetically than if they had a normal conversation in the hallway. ... In the hallway the little children are annoying, but at the foosball table that is the opponent. Both sides have the same rules.” (Germany, public school, supervised and implemented the activity))*

### Bulgaria

*“Students from all grades enjoy playing.” (Bulgaria, public secondary school, Responsible for implementing the activity)*

## 3.1.4 School coexistence: norms, emotional regulation, and shared micro-routines

School coexistence—understood as peer relations, respect for shared norms, behavioral regulation, and everyday conflict management—was another central impact area. Table soccer supported coexistence primarily through micro-routines embedded in gameplay:

- Rule-based interaction
- Turn-taking and fairness
- Cooperative paired play
- Emotional regulation during competitive moments

However, as with inclusion, the strength and transferability of these outcomes depended heavily on implementation design.

### 3.1.5 Rules, structure, and behavioral framing

In contexts where sessions were structured and explicitly framed as learning situations rather than free play, coexistence gains were more visible and articulated. Students repeatedly practiced:

- Respecting formal rules
- Waiting their turn
- Accepting constraints
- Managing frustration
- Engaging in fair play rituals (e.g., handshakes before and after matches)

When these norms were intentionally reinforced by teachers, they became internalized and, in some cases, autonomously upheld by students. Ritualized respect behaviors transferred into playground contexts, contributing to a pacifying effect in recreational spaces previously dominated by high-conflict competitive games.

#### Germany

*“There are clear rules in foosball, clear sides, and then there’s also less discussion. I actually find that at the foosball table... there are fewer arguments... than would be the case in the normal hallway.” (Germany, public school, supervised and implemented the activity)*

#### Spain

*“What I’ve been giving the most importance to is the rules and respect: that they greet each other, shake hands... that at the end they don’t show off, but shake hands again and tell the others ‘well done’.” (Spain, public school, implemented the project)*

#### Bulgaria

*“Students learn to follow clear rules, wait their turn, and accept refereeing decisions. In a competitive but controlled setting, they practice winning with humility and losing with dignity.” (Bulgaria, public secondary school, Responsible for implementing the activity)*

In less structured models, coexistence benefits were present but diffuse. Negotiation of turns and minor disputes still occurred, but without explicit framing these remained informal learning experiences rather than consolidated behavioral routines.

### 3.1.6 Cooperation and paired play

The paired format of table soccer emerged as a natural coexistence driver. Playing in teams of two required:

- Coordination
- Communication
- Shared responsibility
- Mutual encouragement

Students learned to cope jointly with mistakes and losses, making relational norms visible and teachable. These dynamics were particularly powerful when adult mediation made them explicit.

Without structured mediation, paired play still generated cooperative interaction, but its broader transfer into classroom-wide behavior patterns was less evident.

### France

*“I agree. There’s no body contact. And you’re also a team, because you play 2 versus 2. You have a partner—that notion matters. They can make mistakes, do things well; you encourage each other. Those are values of team sports.” (France, private school, Teacher – programme coordinator)*

### Germany

*“If you want to play, you inevitably have to arrange yourself with the others, because you can never play there alone.” (Germany, public school, Support/cover teacher)*

## 3.1.7 Emotional regulation and conflict reduction

Across contexts, table soccer functioned as a channel for competitive energy in a controlled environment. Unlike field soccer, which was often associated with physical confrontation and imitation of aggressive professional behaviors, table soccer reduced:

- Physical escalation
- Dominance based on strength
- Lare-group conflict

Students practiced losing, accepting decisions, and managing competitiveness in a contained setting.

However, waiting times and limited resources occasionally generated frictions, especially in larger schools. In structured implementations, teachers transformed these moments into explicit learning opportunities around patience and fairness. In less structured contexts, these tensions risked remaining unmanaged.

### Germany

*“You can work on emotional regulation very well there... and then you can talk to them about it in that setting and, ideally, reflect on their behaviour. And that actually works very well.” (Germany, public school, Support/cover teacher)*

## 3.1.8 Inclusion and coexistence as design-dependent outcomes

The comparative evidence strongly suggests that neither social inclusion nor school coexistence are inherent outcomes of table soccer. Rather, they depend on three key factors:

- Structured participation (beyond purely voluntary self-selection)
- Explicit norm-setting and pedagogical framing

- Consistent adult mediation

Where these elements were present, inclusion became broader and more equitable, and coexistence gains were stable and transferable. The activity functioned as a “social laboratory,” enabling students to practice empathy, fairness, emotional regulation, and shared responsibility.

Where participation was primarily informal and leisure-oriented, inclusion and coexistence benefits remained localized and selective. Students who were already confident or interested benefited most, while more vulnerable or hesitant students required additional support to engage.

### 3.1.9 Synthesis

Table soccer demonstrates strong potential as a social levelling tool within school environments. It reduces physical barriers, diversifies playground hierarchies, and creates small-scale interaction spaces governed by visible rules.

However, its transformative capacity is not automatic. The strongest impacts on inclusion and coexistence emerge when the activity is intentionally embedded within a pedagogical framework that combines:

- Adult guidance
- Structured rotation systems
- Explicit norm reinforcement
- Opportunities for peer leadership

When these conditions are met, table soccer moves beyond recreation and becomes an effective instrument for strengthening social cohesion and everyday coexistence within diverse school communities.

#### *Spain*

*“We’ve been giving points for fair play, for respecting referees, rules... Those are points that prevent it from being 100% competition and competitiveness.” (Spain, public school, Head of Studies; involved in coordinating the project)*

## 3.2 Reduction of sedentary lifestyles

The reduction of sedentary lifestyles emerged as a relevant but conceptually nuanced outcome of the TSAS program. Importantly, this impact was not associated with increased cardiovascular intensity or high levels of physical exertion. Instead, it was linked to behavioral diversification, low-barrier activation, and sustained engagement.

Across contexts, table soccer contributed to reducing sedentary patterns primarily by replacing passive downtime with structured standing, movement, and social interaction.

### 3.2.1 Low-barrier activation of sedentary profiles inclusion and coexistence as design-dependent outcomes

One of the most consistent findings was the activation of students who typically remain disengaged during recess or avoid traditional sports.

- Teachers identified a clear shift among:
  - Students who tend to avoid Physical Education (PE)
  - Students with low motivation for competitive or high-intensity activities
  - Those who usually remain seated, inactive, or socially peripheral during breaks

Table soccer functioned as a low-threshold entry point. Because it does not require high levels of physical strength, endurance, or prior sporting competence, it minimized fear of failure and reduced performance anxiety. As a result, students who would otherwise remain passive were:

- Standing rather than sitting
- Participating rather than observing
- Socially engaged rather than isolated

In more structured implementations, this activation was particularly visible, as teachers could observe consistent behavioral changes over time. In more informal, open-access contexts, similar dynamics may have occurred but were less systematically documented. In some settings, teachers explicitly noted that students who would typically spend long breaks eating snacks or remaining seated began actively seeking access to the table, indicating a shift in break-time routines.

#### Germany

*“It’s a great activity for the children during break time, because very often they just hang around somewhere on the school grounds on their phones—so this way they’re active again.” (Germany, public school, Support/cover teacher)*

*“Physical strength doesn’t necessarily have to be there—these are other skills. A fifth grader can easily beat an eighth-grader... With practice and good coordination, you can achieve a lot, and that’s why it’s especially appealing for those who otherwise don’t perform so well in PE.” (Germany, public school, supervised and implemented the activity)*

#### Spain

*“Yes, same for us—those who couldn’t [do other things], for example because they were injured or whatever, could still participate. In fact, sometimes I know they’d repeat turns or, whenever there was a free spot, they were there; and the ones who are usually less participatory—you could see they were getting involved a bit more here.” (Spain, public school, Head of Studies; involved in coordinating the project)*

### 3.2.2 Inclusion of physically limited or temporarily injured students

Another important mechanism was the inclusion of students who are often excluded from physical activity due to:

- Asthma or low physical endurance
- Temporary injuries (casts, bandages)
- Motor disabilities
- Health-related restrictions

Table soccer enabled these students to remain physically present within a sporting environment without the demands of running, contact, or high-impact exertion. The activity allowed them to participate “as one of the group,” maintaining social integration and physical engagement.

In some schools, this role was explicitly framed as a practical alternative within sports lessons, while in others it emerged more organically through teacher mediation and peer support. Where supervision was consistent, participation of students with special needs or lower physical capacity was more intentionally facilitated.

#### *Spain*

*“Yes, absolutely—the typical kids we have who always say something hurts when there’s a physical activity they don’t like. In this case, they can do it sitting down; even the injured ones who had a cast or a bandaged foot would sit in a chair and, because they liked it, they could take part just the same.” (Spain, semi-private school, integrated the project into PE/Values and recess)*

### 3.2.3 Diversification of playground behavior

The evidence suggests that the program’s impact on sedentary behavior lies less in increasing physical intensity and more in diversifying how students use their free time.

Table soccer contributed to :

- Reducing passive sitting and idle social clustering
- Offering an alternative to screen-oriented or disengaged habits
- Creating a new “place-to-be” within the playground

In some contexts, the activity was explicitly described as a constructive alternative to passive or snack-oriented break routines. While table soccer does not substitute for aerobic sport, it competes effectively with passive forms of downtime by sustaining attention, competition, and skill development.

Where implemented at scale, high demand occasionally required rotation systems to manage access. In structured environments, these systems reinforced sustained engagement; in less regulated settings, competition for access sometimes generated minor friction, further highlighting the importance of organization.

### France

*“Actually yes—because the tables stayed under the covered playground area for the whole c or 7 weeks he intervened. So during break time we noticed many more pupils went to play, they mastered the rules more, and they were much more interested than before.” (France, private school, Teacher – programme coordinator)*

*“Since we got the table football, many more are on it; the table tennis table is used much less, even not at all sometimes.” (France, private school, Teacher – programme coordinator)*

### Bulgaria

*“Those that used to prefer to have a quick snack in the big break now are eager to reach the table and play soccer with classmates.” (Bulgaria, public secondary school, Responsible for implementing the activity)*

## 3.2.4 From physical intensity to sustained engagement

Comparative evidence highlights a crucial conceptual distinction: reducing sedentary behavior does not necessarily mean increasing physical intensity.

Across contexts, the primary mechanisms contributing to reduced sedentary patterns were:

- Continuous standing and small-scale movement
- Cognitive engagement
- Social interaction
- Structured turn-taking and focus
- Motivation linked to skill progression

In structured, teacher-led implementations, these changes were more visible and easier to connect to broader behavioral patterns. In more informal, voluntary models, the contribution was present but less systematically framed or evaluated.

### France

*“Not especially. What suits them, so to speak, is that it’s not a very cardio activity that requires intense effort, so it’s nice. It matches what Camille said about it being a game. It counts as physical activity but at the same time you don’t have to get too tired.” (France, private school, Teacher – programme coordinator)*

### Germany

*“I think for us it has no influence—no effect—where we could say they are more active... Everyone can take part... but for us the bigger influence was in the social area, not in physical movement.” (Germany, public school, organised and supervised the Kicker-AG)*

### 3.2.5 Design-dependant impact

As with inclusion and coexistence, the reduction of sedentary behavior appears to be a design-dependent outcome.

Its strongest effects were observed when:

- The activity was introduced as a legitimate, structured practice (e.g., within PE before recess use)
- Demand was intentionally stimulated through pedagogical framing
- Participation systems ensured rotation and sustained engagement

When left purely to spontaneous leisure use, table soccer still reduced sedentary behavior among participating students, but its reach depended on self-selection. In larger or highly demanded contexts, intentional organization proved particularly important to prevent exclusion through limited access.

### 3.2.6 Synthesis

Table soccer should not be understood as a substitute for cardiovascular exercise or structured sport. Its contribution to reducing sedentary lifestyles lies elsewhere: in activating students who would otherwise remain inactive, diversifying recreational behaviors, and sustaining participation through accessible, skill-based engagement.

If positioned strategically, table soccer can function as a gateway to active habits, particularly for the most sedentary segments of the student population. However, its effectiveness increases when reduction of sedentary behavior is framed in terms of behavioral activation and engagement, rather than physical intensity alone, and when schools intentionally integrate it within broader activity strategies.

### 3.3 Summary of the questionnaires results

#### 3.3.1 Participants' perception of program outcomes

	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
Expanding my social network (%)	23.6	30.6	29.5	10.8	5.4
Improving my social skills	28.7	34.4	23.5	8.4	5.0
Feeling part of a group	39.9	37.2	13.6	5.7	3.6
Feeling supported by my peers	45.6	33.6	15.3	3.6	1.8
Showing respect to my teammates	50.6	34.7	11.6	1.8	1.4
Respecting the rules of the game	59.5	30.8	8.4	1.1	0.2
Improving team spirit	42.4	34.3	18.1	4.3	0.9
Having fun and enjoying myself	69.7	22.6	5.2	1.6	0.9
Feeling confident	42.0	31.4	18.4	6.1	2.0
Feeling calmer	28.2	32.5	23.9	11.1	4.3
I'm looking forward to carrying on playing	61.9	21.7	11.4	4.1	0.9
Improving my playing skills	49.4	30.6	13.8	4.8	1.4
Accepting that everyone can participate	63.2	23.3	9.5	2.7	1.4
Staying focused during the activity	46.5	36.1	13.2	2.7	1.6
Helping me become more independent	32.9	29.7	24.2	7.3	5.9
I enjoy doing things that were difficult at first	50.3	27.8	15.3	4.1	2.5
Accepting defeat	47.1	33.9	11.5	5.4	2.0
Enjoying being with my teammates during the game	62.0	26.5	7.5	2.5	1.6
Improving communication with my classmates	41.5	31.9	19.6	5.5	1.6
Looking after my health	44.9	20.8	22.2	5.9	6.2

Overall, the questionnaire results indicate that the program had a strongly positive impact across the four targeted dimensions: social, behavioral, emotional, and physical benefits. Regarding social benefits, with a particular emphasis on inclusion, high levels of agreement were observed for items related to feeling part of a group, feeling supported by peers, enjoying time with teammates, and accepting that everyone can participate, suggesting that the program successfully promoted inclusive social interactions.

In terms of behavioral benefits, respondents reported very positive outcomes related to showing respect to teammates, respecting the rules of the game, staying focused during activities, accepting defeat, and engaging constructively in challenging situations, reflecting the development of prosocial and self-regulatory behaviors.

Concerning emotional benefits, most participants indicated increased enjoyment, confidence, calmness, motivation to continue playing, and a willingness to engage with tasks that were initially difficult, pointing to enhanced emotional wellbeing and resilience.

Finally, although physical and health-related benefits showed a slightly higher proportion of neutral responses compared to the other dimensions, a clear majority of participants agreed that the program contributed positively to looking after their health, maintaining energy levels, and supporting overall physical engagement.

Across all dimensions, levels of disagreement remained consistently low, reinforcing the overall positive perception of the program.

### Participants' perception of program aspects

	Very good (%)	Good (%)	Fair (%)	Bad (%)	Very bad (%)
Fun	70.0	21.7	6.8	1.1	0.5
Usefulness	38.1	36.5	19.3	3.4	2.7
Equipment provided (table football)	62.0	28.3	8.4	1.1	0.2
Previous information	40.9	32.4	21.4	3.0	2.3
Organization of activities	48.5	34.9	14.5	1.4	0.7
Program duration	35.7	31.6	17.6	8.7	6.4
I would take part again	69.0	18.5	7.5	3.2	1.8
I would recommend it to my friends	63.0	25.7	5.9	3.9	1.6

The evaluation results indicate a very high level of overall satisfaction with the program. Fun received the most positive ratings, with over 90% of participants evaluating it as very good or good, highlighting the program's strong appeal and enjoyment.

Equipment provision, particularly the table football resources, and the organization of activities were also very positively assessed, reflecting effective planning and implementation.

Although usefulness and previous information received slightly more moderate ratings, the majority of respondents still evaluated these aspects positively.

The program duration generated the most varied responses, with a higher proportion of fair and negative ratings, suggesting potential room for adjustment.

Importantly, participants expressed strong willingness to take part again and recommend the program to their friends, confirming high levels of acceptance, satisfaction, and perceived value.

### Country comparison of positive responses to perceived program outcomes (Agree/Strongly Agree Responses)

	Bulgary (n=36, %)	France (n=125, %)	Germany (n=35, %)	Spain (n=248, %)
Expanding my social network	91.7	53.6	68.6	47.0
Improving my social skills	97.2	61.6	94.3	54.7
Feeling part of a group	91.7	73.6	77.1	76.7
Feeling supported by my peers	91.7	72.8	74.3	81.7
Showing respect to my teammates	100.0	81.5	88.2	85.0
Respecting the rules of the game	94.4	90.3	97.1	88.7
Improving team spirit	88.9	85.6	91.4	68.3
Having fun and enjoying myself	94.4	91.2	100.0	91.4
Feeling confident	88.9	77.6	82.9	67.5
Feeling calmer	72.2	63.2	65.7	57.2
I'm looking forward to carrying on playing	97.2	86.9	94.3	78.3
Improving my playing skills	94.4	84.0	91.4	74.5
Accepting that everyone can participate	83.3	88.0	74.3	88.2
Staying focused during the activity	91.4	84.7	82.9	80.1
Helping me become more independent	66.7	71.8	82.4	54.7
I enjoy doing things that were	91.7	80.6	85.7	74.1

difficult at first				
Accepting defeat	82.9	80.6	94.3	79.0
Enjoying being with my teammates during the game	91.7	87.1	94.1	87.9
Improving communication with my classmates	91.7	71.8	82.9	70.0
Looking after my health	97.1	57.9	78.8	63.1

The comparative analysis of the aggregated agree and strongly agree responses across countries reveals consistently positive perceptions of the program, although with notable variations in intensity.

Overall, Bulgaria and Germany show the highest levels of agreement across most dimensions, particularly in social, behavioral, and enjoyment-related outcomes, such as showing respect to teammates, respecting the rules of the game, having fun, and motivation to continue playing.

France also presents strong positive results, especially in areas related to enjoyment, inclusion, and team spirit, although lower agreement is observed for items linked to social network expansion and health-related benefits.

In contrast, Spain generally reports lower percentages of agreement across several dimensions, particularly for expanding social networks, independence, calmness, and confidence, despite maintaining high levels of agreement for inclusion, enjoyment, respect, and peer support.

Across all countries, items related to respect, enjoyment, motivation, and social interaction consistently achieve high agreement levels, suggesting that the program’s core social and behavioral objectives were successfully met, while differences across countries may reflect contextual, cultural, or implementation-related factors.

### Country comparison of positive responses to perceived program aspects (Very Good/Good Responses)

	Bulgary (n=36, %)	France (n=125, %)	Germany (n=35, %)	Spain (n=248, %)
Fun	97.3	88.8	94.3	91.9
Usefulness	100.0	81.6	88.6	65.6
Equipment provided (table football)	94.5	92.0	91.4	88.6
Previous information	83.3	77.5	77.2	69.5
Organization of activities	94.2	83.1	80.0	83.0
Program duration	100.0	70.4	78.8	59.1
I would take part again	97.2	86.4	91.4	85.9
I would recommend it to my friends	94.4	87.0	94.3	87.7

The results presented in this table represent the combined percentage of “Very good” and “Good” responses for each item in each country, reflecting overall positive evaluations of the programme.

Overall, the findings show high levels of satisfaction across all participating countries, although some differences can be observed in the intensity of positive ratings.

Fun stands out as the most consistently valued aspect, receiving very high scores in all countries, which highlights enjoyment as a key strength of the programme.

Bulgaria reports uniformly high ratings across all items, with particularly strong results for usefulness and programme duration, both achieving unanimous positive evaluations.

Germany and France also demonstrate strong satisfaction, especially regarding equipment provision, organisation of activities, and willingness to participate again.

In contrast, Spain records comparatively lower positive ratings for usefulness and programme duration, suggesting potential areas for improvement related to perceived impact and structural features of the programme.

Despite these variations, participants in all countries expressed a strong intention to take part again and to recommend the programme to their friends, underscoring the overall positive reception and perceived value of the initiative.

### 3.3.2 Teachers' perceptions of program outcomes

	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
Broaden their social relations	50.0	42.9	7.1	0.0	0.0
Improve their social skills	50.0	42.9	7.1	0.0	0.0
Promote social inclusion in the school	57.1	35.7	7.1	0.0	0.0
Encourage peer support	57.1	42.9	0.0	0.0	0.0
Develop in a climate of respect	50.0	42.9	7.1	0.0	0.0
Respect the rules of the game	64.3	35.7	0.0	0.0	0.0
Improve team spirit	64.3	35.7	0.0	0.0	0.0
Foster a sense of achievement	64.3	35.7	0.0	0.0	0.0
Boost self-esteem	57.1	42.9	0.0	0.0	0.0
Reduce stress	46.2	23.1	30.8	0.0	0.0
Increase motivation for leisure activities	42.9	35.7	14.3	7.1	0.0
Disconnect/escape mentally	46.2	38.5	15.4	0.0	0.0
Improve concentration	41.7	33.3	16.7	8.3	0.0
Develop skills or abilities	50.0	42.9	7.1	0.0	0.0
Accept that everyone can participate	71.4	28.6	0.0	0.0	0.0
Enjoy playing together	71.4	28.6	0.0	0.0	0.0
Promote their autonomy	42.9	57.1	0.0	0.0	0.0
Accept defeats	28.6	35.7	28.6	7.1	0.0
Improve communication skills with classmates	35.7	57.1	7.1	0.0	0.0
Take care of their health	30.8	30.8	38.5	0.0	0.0

As shown in the last table, teachers reported very positive perceptions of the program outcomes across key dimensions, including social, behavioral, emotional, health, and educational benefits.

Social benefits were particularly salient, with a strong emphasis on inclusion, as reflected in the high levels of agreement for outcomes such as accept that everyone can participate, enjoy playing together, and improve communication skills with classmates.

Teachers also perceived clear behavioral benefits, including improvements in respect for rules, team spirit, and acceptance of defeats.

Emotional benefits, such as increased self-esteem and stress reduction, were widely endorsed, although with slightly higher levels of neutral responses.

In addition, teachers reported positive health-related benefits, especially regarding students' awareness of taking care of their health, and educational benefits, including gains in concentration, autonomy, and skill development.

Overall, the findings indicate strong teacher endorsement of the program as a multidimensional intervention supporting students' holistic development.

### Teachers' perceptions of program characteristics

	Very good (%)	Good (%)	Fair (%)	Bad (%)	Very bad (%)
Fun	92.9	7.1	0	0	0
Usefulness	53.8	38.5	7.7	0	0
Possibility of applying it in the school's Teaching Programs	42.9	35.7	21.4	0	0
Educational materials provided	53.8	38.5	7.7	0	0
Game equipment (table soccer)	64.3	35.7	0	0	0
Organization and implementation	64.3	35.7	0	0	0
Information received	69.2	23.1	7.7	0	0
Program duration	71.4	21.4	7.1	0	0
Participation (I would participate as a teacher/manager again)	92.9	7.1	0	0	0
Recommendation (I would recommend it to other schools)	78.6	21.4	0	0	0

As shown in this table, teachers' evaluations of the program characteristics were consistently positive, with the majority of responses concentrated in the categories very good and good across all items

Aspects related to overall program quality, such as fun, organization and implementation, program duration, and teachers' willingness to participate again, received particularly high ratings, with very good responses exceeding two thirds of the sample.

Similarly, structural elements including game equipment, educational materials, and information received were positively assessed, indicating that teachers considered the program well designed and appropriately implemented in the school context. Only a small proportion of responses fell into the fair category, and no negative evaluations were reported.

Taken together, the results from the last two tables indicate strong teacher endorsement of both the outcomes and the design of the program. While the first teachers table highlights perceived benefits across social (especially inclusion), behavioral, emotional, health, and educational domains, the second confirms that these outcomes are supported by a program that teachers view as engaging, useful, and feasible within educational settings. This convergence between perceived student benefits and positive evaluations of program characteristics suggests that the program is not only effective from teachers' perspectives, but also well aligned with the practical and pedagogical demands of schools.

## 4. Barriers and future perspectives

The analysis of barriers across contexts highlights that the primary challenges of the TSAS program are not inherent to table soccer itself, but rather stem from implementation design, pedagogical framing, and institutional integration. While structured and open-access models present different limitations, most barriers relate to logistics, participation systems, and resource management rather than to the activity itself.

### 4.1 Operational friction and logistical startup costs

In some contexts, initial implementation was affected by logistical friction, particularly during the setup phase. Tables occasionally arrived unassembled and without the necessary tools, requiring improvised solutions or additional coordination.

However, this pattern was not consistent across all participating schools. In some cases, students actively participated in assembling the table under teacher supervision, which reduced friction and even generated early engagement and ownership. This suggests that startup costs are context-dependent rather than systemic.

#### France

*"For us, assembling took a whole session—we did do the assembly. It's quite long." (France, private school, Teacher – programme coordinator).*

#### Germany

*“We didn’t have any difficulties. Everything was fine.” (Germany, public school, Deputy headmaster)*

### Spain

*“They were thrilled — they didn’t expect it at all. And what I did with the foosball table was: when they brought it, I set aside one class so they could help me assemble it. And our first class was assembling the foosball table — so, all together, we tried to... the legs, the screws... and, well, to get a bit involved in the project; from there, good vibes came up and we moved forward.” (Spain, semi-private school, integrated the project into PE/Values and recess)*

## 4.2 Participation biases and structural frameworks

The implementation model directly impacted inclusivity and pedagogical depth.

- **Self-selection bias in open models:** where participation was voluntary and unstructured, engagement tended to concentrate among students already confident, motivated, or socially integrated. More hesitant or vulnerable students required adult prompting to participate.
- **Pedagogical mediation gap: conversely,** structured models ensured broader participation but required consistent teacher involvement to prevent the activity from drifting into unregulated leisure. Where teacher supervision was central, inclusion and coexistence outcomes were stronger and more visible.

In several contexts, including those with high student demand, participation frameworks (group size limits, rotation systems) proved critical to avoid exclusion through informal monopolization of access.

### Germany

*“It’s often the same ones—the ones who are interested in foosball and who are good at it. Of course, they play more regularly.” (Germany, public school, supervised and implemented the activity)*

*“The only difficulty that sometimes happens is: if nobody comes, then there’s obviously no foosball.” (Germany, public school, Support/cover teacher)*

### Spain

*“I’d add that if, in our school, for example, it hadn’t been a specialist but a class tutor, the results wouldn’t have been the same, because thanks to the fact that he’s a specialist...” (Spain, public school, Head of Studies; involved in coordinating the project).*

*“We mainly tried to pair up students who struggled more socially with the ‘leaders’ of the class, to try to foster coexistence a bit.” (Spain, semi-private school, integrated the project into PE/Values and recess).*

### 4.3 Ressource in high-density environments

Across large schools, limited material resources emerged as a structural bottleneck. A single table in high-density environments generated:

- Increased waiting times
- Competition for access
- Occasional conflict related to turn-taking

In smaller schools, this issue was less pronounced. In larger institutions, however, scalability required either additional tables or more structured rotation systems. The effectiveness of the program in such settings was closely linked to institutional capacity to manage demand.

#### France

*“Fourteen around one table is too many.” (France, private school, Teacher – programme coordinator).*

#### Germany

*“There are days when 8 to 12 kids are there and you really have to take turns. But there are also days when at most two—or none—are there.” (Germany, public school, Support/cover teacher) “I would say it actually levelled off quite well without us having to set up a big plan.” (Germany, public school, supervised and implemented the activity)*

#### Spain

*“The problem is that, since we only have one table, you can’t really work with your students properly; you have to alternate it with other units and so on.” (Spain, public school, Head of Studies; involved in coordinating the project)*

*“At one point, we even considered having two corners so we could have two table soccer tables in the school.” (Spain, semi-private school, integrated the project into PE/Values and recess).*

#### Bulgaria

*“Students argue for time for using the table.” (Bulgaria, public primary school, Responsible for implementing the activity).*

*“Since it is a large school the management can consider buying another table.” (Bulgaria, public secondary school, Responsible for implementing the activity).*

### 4.4 Future perspectives and strategic roadmap

Despite operational barriers, there is broad consensus on the scalability of the TSAS program, provided that it evolves from a loosely framed leisure option to a clearly embedded socio-educational practice.

The roadmap for future implementations points toward a Hybrid Model:

1. Strengthened pedagogical framing: Clearly articulated objectives (fair play, emotional regulation, teamwork, rule adherence) increase institutional coherence and perceived value.
2. Active teacher involvement: Sustainability depends on teachers functioning as active facilitators rather than passive supervisors, particularly in managing competition and inclusion.
3. Role complementarity: External facilitators benefit from basic pedagogical preparation, while teachers benefit from technical familiarity with the mechanics of the game.
4. Optimized resource allocation: Adequate table-to-student ratios and structured rotation systems are essential in larger schools to prevent disengagement and conflict.

In conclusion, cross-context evidence shows that the success of TSAS depends less on the intrinsic properties of table soccer and more on how it is institutionally embedded. When supported by structured organization, adult mediation, and adequate resources, table soccer functions as a scalable and inclusive socio-educational tool. Without these conditions, its impact remains localized and dependent on self-selection.

### France

*“Maybe the facilitator should also be trained in PE pedagogy in general. Then he would have more techniques, and maybe it would become more ‘sporty’, I don’t know. But it would certainly be more effective.” (France, private school, Teacher – programme coordinator).*

### Germany

*“I think this is really important: that the school leadership is on board and supports it, and gives the project leads the freedom to implement it and try things out. And also that it is embedded—not just a break-time activity, but really in the school programme... and actually used for development and not as a pure play object.” (Germany, public school, Deputy headmaster)*

*“It has to be communicated broadly in the school that the offer exists, so that it is taken up.” (Germany, public school, Support/cover teacher)*

### Spain

*“I sent an informational flyer to the kids. I explained that we were going to start a table-football project, I explained what the federation was and where it came from... We were participating with schools from other countries and other schools in Spain.” (Spain, public school, implemented the project)*

*“Above all, integrate it—if we integrate it into playground plans or things like traditional games, this doesn’t have to disappear... in terms of including it in programming units, we’re a super coordinated school, so it carries over year after year, so that it doesn’t depend on the teacher... It can’t depend on a teacher.” (Spain, public school, Head of Studies; involved in coordinating the project)*

## 5. Reflections and recommendations

### 5.1 Proposals for a cross-circular integration

A key recommendation emerging from the study is to move TSAS beyond its current positioning as a Physical Education (PE) or recess-based activity and embed it within a broader cross-curricular framework. Rather than remaining an isolated sports initiative, table soccer can become a transversal pedagogical axis over a defined period (for example, through a dedicated "Table Soccer Month" or an integrated thematic unit), linking technical learning, social learning and school culture.

This model responds to two consistent lessons across contexts: first, the educational value of table soccer becomes clearer when it is explicitly framed (not assumed); and second, inclusion and coexistence outcomes are stronger when participation is structured and mediated rather than left purely to spontaneous self-selection.

#### Design principles

- Create heterogeneous teams assigned by staff (mixing gender, friendship groups, confidence levels, and learning profiles), to avoid reinforcing existing cliques and to support sustained collaboration.
- Keep team composition stable across subjects for the duration of the unit. Stability is what turns "playing together" into shared responsibility and long-term cooperation.
- Allocate explicit roles within each team (e.g., captain, fair-play officer, timekeeper/organiser, observer/rapporteur). Role rotation helps distribute status and prevents a single "expert" from dominating.
- Introduce the activity with an explicit pedagogical frame: why it is being done, what social norms apply, and what students are expected to learn (rules, self-control, teamwork, inclusion).
- Plan for scale: if there is only one table, use rotating stations, short-timed rounds, and scheduled slots; if cohorts are large, connect table use to a wider activity circuit rather than trying to involve an entire class at once.

#### Design principles

Each subject can approach table soccer from its own disciplinary perspective while reinforcing a common set of social norms and shared routines:

- History / Social Studies: explore the origins and social evolution of table soccer; connect the game to leisure cultures, intergenerational practices, and contemporary digital habits.
- Physical Education: develop coordination, motor control and tactical awareness; teach rotation systems, fair-play rituals and basic officiating.
- Values / Citizenship / Tutor time: explicit work on rules, turn-taking, conflict mediation, inclusion, and emotional regulation in competitive moments.
- Arts: create team identities (logos, posters, table signage), design fair-play campaigns, and produce visual "how-to" guides.

- Foreign Language (e.g., English): learn technical vocabulary and rules; practice short cooperative communication scripts (agreeing roles, giving feedback, regulating emotions).
- Recess and playground planning: organise tournaments and structured free-play formats (timed rotations, "king of the hill", inter-grade matches) that consolidate classroom learning.

### **Pedagogical rationale**

A cross-curricular model expands the educational value of TSAS from physical engagement to holistic learning. When students collaborate in stable teams across multiple disciplines, they encounter one another in varied contexts - cognitive, creative, linguistic and physical. This diversification allows different abilities to surface and be recognised, reducing the risk that status is defined only by athletic performance.

In practical terms, the unit creates repeated opportunities to practise the same micro-routines (rules, rotations, paired play, handshakes, dispute resolution) until they become internalised. It also makes inclusion actionable: adaptations such as pictograms, role rotation, or team-wide rule modifications can be deliberately used to support students with different needs.

By integrating TSAS into a multi-disciplinary framework, schools can transform a recreational activity into a structured vehicle for inclusion, cooperation and collective identity-building, while keeping the game attractive and intrinsically motivating for students.

### **Strategic impact**

Providing a shared framework would strengthen coherence across countries, facilitate replication in new educational environments and reduce dependency on individual champions within each school. It would also help align expectations: positioning TSAS not merely as a leisure option, but as a socio-educational intervention with clear objectives and practical conditions for success (teacher involvement, adequate table-to- student ratios, and explicit pedagogical framing).

In this way, TSAS can move from a set of successful local experiences to a transferable model that schools can implement, document and sustain over time.

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