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Designing a Board Game to Expand Knowledge About Parental Involvement in Teacher Education

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Abstract

Research highlights a growing demand for active, experiential learning methods in higher education, especially in teacher education. While the benefits of parental involvement (PI) are well-documented, Hungary lacks tools to effectively prepare teacher trainees for fostering family–school cooperation. This study addresses this gap by introducing a custom-designed board game as an innovative teaching tool. The game simulates real-world challenges in PI through a cooperative, scenario-based framework. Exercises are grounded in international and national research, ensuring their relevance and evidence-based design. Tested with 110 students, the game's educational value was assessed via post-gameplay questionnaires. Participants emphasized the strengths of its cooperative structure, realistic scenarios, and integration of humor. Many reported gaining new insights into parental roles and strategies for effective home–school partnerships. Practical applications include integrating the game into teacher education curricula and adapting it for other educational contexts. This study demonstrates how board games can bridge theory and practice, offering an engaging, effective medium to prepare future teachers for the challenges of PI.

Keywords: parental involvement; board games; teacher education; cooperative learning; collaboration

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Academic Editor: Susan Sonnenschein

Received: 21 May 2025
Revised: 23 July 2025
Accepted: 30 July 2025
Published: 2 August 2025

Citation: Kocsis, Z., Csák, Z., Bodnár, D., & Pusztai, G. (2025). Designing a Board Game to Expand Knowledge About Parental Involvement in Teacher Education. *Education Sciences*, *15*(8), 986. https://doi.org/10.3390/educsci15080986

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1. Introduction

Parental involvement (PI) plays a crucial role in enhancing students' academic success (Epstein, 2010; Boonk et al., 2018; Watson et al., 2012), fostering positive school climates (Goodall & Vorhaus, 2011; OECD, 2019), and strengthening family–school partnerships. Despite its significance, teacher education programs often lack effective tools to prepare educators for building and maintaining such cooperation. In Hungary, most teacher education programs are devoted to subject-specific knowledge, resulting in limited preparation for responsibilities extending beyond classroom instruction. Research has concluded that both teacher trainees and university educators consider preparation for working with parents important, yet they are generally dissatisfied with its effectiveness. While the topic is addressed theoretically in some courses, practical preparation, especially for collaboration with families, is often lacking, and primarily acquired during in-school practice (Chrappán, 2025).

Traditional teacher education and in-service training tools primarily emphasize cognitive development, offering little support for challenging the prevailing education-centered paradigm or for cultivating a broader professional identity that includes renewed pedagogical practices. Additionally, regional and inter-school disparities in student composition

are particularly stark. In some schools, teachers are required to engage with families from socioeconomically disadvantaged backgrounds to effectively support student development, underscoring the critical need for teacher education programs to address parental involvement (Ceglédi et al., 2024; de Bruïne et al., 2014; Hyassat et al., 2024; Jones, 2020; Mutton et al., 2018; Pusztai et al., 2025; Willemse et al., 2018).

Active and experiential learning approaches, such as game-based learning, have gained attention for their ability to engage learners and promote critical skills like communication and collaboration (Perini et al., 2018). Research has shown that board games are particularly effective for introducing complex or sensitive topics in an accessible way (Antonaci et al., 2015). They provide an interactive platform to simulate real-world challenges (see Csempesz, 2016), allowing participants to practice strategies in a low-stakes environment. Moreover, the use of board games has been found to have a positive impact on student motivation and academic performance (Aldemir et al., 2018; Eltahir et al., 2021; Karbownik et al., 2016; Viray, 2016).

The aim of our research group is to develop procedures that will lead to the development of teacher–parent cooperation integrated in teacher education. This study explores the potential of a custom-designed board game to enhance teacher trainees' understanding of PI, bridging theoretical concepts with practical application. One of our students involved in the design of the board game is exploring university communities which use the tools of professional learning communities (PLCs) in the context of teacher education. His research has shown that in such organizations there is a strong emphasis on active, reflective, trialogical learning, a process that can contribute to the creation of innovations and new methods. These good practices could later be integrated into formal teacher education, for example in the form of the board game that is the subject of this study. By being part of such a community of professional socialization, students involved in the design process not only develop skills for their future careers, but also contribute indirectly to the career socialization and professional development of the next generation of students (Bolam et al., 2005; Hakkarainen & Paavola, 2009; Hipp et al., 2008; Stoll et al., 2006a, 2006b).

2. Literature Review

2.1. Parental Involvement

PI is defined in various ways, including parental activity in schools (Morrison, 1978), the provision of resources (Grolnick & Slowiaczek, 1994), investment in children's education (LaRocque et al., 2011), or actions of parents within school settings to support academic success (Hill & Taylor, 2004). Researchers expanded PI into a multidimensional concept, recognizing both school-based and home-based involvement (Epstein, 2018; Fan & Chen, 2001; Hoover-Dempsey & Sandler, 1997; Sui-Chu & Willms, 1996).

Parental involvement (PI), defined as the range of activities parents undertake to support their children's education, is most often conceptualized as school-initiated and structured around institutional expectations. Although Epstein reframed her original model as a "School, Family, and Community Partnerships" approach (Epstein, 2010, 2018), critics argue that its implementation remains largely school-centric, often reflects middle-class norms, and lacks sensitivity to social, ethnic, cultural, and linguistic diversity (Baquedano-López et al., 2013; Hornby & Blackwell, 2018; Reay, 2023). Recent research reshaped the concept from "involvement" to "engagement," emphasizing reciprocal partnerships that recognize parents' agency and cultural knowledge (Goodall & Montgomery, 2013; Jeynes, 2018; Kim, 2022; Pushor, 2018).

Despite the variety of conceptualizations, we chose Epstein's widely used six-dimensional model for its clarity and practical applicability in designing educational tools. In our study, we adopt a school-centered definition of PI, in line with Epstein's

framework (Epstein, 2010), which focuses on school-initiated activities that encourage parents' participation in their children's education. This includes parental presence at school events, communication with teachers, volunteering, and engaging in school-led learning activities at home. While broader conceptualizations of parental engagement consider family-initiated support and home-based learning, our intervention targets aspects of involvement that are school-led and facilitated by teachers. In addition to Epstein's typology, we also refer to Hornby and Lafaele's (2011) model, which provides a critical update by identifying barriers to parental involvement. This perspective highlights the complex interplay between teachers' attitudes, school policies, and parents' resources or cultural backgrounds, which are relevant for designing meaningful school-based involvement strategies.

PI in Hungarian schools remains low: only a quarter of parents contact teachers, slightly more than a quarter of teachers reach out to parents, and fewer than 10% of parents participate in school boards, figures well below the OECD average (OECD, 2019). While the COVID-19 pandemic weakened parent–school contact in many OECD countries, Hungary remained significantly below average in 2022 (OECD, 2020, 2023). Importantly, our previous study also revealed that different parental groups benefit from different forms of school outreach: parents with lower educational attainment reported greater appreciation for support staff and parenting advice, whereas more highly educated parents valued digital communication and volunteering opportunities more. These findings suggest that rather than relying on a one-size-fits-all model, schools should adopt differentiated, responsive family–school–community partnership (FSCP) practices. When such tailored strategies are implemented, they can mitigate the disadvantages associated with low socioeconomic status and strengthen parental involvement across diverse groups, both at home and in school contexts (Pusztai et al., 2025). The research by Ceglédi et al. (2025) focuses on opportunities to support the success of Roma students, with particular emphasis on culturally sensitive pedagogy. It highlights that in a very heterogeneous parental environment, it is necessary to ensure that parents work together on the basis of common educational principles for the benefit of their children's development. In addition to the openness and commitment of teachers, institutional support (financial and personnel) is necessary for schools to fulfill this important role as successfully as possible and to benefit from parental involvement through the success of their students. Given the diversity in Hungarian society, parenting approaches, and teacher–parent cooperation, addressing the challenges of school–family partnerships is essential for improving public education.

2.2. Preparing Teachers for PI

Research indicates that many schools and teachers fail to recognize the potential benefits of parental involvement, do not consider fostering family involvement as part of their responsibilities, and often hold negative, distrustful views of parents (Desforges & Abouchaar, 2003; Jeynes, 2011). This raises the question of which programs can effectively promote parental involvement and strengthen collaboration with parents.

Collaboration with parents has been a less emphasized aspect of teacher preparation (Sheldon & Jung, 2015a). Teacher trainees often feel uncertain about managing relationships with parents, which can contribute to stress and burnout among novice teachers (Pedditzi et al., 2021).

Hornby and Lafaele (2011) had introduced a model that clarifies the barriers to parental involvement (PI) at the family, child, teacher, and societal levels. By enhancing educators' understanding of these challenges, the model supports more effective PI strategies in both pre-service teacher education and professional development. This model has been updated and improved by Hornby and Blackwell (2018). Although the barriers identified in the study were still present, the authors found that they hindered parental involvement to a

lesser extent than previously assumed. In their revised model, they also highlighted that, due to reduced government support for families and changing parental needs (particularly in the area of communication), schools are also becoming much more aware and proactive in their efforts to develop parent–school partnerships. According to Sheldon and Jung (2015b), professional development programs play a key role in equipping teachers with strategies to enhance family–school collaboration. Initiatives like the National Network of Partnership Schools (NNPS, see Epstein et al., 2009) and the Family Engagement Partnership (FEP, see Sheldon & Hutchins, 2014) provide structured support, training, and coaching to help educators implement effective collaboration practices. These programs emphasize the importance of sustained teacher development in fostering strong school–family partnerships that positively impact student outcomes.

Although the importance of teacher education in home–school partnerships has been widely acknowledged, preparation remains inconsistent. Both preservice and practicing teachers require multiple competencies, including cultural awareness, communication strategies, and digital skills, to engage effectively with parents (Epstein, 2018; Graham-Clay, 2024). Willemse et al. (2018) reviewed teacher education literature from North America, Australia, and Europe, highlighting the persistent issue of inadequate preparation for preservice teachers in engaging with parents. Recent studies confirm this finding: teacher education in Canada (Antony-Newman, 2025) and in England (Jones et al., 2025) also marginalize the topic of parenting and collaboration. This is also indicated by the fact that teachers self-report not feeling adequately prepared for dealing with parents, and teacher education does not provide any meaningful support in this area, as the topic is neglected there, as well (Jones et al., 2025; Monfrance et al., 2024). However, empirical findings suggest that one of the key predictors of the level of parental involvement is how prepared and competent teachers perceive themselves to be in collaborating with parents (Monfrance et al., 2024).

2.3. Board Games in Higher Education

Board games are tools in teacher education that allow teacher trainees to try out different aspects of working with parents in a safe, simulated environment. During this process, learning experience is deepened, and theoretical knowledge is put into practice. The incorporation of board games into university-level teacher education aligns closely with contemporary research on experiential and active learning, offering a practical and reflective framework for skill development.

Traditional learning theory focuses on the cognitive dimension and does not include the emotional and social dimensions of learning, which make learners more active and learning more enjoyable (Illeris, 2003; Lim et al., 2019). Research by Eltahir et al. (2021) further demonstrates that game-based learning enhances motivation and persistence. Research suggests that board games can produce more enduring and impactful learning outcomes than many conventional teaching methods (Karbownik et al., 2016; Perini et al., 2018), and also highlights a marked improvement in academic performance among students engaged with board games, compared to those in traditional instruction settings (Viray, 2016). Among higher education students, the game 5-ST☆R proved effective in developing students' soft skills in hotel management training (Radzi et al., 2020), and a modified version of Dixit promoted peer discussion and conceptual understanding in physics education (Janiga & Haverlíková, 2024). Similarly, the use of Monopoly in teaching financial statement analysis improved students' cognitive engagement and collaboration (Vijayakumar & Kulkarni, 2020). BioRacer enhanced engagement, memory retention, and teamwork in public health biology education (Ezezika et al., 2023). Previous studies have demonstrated that board games, including those designed or adapted by university students and educa-

tors, can effectively support learner-centered teaching practices. For instance, Catalyze! encouraged active learning and pedagogical reflection among teaching assistants (Brydges & Dembinski, 2019). These examples illustrate that game-based learning, particularly when future educators are involved in game use or design, can foster critical skills aligned with learner-centered approaches. For teacher trainees, engaging with (board) games, and even designing their own, can significantly support their ability to adopt learner-centered teaching practices (see Brydges & Dembinski, 2019; Frossard et al., 2012).

Serious games, which are purposefully designed for educational, rather than entertainment objectives, offer learners a risk-free context for experimentation and skill development. These games have the potential to influence learners' attitudes and behaviors in alignment with pedagogical aims, thereby contributing meaningfully to the learning process (Abt, 1970; Cosimini & Collins, 2023). Game-based learning presents a versatile method for nurturing these essential skills. Furthermore, communication, collaboration, critical thinking, and creativity (the 4Cs)—identified by Trilling and Fadel (2009) as critical competencies for the 21st-century labor market—are particularly relevant for teachers, who rely on these skills to work effectively with students, parents, and colleagues.

In Hungary, the following board games are designed primarily for students and university learners, focusing on topics related to educational sociology and the field of education sciences. Mentortársas presents the educational journey of disadvantaged students all the way to higher education in an innovative way, using real-life situations. The goal of the game for players is to achieve the highest possible level of education while confronting the challenges faced by these students. Rendszerhiba is a cooperative game that explores how the education system could be made more equitable and effective. Players work together to identify system failures and develop improvements. It is recommended for ages 16 and up (Csempesz, 2016). Although not originally designed for educational purposes, Szociopoly effectively illustrates the challenges of poverty and extreme poverty through the perspective of a disadvantaged family[1]. It supports the development of social sensitivity and the critical examination of stereotypes (Kiss, 2021). However, no cooperative board game has yet been published on the topic of parental involvement.

The aim of this study is to examine the potential of a custom-designed board game as an innovative tool in teacher education for enhancing knowledge and skills related to parental involvement.

Given the persistent lack of adequate preparation for engaging with parents in both initial and ongoing teacher education, there is a pressing need for innovative, practice-oriented approaches that can bridge this gap. The literature demonstrates that teacher confidence and competence in parental collaboration are key predictors of successful PI, yet such skills are rarely developed systematically in training programs. Board games, especially serious, purpose-driven ones, offer an engaging, low-risk platform for future teachers to explore the nuances of parent–teacher interactions. By simulating realistic scenarios and encouraging reflection, communication, and problem-solving, board games align with experiential learning principles and can serve as a powerful medium for developing essential PI-related competencies. Integrating such tools into teacher education represents a promising, evidence-informed response to a well-documented training deficit.

3. The Current Study

This study aims to present the key steps and methodological foundations of the board game development process. The objective of this research is to examine how the custom-designed board game facilitates students' reflections and understandings of PI. Our research builds on existing literature, which highlights the need for experiential learning

tools in teacher education to better prepare future educators for family–school partnerships (Chrappán, 2025; Epstein, 2018; Frossard et al., 2012; Graham-Clay, 2024).

The study poses the following research questions:

(1) What understandings of parental involvement emerge through the use of the board game?
(2) How do participants perceive the educational value and applicability of the game in real-world teaching contexts?

Drawing from the existing literature, we formulated two hypotheses:

H1. *The board game is expected to surface nuanced perspectives and understandings of PI, particularly regarding its challenges and potential in everyday school practice.*

H2. *It is expected that participants will perceive the cooperative and scenario-based nature of the board game as beneficial for addressing challenges related to school–family partnerships.*

4. Materials and Methods

4.1. Research Design

This study employed a quantitative research design to assess the educational impact of a custom-designed board game on students, especially teacher trainees' understanding of PI. Quantitative data was collected to evaluate participants' experiences, knowledge acquisition, and perceptions of the game in simulating real-life challenges in school–family collaboration.

The development process incorporated several rounds of external evaluation to maintain high-quality standards. Initially, 13 individuals offered constructive feedback throughout different phases of the design (Costa & Kallick, 1993; MacPhail et al., 2021). Furthermore, an Expert Committee of over 15 professionals from our research group—including senior and junior researchers, academic staff, interns, teachers, and principals—provided insights to enhance both the educational effectiveness and overall engagement of the game (Escobar-Pérez & Cuervo-Martínez, 2008).

4.2. Data Collection Methods

Prior to its final deployment, the board game underwent an extensive testing phase, including 14 trial sessions with former students of teacher education—key representatives of the target audience. These sessions provided valuable insights, allowing for refinements that enhanced both the educational impact and the overall playability of the game, ensuring it met its intended learning objectives while remaining engaging and effective.

Data was gathered through post-gameplay questionnaires administered to 13 non-teacher trainees, 13 psychology students, and 80 teacher trainees. The questionnaires included both open-ended and closed questions to measure participants' reflections on the game's realism, cooperative elements, and pedagogical value.

The questionnaire examined several variables, including the participants' field of study, their opinion of the board game, and the perceived knowledge acquired during the game. To ensure the usability of our data, responses to the open-ended questions were independently coded by two authors and then finalized through consensus. For each question, multiple codes were developed to capture the content of the responses. These codes were entered into SPSS 25 as nominal variables. Given the nature of open-ended questions, responses often conveyed multiple, non-mutually exclusive meanings. Therefore, in some cases, we used dichotomous (dummy) variables in which the codes themselves served as the variables.

For example, to answer the question "Q2: What did you like about the game?", a participant might respond: "The design of the game and the basic idea were very creative." In this case, the variables "Q2_graphics" and "Q2_basic_idea" would be coded as 1, while all other variables (e.g., Q2_cooperation, Q2_characters, etc.) would receive a value of 0. In other instances, where the question was more direct, the codes could be represented using a single multicategorical nominal variable. In such cases, the categories within the variable captured the meanings conveyed by the responses. For example, we created one multicategorical variable (Q9_code) for the question „Q9: What did you learn during the game? Please describe.", as the semantics of the question encouraged the respondent to highlight a single aspect.

Participants' overall impression of the board game was measured using a 10-point Likert scale and the following question: "Overall, how much did you like the board game on a scale from 1 to 10? Please circle the appropriate number!" Participants provided the name of their current field of study in free-text format. Based on this, we constructed three sets of nominal variables: (1) field of study (teacher education, psychology, education, special needs education, healthcare, judicial administration, or other), (2) professional relevance (professional [teacher education, educational sciences-pedagogy, special needs education]; non-professional [psychology, healthcare, judicial administration, other]), and (3) area of training (humanities and arts, special needs education, law, computer sciences, or other). The "other" category included a mix of healthcare, IT, and economics-related training areas. The combination of these fields was justified by their individually low sample sizes. Descriptive statistics for respondents' field of study, professional background, and training area are presented in Table 1.

Table 1. Training Characteristics of the Students in the Sample.

Respondent's Profession	**N**	**Percent (%)**
Teacher education	61	57.5
Psychology	13	12.3
Special needs education	10	9.4
Educational sciences, pedagogy	8	7.5
Other	6	5.7
Judicial administration	5	4.7
Healthcare	3	2.8
Professional or not		
Professional	80	75.5
Non-professional	26	24.5
Study field		
Humanity and arts	86	81.1
Special needs education	10	9.4
Law	5	4.7
Others	5	4.7
Total	106	100

4.3. Sample

This study involved 13 students who are psychology students; another 13 players who participated in the course "Educational research (Board games in education)"; and 80 teacher trainees with diverse educational experiences. The participants provided their written consent on signed forms. They attended game sessions lasting approximately 90 min each.

4.4. Data Analysis

Quantitative data was analyzed using SPSS Statistics 25, employing descriptive statistics, Mann–Whitney U tests, and Kruskal–Wallis tests to identify differences in responses based on professional background. Open-ended responses were thematically analyzed to identify recurring themes related to knowledge and attitudes toward parental involvement. For the between-group comparison of the open-ended questions, we conducted cross-tabulation analyses due to the nominal nature of the variables, using chi-square test. Differences were considered significant when the chi-square test reached significance and the absolute value of the adjusted residuals exceeded 2.

5. Board Game Overview—Steps and Professional Considerations in the Development of the Board Game

Our board game K.Ö.SZ.I. (Communication and Connectivity between Parents and School) is a cooperative, thematic board game designed for teacher trainees and education professionals to enhance understanding of parental involvement. It falls under the category of adult board games, as players face numerous decision-making scenarios. It is cooperative, requiring players to work together, with shared success or failure. The game is considered advanced due to its mental demands and educational focus, rather than being designed for pure entertainment. Its replayability stems from varied character abilities, action cards, and scenarios. With characters possessing distinct skills and collaborating toward a shared objective, it qualifies as a symmetric game. Moreover, its comprehensive focus on parental involvement situates it as a thematic game (Győri-Nádai & Győri, 2023). It also focuses on team-based problem-solving and the integration of best practices. Played by 4–7 participants, the game represents a school year through ten rounds, tackling realistic challenges in family–school relations. Success depends on collaboration and collective decision-making (Figure 1).

Figure 1. Board game graphics.

5.1. Objective

Players work together to improve a school's status on three fields—parental connectivity, student achievement, and prestige—by solving monthly challenges based on real-world research and experiences. Studies have confirmed that PI has a positive impact on students' academic achievement (Jeynes, 2022), but a well-functioning parent–school relationship is not only beneficial for students and their families. It also has a positive impact on teachers and school culture. It can improve the school atmosphere (OECD, 2019), and teachers feel better about themselves and see their work as more effective when they feel that parents support and appreciate them. PI also benefits the school's reputation, its relationships with other institutions and the local community, and its recognition (Goodall & Vorhaus,

2011; Fine, 1993). These factors have an indirect impact on the school's reputation, i.e., its prestige.

The game's difficulty is adjustable: the initial school status can be set by attributing different values to the aforementioned three fields. The ultimate goal is to tackle realistic challenges in family–school relations by utilizing teamwork, strategy, and knowledge gained during gameplay.

5.2. Game Setup and Components

5.2.1. Roles and Characters

Players assume diverse school professional roles, each with distinct skills (communication, connectivity, expertise, and innovation). Participants draw character cards representing school professionals (e.g., teachers, principals, or support staff) (see Table 2.). While developing these characters, we aimed to represent school staff in diverse ways, considering factors such as gender balance, roles, and attitudes. To highlight their personalities, we assigned them distinctive names, sometimes incorporating wordplay (Figure A1).

Table 2. Features of the game characters.

	Characters	Distribution by Gender
School staff	Principal	2 females, 2 males
	Middle school teacher	4 females
	High school teacher	1 female, 1 male
	Teacher trainee	1 female, 1 male
	Form teacher	2 females, 2 males
Staff	Supporting staff member	3 females, 2 males
	Mentor	2 females, 2 males
	Bursar	1 female, 1 male
	Staff member	1 female, 4 males

The creation of school characters is based on the work of our research team to date and on international literature. Principals (Sheldon & Jung, 2015a) play an important role in the game, and in addition to teachers in primary and secondary schools, school support professionals (Csók & Pusztai, 2022), mentors (Godó & Hornyák, 2023), and other school staff are also featured in the game.

Each school character has four skills with a unique set of points attributed to them on a scale of 1 to 5. The skills are as follows:

- Communication—resolving conflicts and conducting discussions;
- Connectivity—engaging with parents and external organizations;
- Expertise—applying knowledge to academic challenges;
- Innovation—finding creative solutions to modern educational issues.

The 'K.Ö.SZ.I. Index' (Thanks Index) was created through the combination of these skills. K.Ö.SZ.I. is an acronym made up by the initial letters of the skills' Hungarian names, respectively.

As part of the development process, we also created 'parent cards' inspired by Smit et al.'s (2007) typology. The labels used for the six theoretical types (e.g., career-maker, tormentor) serve purely as analytical tools and are not visible to players during gameplay. Drawing on this typology, we expanded and adapted the parent profiles, integrating insights from our own interview-based research with teachers (Fényes et al., 2024; Szabó et al., 2025). These profiles intentionally include tension or dilemmas to prompt critical thinking and professional reflection. The first two columns of Table 3 include the typology developed by Smit et al. (2007, p. 52) (though in a condensed form), which we used as

a theoretical starting point. Instead, players only interact with the narrative content in the third column, which presents nuanced parent personas and incorporates our own contributions. While this typology provided a useful framework to avoid relying solely on our personal, subjective experiences, the final character set goes beyond Smit et al.'s categories. We intentionally expanded and adapted the typology by adding original character ideas and combinations to reflect a broader, more diverse set of parent profiles. Our goal was to ground the game in theory, yet allow for creative development to ensure the characters represent realistic and varied perspectives. The resulting 34 parent cards reflect a wide range of involvement types, challenges, and strengths. Parent cards influence these skills (K.Ö.SZ.I. index) positively or negatively (Figure A2). Drawn during each round, these cards represent diverse family types and impact characters' skills (positively or negatively). Their research aimed to identify the expectations of different parent groups toward schools and, based on these insights, develop strategies to engage various types of parents.

Although four of the six parent types involve some critical or problematic traits, we do not aim to reinforce deficit-based perspectives. On the contrary, our intention is to encourage pre-service teachers to reflect on complex parent–school dynamics and learn strategies for PI, even with families that present challenges. Some traits may seem exaggerated; this is a pedagogical strategy: the goal is not to stigmatize, but to help future teachers develop empathy, flexibility, and professional strategies when navigating complex parent–school interactions. Each parent card includes potential pathways to cooperation and emphasizes relational work and professional responsibility on the part of educators. In fact, several "negative" parents possess positive characteristics that can help players advance in the game. This reflects our intention to show that every parent has strengths and potential contributions—even if cooperation is not immediately smooth.

Table 3. Features of some parental characters and their theoretical basis.

Type of Smit et al. (2007)	Theoretical Characteristics	Parent Cards (Card Description)
The supporter Helpful, nice, solid, creative, sympathetic, joint thinker, harmonious, supportive, enlightening, willing to serve, and well-adjusted	Satisfied and involved, prepared to help with practical matters, willing to work, an excellent helping hand, pleasant partner, active, available on demand, and has sufficient time	Otília, a kindergarten teacher, who has excellent connections with other parents—they are either her old kindergarten groupmates or the parents of the toddlers she teaches. (Positive card.) Ferenc is a repairman who is willing to lend a helping hand whenever it is necessary—be it a repair in the classroom or help in decision-making. (Positive card.)
The absentee Loner, quitter, has (almost) no contact with other parents, no friendship relations with the school, uncommunicative, and wrestles with cultural gap due to different cultural background	Does not consider him/herself suited to make a contribution, may only participate when asked explicitly, moderately dissatisfied, uninvolved. School has no priority (anymore), leaves choice of school up to chance, impossible to contact, introverted, and unapproachable	Tünde, a stewardess mother, who is never at home and leaves parenting to the grandparents of her child. Support staff or Staff member characters are able to turn her negative Communication modifier to positive. (Negative card.) Zoárd is an entrepreneur who is unreachable by the school. However, a player character with 2 Expertise points "gains access" to his innovative ideas—in-game, it means that he gives +1 Innovation towards the solution of a monthly challenge. (Negative card.)

Table 3. *Cont.*

Type of Smit et al. (2007)	Theoretical Characteristics	Parent Cards (Card Description)
The politician Critical, precise, optimistic, desire to inspire, and persuasive	Desire to help make decisions, exert influence, and be involved; satisfied as long as parent can participate in meetings; critical consumer; extroverted; and pays attention to 'democratic' quality of the choice of school	Vilma, a grandmother and a retired teacher, who still has an active role in the school, by cooperating with the teacher and the parents of her grandchild's class. (Positive card.) Valéria is an accountant, a divorced mother with a teenage child. Due to her job, she is precise, likes to be informed about everything, and is not afraid to express her opinion. (Negative card.)
The career-maker Aloof, "no news is good news", businesslike, and basically all take and no give	Places responsibility for child raising, child care, and education on the school; one-stop-shopping approach; satisfied as long as school takes on all tasks; critical with regard to choice of school; and has attitude of 'school is for the parents' and sees teachers as an extension of parents	Álmos is a web designer who ignores the goals of his children; instead, he wants them to achieve his dreams. A player with 2 or 3 Connectivity points can unlock his +3 Innovation modifier (negative card). Ilona, a highly educated parent who works as a doctor, wants to ensure a secure future for her child. (Positive card.)
The tormentor Know-it-all, cold, insensitive, aggressive, conflictual, fighter, theatrical, and impatient	Feel offended and misunderstood as a result of the school's attitude and own educational experiences; denounces errors on the part of the school as a critical consumer, is an unguided missile for the school team; and is only satisfied when the school cringes and takes responsibility for suboptimal functioning	Ancsa, an administrator mother, who acts as a know-it-all, and thus, hinders progress. However, a confident Principal or Form Teacher can find the best way to cooperate with her. (Negative card.) Real estate agent Roland does not accept "no" as an answer. 3 Communication points are required to bring out his positive aspects (Expertise). (Negative card.)
The super parent Loyal, ambitious, strengthener, innovative, communicative, inspiring, walking encyclopedia, and grows	Feels responsible for child raising and education together with the school; is prepared to support the school alongside a busy job; is willing to invest in the school relation; thinks critically along with the school; contributes good ideas; is prepared to utilize own networks; and is satisfied when the school does its best for the performance and well-being of own child and other students	Kata, an event organizer mother, who is willing to cooperate with the school in planning fun and meaningful programs for the students. Her motto is: "Creative events are the key to a happy school." (Positive card.) Emőke is a foster parent, a supportive mother with good communication skills. (Positive card.)

This table demonstrates how theoretical models can be translated into pedagogical tools in a playful yet reflective way. The narrative diversity of the parent characters allows players to explore a wide range of school–parent interactions. Regarding the gender balance: the deck includes 18 female and 14 male parent characters, as well as two "shadow parents." The majority of female parent cards reflects the social reality that

mothers and female guardians are more often in direct contact with schools (Csák, 2023). Nevertheless, we intentionally included many fathers and male caregivers to highlight their roles and contributions to PI. It is to show that both genders are represented in both positive and negative roles, reinforcing the message that involvement is not gender-specific but context-dependent.

We believe this nuance is crucial, especially in teacher education. Future teachers will not only encounter committed, cooperative families, but also need to develop relational and reflective skills to work with parents facing challenges. Similarly, in real-life school settings, colleagues—including teachers and staff—represent a spectrum of personalities and working styles: some may be stricter or more flexible, others more supportive or critical. Our board game simulates this diversity to better prepare players for realistic, multifaceted educational environments.

5.2.2. Special Cards

Action cards are unexpected events that have a positive or negative impact on the school, i.e., they affect the three indicators on the game board (attributed to connectivity, student achievement, and prestige). There are two subtypes of these cards. The school problem cards always describe some kind of difficulty, i.e., they reduce the value of the indicators. Negative school incidents described on the cards were collected by teachers with years of experience, and with whom our research team works in collaboration. This way, we have ensured that these cards also confront players with real situations that they may encounter during their work, and that these situations can either form the basis of a professional discussion or be used outside the game as a discussion starter or topic guide in a course. The following are examples of negative action cards:

> "The PTA is organizing a team-building trip that you cannot attend because you've become infected with COVID. Effect on the game: parental connectivity is reduced by 1 point."

> "You had invited a renowned expert to your school to give an interactive presentation on the role of healthy eating. However, only a few parents showed up, and it negatively affected the reputation of your school. Effect on the game: prestige is reduced by 1 point."

> "A gifted student missed the deadline of applying to university because she was afraid to tell her parents that she couldn't use the application interface. Effect on the game: student achievement drops by 1 point."

In contrast, good practice action cards have a positive effect (an increase of one point) on the school value chosen by the players. Another special feature of these cards is that they allow players to learn about a variety of established domestic and international good practices, thus reading the description on the card aloud is recommended.

> "Parenting Forums. School-organized events where professionals give lectures to participants about a given topic related to upbringing and parenting. Lectures are followed by a discussion."

> "Feedback from Parents. At the end of the school year, parents are asked to fill out an anonymous questionnaire regarding possible improvements in the future and issues in need of resolution. Feedback is taken into consideration before the next year, and parents are also notified about changes based on their answers."

> "Jobs' Night. The event is aimed to welcome pupils in 7th to 8th grades and their parents. Workshops and activities allow teachers and families to have casual conversations besides the theme of the program."

The good practices have been collected by our research team and are available in more detail, so they can be useful for teachers outside the game (Pusztai et al., 2024a).

There are 80 negative situation action cards and 60 good practice cards. The deliberate imbalance (80 negative situation action cards versus 60 good practice cards) serves two pedagogical purposes. First, we aimed to maintain an engaging level of difficulty; a higher frequency of setbacks sustains players' interest and motivation by preserving the game's competitive dynamic and preventing it from becoming overly predictable or easy. Second, the negative cards are designed to stimulate critical reflection and discussion beyond gameplay, making them versatile tools across multiple course contexts. Moreover, while our research team has compiled a broader collection of good practice (Pusztai et al., 2024a), only a subset could be incorporated into the printed version of the game. This limitation was due to practical constraints related to the earlier finalization and production of the game, which preceded the completion of the full good practice database.

The deck of action cards should be shuffled to include both types of cards. Players are required to collectively draw one card from the deck each round (i.e., the card is drawn by the players as a group, not individually).

Quiz cards are drawn at the end of the round, as well. The quiz questions must be answered jointly by the players. If there is no game master, the player with the school principal character reads the quiz question out loud and checks the correctness of the answer. If the answer is correct, the players decide together which school indicator they would like to increase by one point, similar to the good practice cards. The correct answers are always given on the bottom of the quiz cards. These cards are also a way of transferring knowledge. If players want to find out more about the question outside the game, they can scan the QR codes on the cards to access the original studies and websites. The questions were designed to serve as a model for a teacher trainees, so we used different types of tasks. The tasks can be closed questions (simple choice, true-false, and pairing), as well as supplementary and open-ended, short-answer tasks. There are 85 quiz cards in total.

5.3. Playing the Game

Players select character cards, ensuring that at least one among them plays as the Principal. School status for a standard game is having the indicators of the three fields all set to the middlemost value. Meanwhile, decks containing situation cards, action cards, and good practice cards are shuffled and arranged on the board. Each player draws a parent card, which temporarily influences their character's skills for that round.

At the beginning of each round, the Principal selects a situation card that presents a real-world school–family challenge for the month. Players collaborate using a solution board that outlines possible actions, strategically combining their skills while considering the impact of parent cards (Table 4). Successful problem-solving leads to positive adjustments on the school's indicator scales.

After that, the deck of action cards should be shuffled to include both types of cards. Players are required to collectively draw one card from the deck each round. Finally, quiz cards are drawn at the end of the round, as well. The quiz questions must be answered jointly by the players. During the game, players have several opportunities to read summaries of relevant literature on the so-called quiz cards and solution table (game tool), which contribute to shared learning and problem solving.

Table 4. The theoretical basis of the solution table (game tool) presented during the game, which contributes to the players' joint learning and problem solving.

Possible Options on the Solution Table	Dimensions of Epstein's Model	Details	References
Home visit Workshop 1 Consultation	Strengthening parenting skills	Understanding student behavior, recognizing the family's circumstances and cultural background, identifying family strengths, and enhancing pedagogical and developmental knowledge and skills.	(Hutchins et al., 2012; Paulick et al., 2023; Scher & Lauver, 2021; Kronholz, 2016)
Joint program for parents and teachers Newsletters	Communication	Enhancing communication skills with parents from diverse social and cultural backgrounds, while recognizing and leveraging the strength of parental networks. Newsletters offer a practical and effective means of keeping parents updated on school and classroom activities. They serve three key functions: providing information, offering educational insights, and encouraging parental involvement.	(Allen & McAtee, 2009; Graham-Clay, 2024; Jeynes, 2025; Ray, 2013)
Community	Cooperation with the community	Expanding school programs through collaboration with external stakeholders and shared responsibilities. Developing the ability to engage external mentors and partners while fostering student motivation by shaping their aspirations and life goals.	(Block et al., 2015; Coco et al., 2007)
Parental volunteering	Volunteering	The ability to engage passive families is improving, while trust is strengthened in informal settings. Identifying and valuing parents' talents, delegating tasks by involving them, and encouraging parents to support both students and fellow parents in need, fostering shared responsibility.	(Fensterwald, 2022; Hamlin & Li, 2019; Marland-Peltoniemi, 2015; Myers, 2022; Kocsis et al., 2024)
Workshop 2	Supporting learning at home	Plan homework more effectively and complete tasks with greater confidence. Strengthen relationships with parents by respecting family time. Identify motivational strategies tailored to single-parent households, overburdened two-parent families, and those with lower socioeconomic status.	(Dettmers et al., 2019; Gonida & Cortina, 2014; Küçüker & Kaçar, 2024)
Decision making	Decision making	Incorporating parents' perspectives prior to decision-making helps in more accurately predicting outcomes. Engaging with parent representatives provides a deeper understanding of parenting dynamics, leading to more informed and realistic decisions.	(Harris, 2012; Gülcan & Duran, 2018; Sakamoto, 2020)

6. Findings

As a first step in our analysis, we examined participants' overall impressions of the board game. Based on the descriptive statistics of a 10-point Likert scale, respondents generally rated the game quite positively (Mean = 8.97; SD = 0.96; min = 7; max = 10). We were also curious whether the participants' field of study, professional background, or area of training had any influence on their ratings. As the normality test indicated that the distribution of responses did not follow a normal distribution (Shapiro–Wilk test, $p = 0.000$), we employed non-parametric tests for further analysis.

The Mann–Whitney U test (professional; non-professional) showed that there was no significant difference by professionalism in how well the game was rated ($p = 0.77$). In analyzing the relationship between participants' field of study (teacher education, psychology, education, healthcare, judicial administration, or other) and their evaluation of the board game, the Kruskal–Wallis test indicated no statistically significant differences ($p = 0.33$). However, the non-parametric post-hoc test (Dwass–Steel–Critchlow–Fligner, DSCF) also revealed no significant pairwise differences between the groups. Further analyses were conducted based on the participants' broader area of training (humanities and arts, special needs education, law, or other). Here, the Kruskal–Wallis test revealed significant differences ($p = 0.004$). According to the DSCF post-hoc test, students from the "other" training areas rated the board game significantly lower than those studying in the humanities and arts ($p = 0.019$) and special needs education ($p = 0.011$) fields. The Kruskal–Wallis test results, along with the rank values for each training area, are presented in Table 5.

Table 5. Overall impression of the board game by participants' area of training.

Study Field	N	Mean Rank	Sign.
Humanity and arts	86	53.12	0.004
Special needs education	10	73.05	
Law	5	59.6	
Others	5	14.8	
Total	106		

Based on these results, the extent to which participants liked the board game overall was independent of their specific field of study and whether they were studying in a professional domain. However, participants' evaluations differed by area of training: students in healthcare, IT, and economics-related programs (grouped under the "other" category) rated the board game less favorably compared to those studying in the fields of humanities and arts or special needs education.

In the following section, we examine which aspects of the board game were most frequently mentioned in a positive light by the respondents. The question was open-ended, allowing participants to decide freely how to respond. Table 6 presents the number and percentage distribution of positive mentions related to specific elements of the game.

Table 6. Positive game elements favored by players.

Category	Number of Mentions	Percent (%)
Cooperation	50	31.06
Mechanics of the board game	29	18.01
Realism of the board game	23	14.28
Characters	21	13.04
Basic idea (to make a game for teachers)	13	8.08
Acquiring knowledge	11	6.83
Graphics	9	5.59
Humor	5	3.11
Total	161	100

The categories show what the respondents highlighted as positive in the game in their answer. A respondent could mention more than one category in their answer. Nearly one-third of the mentions referred to the cooperative nature of the board game (31.06%), and a substantial proportion of the responses also highlighted the core game mechanics (18.01%). To examine between-group differences in responses, we conducted a cross-tabulation

analysis using the chi-square test and also took adjusted residuals into account. A significant difference was found only in the comparison between professionals and non-professionals. Among the respondents classified as professionals, 26.3% gave positive feedback regarding the realism of the board game, whereas only 7.7% of the non-professionals did so ($p = 0.046$).

An open-ended question also asked which specific cards or game mechanisms the players liked the most. The results related to this question are presented in Table 7.

Table 7. Cards and mechanisms favored by players.

	Category	Number of Mentions
Types of cards	Parent cards	22
	Characters	16
	Principal	6
	Quiz cards	6
	"Positive" parent cards	5
	"Negative" parent cards	3
	Action cards	2
	Situation cards	1
	School staff	1
	"Shadow" parents	1
	Class teacher cards	1
Mechanics of the board game	Strategic discussions	6
	Influencing mechanism of parent cards	4
	Drawing a new parent card	3
	Real examples	2
	The effect of the parent cards	2
	Retention of parents per circle	1

In this case, significantly fewer participants commented on the game mechanics; however, 22 respondents identified the parent cards as their favorite, and the character-type cards also received a notable number of mentions (16). In this regard, no significant between-group differences were found based on the chi-square test.

We analyzed what participants learned during the board game session. The most frequently selected category was cooperation/collaboration, with 34.9% of respondents mentioning it. General knowledge (covering topics like public information, school, and science) was the second most frequent response (30.2%). Problem-solving was noted by 17% of respondents, suggesting that it is an important but somewhat less emphasized area compared to cooperation and general knowledge. Interestingly, acceptance/empathy was chosen by 2.8% of respondents. The responses also show that openness to parental communication was rated by 7.5%. Based on our cross-tabulation analysis, a significant difference emerged according to respondents' professional background (professional vs. non-professional). Of the references to cooperation/collaboration, 62.2% came from professionals and 37.8% from non-professionals. Among those who mentioned problem-solving, 94.4% were professionals, while only 5.6% were non-professionals ($p = 0.027$).

Finally, we analyzed what novelties the respondents highlighted in relation to the board game. The answers clustered around two main thematic dimensions (*answers related to the game* and *answers related to knowledge*), within which we identified further subcategories. Based on the results, a significant proportion of students referred to the board game as a whole as a novelty (18.9%). For these respondents, it was not merely individual game elements, the nature of the game, or its theme that were considered new, but rather the overall experience and impression of the game. Additionally, 10.4% of respondents emphasized that the game enriched their knowledge about the topic of parental involvement, while 9.4% found the game mechanics to be a novel and engaging experience. Based on the

chi-square test, there was no significant difference between groups. The frequencies and percentages of these mentions are presented in Table 8.

Table 8. Frequencies of perceived novelties offered by the board game based on participants' open-ended responses.

		Percent (%)	N
Answers related to the game	The whole game	18.9	20
	The mechanics of the game	9.4	10
	The realism of the game	7.5	8
	It is a game for teachers	6.6	7
	The cooperative nature of the game	4.7	5
Answers related to knowledge	Knowledge about parental involvement	10.4	11
	Mentioned knowledge acquisition in general	7.5	8
	Knowledge of educational science	6.6	7
	Knowledge of school, school system	6.6	7
	Suzuki method	3.8	4
	Other specific knowledge mentioned	4.7	5
It was nothing new		13.2	14
Total		100.0	106

7. Discussion

The purpose of this study is to outline the main stages and methodological principles involved in developing a board game and to examine how it facilitates students' reflections and understandings of parental involvement in education.

We first investigated the extent to which the game simulated real-life challenges in parent–teacher collaboration. Although various theoretical frameworks have been developed to conceptualize parental involvement, Epstein's model remains one of the most widely recognized and systematically applied in both research and educational practice. Its structured approach, categorizing involvement into six distinct but interconnected dimensions, offers a clear and comprehensive framework for designing learning materials and evaluating school–family collaboration efforts. Given its widespread acceptance and applicability across diverse educational contexts, Epstein's framework served as a practical and pedagogically robust foundation for the design of our board game. Importantly, its dimensional structure allowed us to create gameplay scenarios that reflect the multifaceted nature of family–school partnerships, covering a broad spectrum of real-life situations. While we acknowledge critiques of the model, particularly its perceived school-centric orientation, we intentionally incorporated diverse family perspectives and culturally responsive elements into the game design to ensure a more inclusive and critically reflective learning experience. In this way, Epstein's framework provided a clear conceptual backbone while also allowing for creative and critical expansion. This direct application ensures that teacher trainees do not merely learn about PI but actively practice the skills required for building and maintaining effective partnerships with families. While our board game is grounded in Epstein's six dimensions of parental involvement, its cooperative, scenario-based design specifically aims to foster students' reflective and critical engagement with a wide range of family–school situations. By simulating real-world dilemmas, the game invites participants to examine their own values, biases, and assumptions about families, thereby contributing to the reflective dimension of professional socialization (Goodall & Montgomery, 2013; Pushor, 2018). The inclusion of diverse parent profiles intentionally foregrounds issues of social, ethnic, and cultural diversity in family–school relations (Baquedano-López et al., 2013; Hornby & Blackwell, 2018; Pusztai et al., 2025; Reay, 2023). By interacting with

characters modeled on real-life family backgrounds, participants were challenged to adapt their communication strategies in context-sensitive ways and to develop skills that support parental agency (Jeynes, 2018; Kim, 2022; Pushor, 2018). This approach aligns with the principles of culturally responsive pedagogy, which emphasize affirming diverse family experiences, and recognizing parents' agency and the value of integrating their cultural knowledge into educational practices (Cholewa et al., 2014; Pusztai et al., 2024b).

Results from post-game questionnaires indicated that the game successfully provided an interactive and reflective environment. Also consistent with the extant literature, both cooperative learning and game-based pedagogy have been shown to enhance engagement and foster collaboration among learners (Cosimini & Collins, 2023).

Our findings support the hypothesis that the board game encourages participants to reflect on the complexity of PI and articulate more nuanced understandings of its practice in everyday school settings. This study highlights how gameplay provides a safe, collaborative space where students can engage with varied scenarios, parental profiles, and school–family dynamics. The responses suggest that participants identified both the challenges and possibilities inherent in family–school cooperation, and were able to connect theoretical concepts to realistic educational situations. Through shared decision-making and strategic discussions, the game prompted players to explore diverse perspectives. In this way, the board game served as a reflective and dialogic learning tool that surfaced understandings of PI. In addition, we examined the role of different player roles in shaping the learning experience.

Our second research question explored how participants perceive the educational value and applicability of the game in real-world teaching contexts. The related hypothesis assumed that participants will perceive the cooperative and scenario-based nature of the board game as beneficial for addressing challenges related to school–family partnerships

The structured role-playing and simulated decision-making processes provided opportunities to experiment with strategies. Participants also highlighted the engaging nature of the game, with elements of humor and storytelling making the learning process more enjoyable and memorable. Most notably, students emphasized the value of teamwork, joint decision-making, and peer discussion during gameplay. These collaborative elements were repeatedly identified as key positive aspects in the open-ended responses. The engaging nature of the board game appeared to support a learning environment where participants could experiment with possible school–family interaction strategies, test different roles, and reflect on consequences in a safe and interactive context. Although the focus was not on direct skill development, the findings suggest that scenario-based and cooperative game formats can enhance students' and teacher trainees' awareness of the interpersonal and contextual complexities of PI. However, future research should explore longitudinal effects, assessing whether knowledge and attitudes gained through gameplay translate into sustained improvements in real-world teaching practice.

The data suggests that the interactive nature of the game fosters collaboration and encourages reflective thinking, allowing participants to explore different parental perspectives and problem-solving strategies. Overall, the findings indicate that board games can support students, especially teacher trainees, in developing a deeper understanding of the complexities of PI in education.

8. Conclusions

While board games have been studied in educational contexts, their application in teacher education, particularly in preparing educators for family-school collaboration, remains relatively unexplored. Through this approach, this study provides an interactive tool where teacher trainees and practicing educators can develop their knowledge about PI.

This research addresses a critical gap in teacher education: preparing future and current educators to navigate the complexities of school–family collaboration. By simulating real-world challenges, the game enables participants to engage in meaningful discussions about communication strategies, conflict resolution, and community involvement—areas often overlooked in traditional teacher education programs.

One limitation of this research is that the study focused primarily on short-term learning outcomes. Future studies should explore whether the knowledge and attitudes gained through gameplay result in long-term changes in teacher practice. Additionally, while the sample included a mix of students, further research could examine how different levels of teaching experience impact engagement with and benefits from the game. Moreover, while Epstein's framework provides a useful structure for categorizing school–family interactions, reliance on this model may constrain more critical or culturally responsive interpretations. The final limitation is that some elements of the game risk reinforcing deficit perspectives of parents. To counterbalance this, it is essential that facilitators or educators lead a reflective, professionally grounded debriefing after gameplay. Such discussions should explicitly address stereotypes, explore alternative interpretations of parental behavior, and encourage critical thinking. For example, participants can also analyze and reflect on those cards that were not drawn during the game, using them as prompts to broaden the discourse and consider more diverse perspectives on PI.

Based on these results, it could be recommended that game-based learning approaches be integrated into teacher education curricula, particularly in courses focusing on school–family partnerships and communication skills. Given the flexibility of the K.Ö.SZ.I. board game, it could also be adapted for use in professional development programs for practicing teachers, school leaders, and educational policymakers.

The game's design allows replayability and customization, making it a versatile tool for various educational contexts. For example, the incorporation of "good practice" and "quiz" cards introduces international and research-based insights, further enhancing its pedagogical value.

Moreover, the use of QR codes linking to detailed resources supports self-directed learning beyond the game. In Hungary, research and practices around parental involvement in education are less developed compared to other regions, and this study contributes significantly to the local and regional discourse by providing a culturally sensitive tool that addresses specific educational challenges.

Although the board game was initially designed for small-group interaction (4–7 players per board), we have successfully implemented it in larger classes of teacher trainees through the use of multiple simultaneous playgroups and rotational facilitation. In practice, the classroom is divided into smaller teams, each with their own game set, allowing parallel gameplay. One or two instructors (or peer facilitators) circulate among groups to support understanding and promote reflective discussion. To involve the whole class, we include joint debriefing sessions where students share experiences and insights, helping them connect the game to broader themes of PI. In large classes, the game can be adapted into a station-based format, allowing students to rotate between tasks or take on observer roles. These formats encourage peer learning, critical reflection, and collaborative problem-solving, skills essential for building strong school–family partnerships.

This study also showed that board games can bridge the gap between theory and practice in teacher education. By aligning gameplay scenarios with Epstein's six dimensions of PI, the game translates abstract theoretical concepts into tangible, experiential learning opportunities. In conclusion, the findings of this study highlight the potential of board games as a valuable pedagogical tool in teacher education. As active and experiential learning methods continue to gain importance in higher education, the integration of

educational board games could play a crucial role in preparing teachers for the realities of family–school collaboration, ultimately contributing to more effective educational practices.

Author Contributions: Conceptualization, Z.K., Z.C., D.B. and G.P.; methodology, Z.K. and Z.C.; formal analysis, Z.C.; writing—original draft preparation, Z.K. and D.B.; writing—review and editing, Z.K. and G.P.; supervision, G.P.; project administration, Z.K. and G.P.; funding acquisition, G.P. All authors have read and agreed to the published version of the manuscript.

Funding: The research on which this paper is based has been implemented by the MTA-DE-Parent–Teacher Cooperation Research Group and with the support provided by the Research Program for Public Education Development of the Hungarian Academy of Sciences.

Institutional Review Board Statement: This research was conducted in accordance with the Declaration of Helsinki, and approved by the Ethical Committee of the University of Debrecen (1/2022, 10 March 2022).

Informed Consent Statement: Informed consent was obtained from all subjects involved in this study.

Data Availability Statement: Data will be made available upon request from the corresponding author.

Acknowledgments: This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences and the EKÖP-24-2 University Research Scholarship Program of the Ministry for Culture and Innovation from the source of the National Research, Development and Innovation Fund.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Figure A1. A school professional character (high school math teacher). This character is an ageing, yet respected teacher who has experienced a lot in his long career. He is respected for his great knowledge and fairness. However, he is at a loss to understand the problems of the modern school and does not know the latest and most effective solutions. The following text appears on the character cards in Hungarian. For clarity, here is the English translation of the text directly visible on the cards: Charles Chair, high school mathematics teacher. Communication: 3, connectivity: 3, expertise: 4, and innovation: 1.

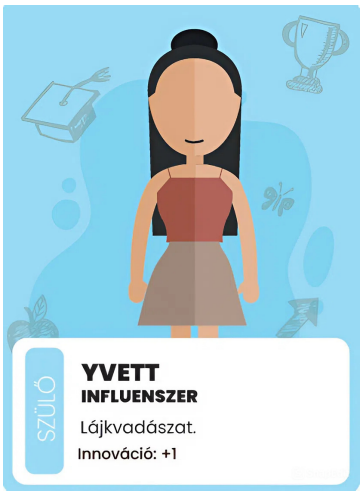

Figure A2. A parent card (influencer mom). She is Yvett, the influencer. Her greatest strength is hunting for likes. She increases the school character's innovation skill by +1. The following text appears on the character cards in Hungarian. For clarity, here is the English translation of the text directly visible on the cards: Yvette, influencer. Special trait: Like hunting. Innovation: +1.

Note

[1] https://www.szociopoly.hu/j%C3%A1t%C3%A9k (accessed on 30 July 2025).

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