Changes in the Social Characteristics of General Classroom Communities Including Children with Mild Intellectual Disability in Three Years

Endre Horváth[1], Ágota Szekeres[2]

[1] Doctoral School of Education, ELTE Eötvös Loránd University, Budapest, Hungary
[2] Special Education Institute of Atypical Behaviour and Cognition, Barczi Gusztav Faculty of Special Needs Education, ELTE Eötvös Loránd University, Budapest, Hungary

HOW TO CITE:
Horváth, E., & Szekeres, Á. (2023). Changes in the Social Characteristics of General Classroom Communities Including Children with Mild Intellectual Disability in Three Years. *International Journal of Special Education, 38*(2), 176-187.

CORRESPONDING AUTHOR:
Endre Horváth;
horvath.endre@barczi.elte.hu

DOI:
https://doi.org/10.52291/ijse.2023.38.32

ABSTRACT:

This study aimed to follow Hungarian general primary school classroom communities (N = 12) that included children with mild intellectual disability (MID) (N = 20) over a three-year period to describe changes in the most important social characteristics of communities regarding group cohesion and see how communities develop on their own without planned support. A total of 291 students participated in the research. A peer nomination survey was conducted in each class in grades 4 and 5, and then three years later. The quantitative analysis revealed no significant difference in the values of the measured sociometric indicators after three years. Furthermore, a linear direction in the evolution of the indicators, which would contribute to the implicit development of a community alongside increased time spent together, could not be identified. This condition did not favor students with MID, as they had significantly fewer mutual choices than their peers. The results of this study emphasize the need for professionally designed community development to create and maintain an inclusive classroom community.

Keywords: mild intellectual disability, general classroom, social characteristics, peer nomination

INTRODUCTION

More and more educational studies focus on examining relationships and social participation at school concerning academic progress or social-emotional well-being (Cole et al., 2021; Krämer et al., 2021) . In Hungary, the proportion of students with special educational needs (SEN) participating in general classrooms constantly increases. In the school year of 2004/2005, nearly 42% of students with SEN studied in general education classes; this ratio represents 68% of the participants in the school year of 2014/2015 (HCSO, 2015). Approximately 71% of students with SEN study together with their peers in general classrooms (HCSO, 2019). These facts draw attention to the factors that contribute to successful inclusion.

The number of studies that seek to identify the factors of successful inclusion is also constantly growing. Important factors are the ability of the majority group members to accept and accommodate (Fischer, 2009; McCoy & Banks, 2012), the commitment of the leaders and teaching staff (Ben-Yehuda et al., 2010; Roberts & Simpson, 2016), the attitude of teachers towards inclusion (Ben-Yehuda et al., 2010; Cornoldi et al., 2018; Lindner et al., 2023), the attitude of teachers towards students with SEN (Schwab & Alnahdi, 2023), training for regular teachers on evidence-based practices (Al-Ali & Gaber, 2023), the attitude of parents (de Boer et al., 2010), students' attitudes towards their peers with SEN (de Boer et al., 2012; Di Maggio et al., 2022; Freer, 2021), the personality and social skills of students with SEN in inclusive settings (Bless, 1995; Daley & McCarthy, 2020), the performance of students with SEN (De Bruin, 2020; Rafferty et al., 2003; Schwab et al., 2015), and a meta-analysis on the topic (Van Mieghem et al., 2020). In Hungarian general education schools, there is increasing attention to examining the performance of children and young people with SEN (Józsa et al., 2014; Szenczi et al., 2017). Additionally, it is essential to consider how students develop their relationships within the community, their sense of belonging (Dopplinger, 2014), and how well the community can meet their social and emotional needs (Koster et al., 2009). The extent of socio-emotional inclusion is usually measured utilizing some form of sociometry, like multi-aspect sociometry (Mérei, 1996), peer nomination (e.g., Kulawiak & Wilbert, 2020; Monjas et al., 2014; Vuran, 2005), or peer rating (e.g., Baydık & Bakkaloglu, 2009). In Hungary, data is available regarding the social inclusion of students with hearing impairment (Perlusz, 1995), attention deficit hyperactivity disorder (ADHD) (Benyák, 2006), autism spectrum disorder (ASD) (Méhes & Győriné Stefanik, 2017), and mild intellectual disabilities (MID) (Szekeres, 2014).

In general education schools, students with MID often receive fewer positive sociometric nominations than their peers (Szekeres, 2014). Szekeres and Horváth (2014a) also found that these students are aware of their challenges in social participation. However, students with MID spend the entire school day with their typically developing peers and receive significantly more positive sociometric nominations than when they are only together in certain activities (Szekeres, 2012). A meta-analysis conducted by Ochoa & Olivarez (1995) indicated that pupils with learning disabilities (LD) have lower sociometric status when compared to their typically developing peers. Szekeres & Horváth (2014b) examined the impact of the number of students with MID in a general education community. The data revealed that if more children with MID are in a class, the number of negative sociometric nominations is distributed among these students. Szekeres & Horváth (2015b) further found that 60% of children with MID connect to at least one of their peers in a general education community; however, in these classes, the role of the "rejected student" is commonly dedicated to the student with MID. Students with MID often have relationships, yet others perceive them as students who are still looking for friends or do not feel well in the community.

Students with MID are more likely to obtain relationships in a cliquish class than by linking to a central role block (Kiss & Szekeres, 2016), and they are more likely to seek friendship among typically developing students than with each other (Kiss & Szekeres, 2016; Reed et al., 2011). From this, it is evident that students with MID require more excellent pedagogical support to develop their relationships (Pavri, 2004; Pavri & Hegwer-DiVita, 2006; Schneider, 2016). Additionally, enhancing their social skills may impact their overall performance long-term (Caemmerer & Keith, 2015; Hajovsky et al., 2021).

In general education classes, teachers have significant roles in shaping inclusive communities. They must possess values that help achieve the goals of inclusive education. For this, they need competencies that help each student's optimal learning outcomes and social-emotional development (Engelbrecht, 2013; Gottfried et al., 2019; Klehm, 2014; EADSNE, 2012). Thus, the formation of a class as a community, the recognition of marginalized children, and the achievement of real inclusion all play essential roles.

As Kiuru et al. (2015) describe positive teachers' influence on peer acceptance. A warm and supportive teacher

can enhance student acceptance, which, in turn, can positively contribute to learning outcomes. When a teacher demonstrates a clear liking for a student, he or she sets an example for other students to follow (Hendrickx et al., 2017), and teachers often unconsciously affect their students' perceptions (Dopplinger, 2014).

Horváth et al. (2016) have already summarized the main sociometric characteristics of elementary school classes (n = 86) that integrate students with MID. They specified the mean zones of the following indices: reciprocity index (77-96%), density index (0.9-1.2), cohesion index (7-18%), mutual choice index (42-58%), significance index (33-51%), dominance index (0.17-4.27), and exclusion index (0.61-1.73).

By reviewing the results of the follow-up studies related to peer relations, it becomes clear that researchers have different conclusions depending on the methodology and the questions examined:

- The social status of students with SEN within the community does not change (Bear et al., 1993; Estell et al., 2008, 2009; Kemp & Carter, 2002; Kuhne & Wiener, 2000; Mrug et al., 2012).
- The social status of students with SEN in the community has somewhat improved (Frederickson & Furnham, 2001).
- The social status of students with SEN within the community is not improving (Hall & McGregor, 2000; Schwab, 2019; Voyer et al., 2017).

There is a lack of research in Hungary that specifically examines how the status of the community and the inclusion of students with SEN change over time. Knowing how peer relationships develop within a classroom community is essential because, as we have shown above, they can impact academic performance. Teachers in Hungary must report on specific competencies every few years, including community development and support for students with SEN (Antalné et al., 2019). Exploring changes in the social structure of class communities can help teachers see the focus of community development more accurately, thus setting more precise goals and developing their competencies.

Purpose of the study

This study aimed to longitudinally follow general primary school classroom communities that included children with MID over three years. The objective was to describe changes in these communities' most important social characteristics, explicitly focusing on group cohesion, and observe how these communities develop independently without planned support. This is an important area of research as it can provide insights into the effectiveness of inclusive education and the factors contributing to the successful inclusion of students with mild intellectual disability (MID) in general classrooms. Understanding the social dynamics within these communities can help inform strategies for community development and support for students with MID, ultimately creating more inclusive classroom environments.

METHOD

Participants

A total of 291 children in 12 primary school classes participated in this study: children with mild intellectual disability of unknown etiology (N = 20) and their classroom peers (N = 271) (see Table 1). The primary schools were randomly selected from the Hungarian Education Office database. The sample was evenly distributed regarding gender, but representative sampling was not the goal. The selection criteria for participation were as follows:

- At least one child with MID studied in the class. Participant selection was primarily based on existing diagnoses (ICD F70) by an Expert Panel.
- In the selected primary schools, children with MID spend 95% of their day engaged in activities alongside their typically developing peers.
- Teachers did not carry out any professional community development in the class. In a screening process, class teachers were asked about the regular usage of any sociometric instruments to assess the social structure of their classes and the use of any deliberate procedures to develop the classroom community.

A peer nomination survey was conducted in the selected 12 classes on two occasions. Still, the final sample of this study included only those classes where at least one of the children with MID remained a member of the class over the three years. The composition of typically developing students within the class could have changed over time. After three years, the average number of students in a class (class size) could have decreased due to the special features of the Hungarian educational system (table 1).

Measures

The sociometric data collection supported by the SMETRY system is based on Mérei's multi-aspect sociometry, which allows the characterization of the communities as social psychological units (Horváth & Szekeres, 2017). This method describes the location of individuals in the

Table 1. **Distribution of the sample**

	Classes			**Participants**			
	Grade	N	Average class size	Boys	Girls	Students with MID	∑
Data collection 1	4 (ages 10-11)	8	19	63	70	14	133
	5 (ages 11-12)	4	19	48	46	5	94
	∑	12		111	116	19	227
Data collection 2	7 (ages 13-14)	8	17	64	63	12	127
	8 (ages 14-15)	4	17	35	33	4	68
	∑	12		99	96	16	195
Participated in both data collection						15	131
∑ Total number of students						**20**	**291**

social field and reveals social patterns in various aspects. It can help to understand the processes in the community, show the flow of information, the hierarchy, and the roles of the social field, and give pedagogical and organizational references for community development. Contrary to other peer nomination methods, it works with more general questions that are more likely to trigger stereotypes filtered out from personal experience and less likely to trigger unusual choices reflecting momentary mood (Mérei, 1971/1996, as quoted in Horváth et al., 2016). In this way, a more stable picture of the examined community can be drawn, which can be compared with data gained far away in time, and the change between the two states can be seen so that the method can be applied in cross-sectional and longitudinal studies (Horváth & Szekeres, 2017).

A self-developed peer nomination instrument was used, which consisted of 28 items, including questions concerning sympathy, popularity, community functions, individual abilities, and the difficulty of social inclusion. The questionnaire did not include questions concerning peers' dislikes. The questions concerning sympathy (such as, who would you invite to your birthday party?) are designed to examine mutual relationships between students. We speak of a mutual choice when two people choose each other on the same question concerning sympathy.

Sociometric indices describe communities in many aspects, such as cohesion, hierarchical structure, and role-oriented group structure. This study deals with the following sociometric indicators: reciprocity index, density index, cohesion index, mutual choice index, significance index, dominance index, exclusion index, role index, and choice repertoire index (Horváth et al., 2016). By examining these indicators, we can get a comprehensive picture of the class community's social structure and the strength of cohesion. By repeating the examination, we can determine any changes in these characteristics. A closer look at these indices can help teachers understand what they should focus on in community development.

The reciprocity index shows how many people in the social field have relationships. If the index is 100%, there are no loners in the community; everyone has at least one relationship. A mature community has a high 100% index (Szekeres & Horváth, 2014a). The density index shows the average number of reciprocated ties between individuals. In a mature, stable community, this index is above 1. An indicator below the average indicates that the social structure is loose, and its network of relationships is uncertain (Szekeres & Horváth, 2014a). The cohesion index gives information about the ratio of potential and completed relationships within a community. The high cohesion index may indicate that the group has a high cohesive force and can be quickly mobilized as a whole. The mutual choice index shows what percent of ties directed to individual people are reciprocated in sympathy questions. A high indicator refers to the stability of relationships; a lower value than the average range refers to the indecision of relationships (Szekeres & Horváth, 2014a).

Sociometric significance refers to the group's hierarchical structure, while the role is related to differentiation, i.e., the discrepancy between status in the social field and individual characteristics. Individuals are significant in the social area if others frequently choose them along various sociometric dimensions. These group members are substantial because they are often on their peers' minds (Szekeres & Horváth, 2014a).

The role relates to multi-aspect sociometry, as this process differentiates relationships qualitatively. It can also point out attributes in which social expectations are more important than sympathy or antipathy. The choice repertoire index refers to the number of group members considered during nominations. This indicator helps to interpret the meaning of significance and role (Szekeres & Horváth, 2014a).

The current study compares the values of the above indicators measured at two points in time. This comparison gives us a comprehensive picture of whether there has been a significant change in the social structure of communities, in-group cohesion, and whether progress can be detected.

Procedures

The paper-and-pencil questionnaires were administered to groups of students during a lesson. The students were asked to nominate three of their peers for each question. After three years, a new survey took place using the same sociometric questionnaire. Data processing was carried out with the SMETRY sociometric software (Horváth & Szekeres, 2017).

Analysis

Sociometric indices were calculated with the SMETRY software (Horváth & Szekeres, 2017). Due to the nature of the variables, non-parametric tests, including the paired-sample Wilcoxon test (V), the one-sample Sign test (S), and the paired-samples Sign test (Sp), were used to identify differences between the number of mutual choices in questions concerning sympathy and the changes in sociometric indices and class size. For these statistical analyses, R Studio (v2023.03.0+386) software was used.

RESULTS

Class size

The class size was significantly lower after three years (Mdn = 16.5) than during the first data collection (Mdn = 20), V = 65.5, p = .040, r = 0.29. Figure 1 displays the corresponding data and illustrates the reduction in class size (see fig. 1).

In a previous study, Horváth et al. (2016) described the average zones of the examined indices based on a sample of 45 general education classes that included students with MID. In the case of the first and second data collections in this study, the values of the analyzed indices do not exceed the upper limit of the average zone

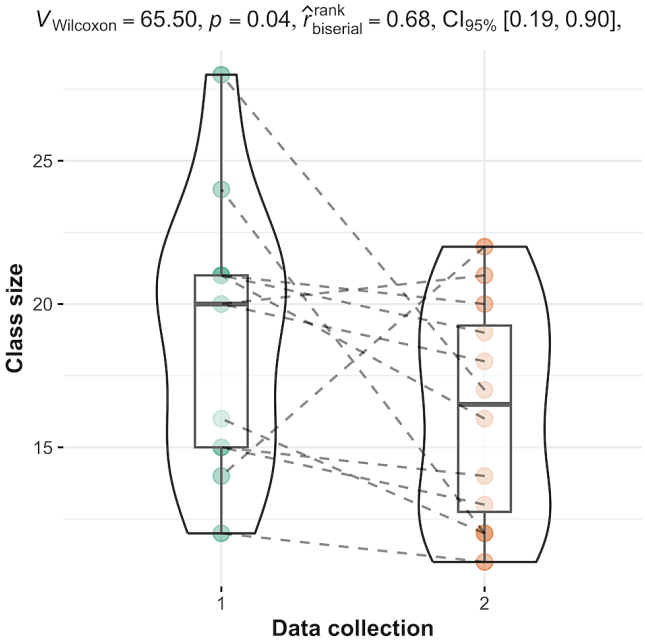

Fig. 1. Change in class size between the first and second data collections.

(density index, cohesion index) or remain close to it. This means we can only talk about average cohesion in the examined classes. The values of the choice repertoire index are also average, which means that the members of the communities were in the students' minds during the data collection, and no one was left out during the nominations. Notably, only one class had a reciprocity index value of 100 for both the first and second data collections, which means that every student had a relationship with at least one other student in the community. This is one of the expected conditions for the characteristics of an ideal class community in terms of social participation.

Indices

No significant differences were found in the values of the examined indicators after three years, except in the cohesion index (see Table 2).

Individual results

In the present study, the mutual choices made by the members of the class communities on sympathy issues were also analyzed. A paired samples Sign test was conducted to determine the change in the number of mutual choices for the entire sample (N = 131). The results indicate an insignificant change, Sp = 17, p = 0.063. This suggests that the decrease in class size did not result in a community-level reduction in the number of mutual choices that affected everyone. This is also shown in the case of the examined cohesion indices.

Table 2 **Results of the discrepancy between the examined parameters using the Wilcoxon S-R test (V) and the Sign test (S) in the case of the exclusion index**

Indices	Data collection 1		Data collection 2		Test results
reciprocity index	Mdn = 85.35	Min = 46.67, Max = 100	Mdn = 89.12	Min = 54.55, Max = 100	V = 28, p = .423
density index	Mdn = 0.93	Min = 0.42, Max = 1.33	Mdn = 1.03	Min = 0.54, Max = 1.20	V = 39, p = 1
cohesion index	Mdn = 10.48	Min = 7.58, Max = 18.10	Mdn = 12.68	Min = 8.97, Max = 21.21	**V = 12, p = .034*, r = -0.341**
mutual choice index	Mdn = 46.62	Min = 24.39, Max = 60.32	Mdn = 48.78	Min = 29.17, Max = 60.87	V = 30, p = .518
significance index	Mdn = 42.26	Min = 28.57, Max = 46.67	Mdn = 40.45	Min = 25.00, Max = 63.64	V = 40, p = .969
dominance index	Mdn = 1.63	Min = 0.67, Max = 7.00	Mdn = 1.33	Min = 0, Max = 5.00	V =52, p = .339
exclusion index	Mdn = 1.12	Min = 0.40, Max = 2.50	Mdn = 1.00	Min = 0.8, Max = 2.00	Sp = 6, p = .753
role index	Mdn = 57.73	Min = 46.67, Max = 71.43	Mdn = 57.29	Min = 35.29, Max = 78.95	V = 50, p = .423
choice repertoire index	Mdn = 77.06	Min = 69.26, Max = 87.07	Mdn = 74.94	Min = 68.52, Max = 87.50	V = 47, p = .569

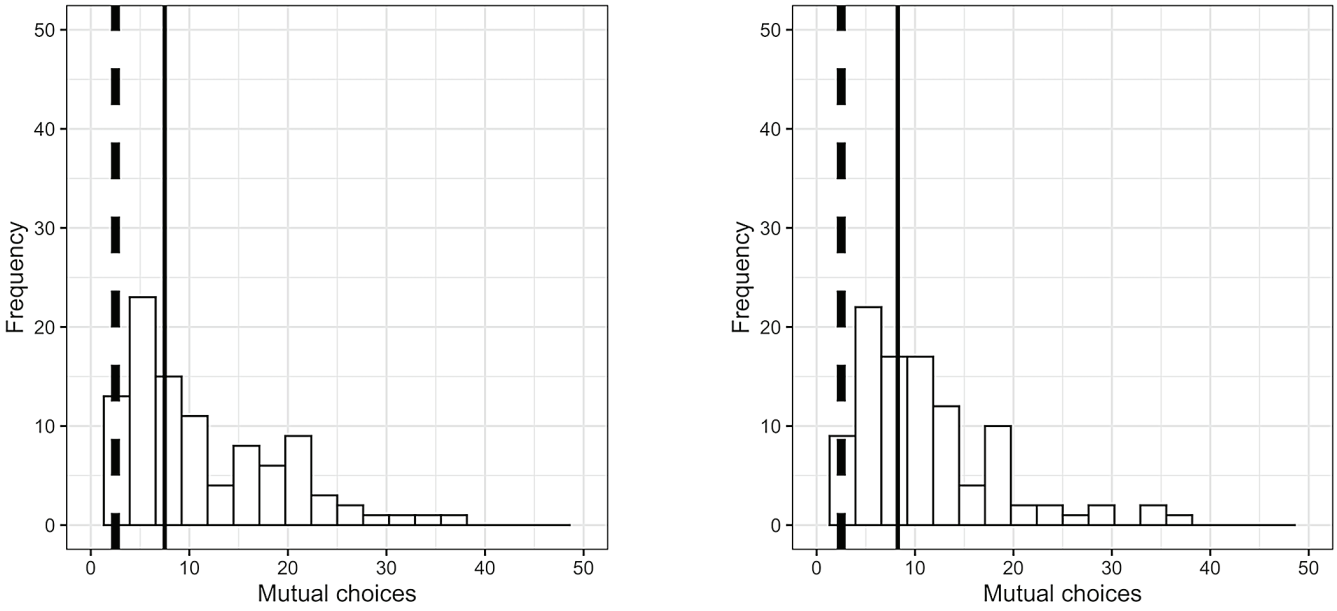

Fig. 1. Distribution of mutual choices during the first data collection (left) and the second data collection (right)

Note. The median of the choices of MID students is marked with a dashed line, and the median of their non-MID peers' choices is marked with a solid line.

One sample Sign test was conducted to evaluate if there was a difference between the number of mutual choices between students with MID and their typically developing peers. At the first data collection, students with MID (N=15) had significantly fewer mutual choices compared to their typically developing peers (N=116), Mdn_{MID}=2.50, $Mdn_{NON\text{-}MID}$=7.50, S=93, p<0.01, r= 0.741. Three years later, the difference was similar in the second data collection, Mdn_{MID}=3.44, $Mdn_{NON\text{-}MID}$ = 8.24, S=94, p<0.01, r=0.695 (see fig. 2). In the case of MID students (N=15), no significant change can be detected in the number of mutual choices between the first and

second data collection, Sp=6, p=0.753, nor the case of their typically developing classroom peers (N=116), Sp=60, p=0.709.

DISCUSSION

The indices examined mainly characterize the cohesion of a classroom community, how its members are included in public opinion, and in what proportion they have a role or significance (Horváth et al., 2016). The development of the communities can also be deduced from the values of the indicators.

In the case of the examined classroom communities, the group cohesion was general or below general during the first data collection, and the class size decreased for the second data collection. No significant difference can be found in the values of the examined indices over the three years. There is no tendency for growth or decrease. This suggests that a linear direction cannot be outlined in the evolution of the examined variables. Additionally, the increase in time spent together does not lead to the implicit development of the community without professional pedagogical support. This condition did not favor students with MID, as they had significantly fewer mutual choices than their peers. These results draw attention to the need for professionally designed community development, mainly in those general education school communities where group cohesion is average or weak. In a previous study, Herbainé Szekeres & Szekeres (2016) indicated that students with MID are unable or hardly integrated into poorly developed classroom communities (with low sociometric indicators) compared to classroom communities with a favorable atmosphere.

Data-based decision-making is the basis of planned community development (Filderman et al., 2019; Horváth et al., 2021), so it is essential to collect sociometric (peer nomination) data from the communities regularly.

The strength of this study is that it follows up on general primary school classes, including children with MID, over a susceptible three-year period. It draws attention to the need for professional community development. However, there were some limitations to consider. The relatively small sample restricts the possibility of conducting further and more detailed analyses. Our results, such as the decrease in class size or the unfavorable social situation of students with MID, may have been influenced by the peculiarities of the Hungarian public education system. Due to the small sample, it was impossible to control how many children with MID learned in the classes. Previous studies have had different results on the role of the number of children with special educational needs in general classrooms (Hallahan et al., 2020; Park et al., 2014). It would have been important to find out if there are differences between these classes based on the number of children with MID.

CONCLUSION

The results of this study can contribute to more effective pedagogical work by drawing attention to the importance of planned community development. The results demonstrate that mere time spent together does not improve group cohesion, and students with MID need support in terms of community participation. These findings suggest that the number of mutual choices remained relatively stable for both MID students and their typically developing peers over the three years. The lack of significant change in mutual choices may indicate consistent social interaction and preference among the participants. Early initiation of development is critical. In Hungarian education, the early years are a sensitive period for forming class communities. In this period, students often get new head teachers, and class compositions change due to the unique features of any elementary educational system. In a previous study, Szekeres & Horváth (2015a) suggested that if a student with MID did not or was loosely connected to someone in the general education community, he or she became lonely when the community structure became disrupted.

Our findings draw attention to the need for teachers to pay special attention to community development, including strengthening group cohesion, to form an inclusive class community for students with MID and all students. Creating a strong sense of community within the classroom can help mitigate feelings of loneliness and isolation among students with MID and promote a positive learning environment for all students. Teachers should actively foster connections and relationships among students, encouraging collaboration and empathy to ensure no student feels left out or disconnected.

The social experience acquired in general classroom communities is essential not only for children with disabilities but also for typically developing students as well (Carter et al., 2013; Lindner et al., 2023; Woodgate et al., 2020). The social acceptance of students with SEN is lower than that of their typically developing peers; however, they show more negative and less positive social interactions (Schwab et al., 2014). For these reasons, it would be important to teach social skills to children with SEN (Jacob et al., 2022; Kavale & Forness, 1996), which

might help develop and maintain their relationships. The development of group dynamics may reduce the proportion of marginalized students (Doveston & Keenaghan, 2006). Already, preschool interventions show that preschool children with SEN received more positive peer sociometric nominations in post-tests and fewer negative peer sociometric nominations (Ginevra et al., 2020).

Creating and maintaining friendly relationships is vital for every child. They can exercise such social skills, which can play an important role in their relationships as adults or even in their employment (Brooke et al., 2009; Lusk & Cook, 2009). Students with SEN can later, as disabled employees, use this experience to integrate into society successfully. Teachers must support social participation in the classroom. As seen in this study, the problems that may arise in the cohesion of the class communities are not solved by themselves just because of the time spent together. Data-based decision-making can help to plan community development based on objective data and follow the changes in the social characteristics of a classroom community (Horváth et al., 2021).

ACKNOWLEDGEMENT

None

DECLARATION OF INTEREST STATEMENT

The author reported no potential conflict of interest.

FUNDING

This publication/research has been supported by the National Research, Development, and Innovation Office on behalf of the Prime Minister's Office – National Authority – through the project RRF-2.3.1-21-2022-00013, titled "National Laboratory for Social Innovation"

REFERENCES

Al-Ali, O. A., & Gaber, S. A. (2023). Improving Teachers' Attitudes Toward the Teaching of Intellectually Disabled Students through Training in Evidence-Based Practices. *International Journal of Learning, Teaching and Educational Research*, *22*(9), 332–346. https://doi.org/10.26803/ijlter.22.9.18

Antalné, Sz. Á., Hámori, V., Kimmel, M., Kotschy, B., Móri, Á., Szőke-Milinte, E., & Wölfling, Zs. (2019). *Útmutató a pedagógusok minősítési rendszeréhez. Az emberi erőforrások minisztere által 2013. November 19.-én elfogadott általános tájékoztató anyag* (Hatodik, módosított változat) [Guidelines for the qualification system of teachers. General information document adopted by the Minister of Human Resources on 19 November 2013]. Budapest: Oktatási Hivatal.

Baydık, B., & Bakkaloglu, H. (2009). Predictors of sociometric status for low socioeconomic status elementary mainstreamed students with and without special needs. *Educational Sciences in Teory and Practice*, 9, 401–447.

Bear, G. G., Juvonen, J., & McInerney, F. (1993). Self-Perceptions and Peer Relations of Boys with and Boys without Learning Disabilities in an Integrated Setting: A Longitudinal Study. *Learning Disability Quarterly*, 16(2), 127–136. https://doi.org/10.2307/1511135

Benyák, A. (2006). Alsó tagozatos hiperaktív gyermekek szociális pozíciója az osztályban [Social position of children with ADHD in primary school]. *Alkalmazott Pszichológia*, *8*(4), 5–21.

Ben-Yehuda, S., Leyser, Y., & Last, U. (2010). Teacher educational beliefs and sociometric status of special educational needs (SEN) students in inclusive classrooms. *International Journal of Inclusive Education*, 14(1), 17–34. https://doi.org/10.1080/13603110802327339

Bless, G. (1995). A tanulásban mentálisan akadályozottak integrációja—– A szociális, emocionális és értelmi fejlődéssel kapcsolatos hatékonyságkutatás eredményei [Integration of children with learning disabilities – results of efficiency regarding to social, emotional and cognitive development]. In: Y. Csányi (Ed.), *Együttnevelés – Speciális igényű tanulók az iskolában* (pp. 132–142). Iskolafejlesztési Alapítvány, OKI Iskolafejlesztési Központ.

Brooke, V. A., Revell, G., & Wehman, P. (2009). Quality Indicators for Competitive Employment Outcomes: What Special Education Teachers Need to Know in Transition Planning. *TEACHING Exceptional Children*, 41(4), 58–66. https://doi.org/10.1177/004005990904100406

Caemmerer, J. M., & Keith, T. Z. (2015). Longitudinal, reciprocal effects of social skills and achievement from kindergarten to eighth grade. *Journal of School Psychology*, 53(4), 265–281. https://doi.org/10.1016/j.jsp.2015.05.001

Carter, E. W., Asmus, J., & Moss, Colleen, K. (2013). Fostering Friendships: Supporting Relationships among Youth with and without Developmental Disabilities. *Prevention Researcher*, 20(2), 14–17.

Cole, S. M., Murphy, H. R., Frisby, M. B., Grossi, T. A., & Bolte, H. R. (2021). The Relationship of Special Education Placement and Student Academic Outcomes. *The Journal of Special Education*, 54(4), 217–227. https://doi.org/10.1177/0022466920925033

Cornoldi, C., Capodieci, A., Colomer Diago, C., Miranda, A., & Shepherd, K. G. (2018). Attitudes of Primary School Teachers in Three Western Countries Toward Learning Disabilities. *Journal of Learning Disabilities*, 51(1), 43–54. https://doi.org/10.1177/0022219416678408

Daley, S. G., & McCarthy, M. F. (2020). Students With Disabilities in Social and Emotional Learning Interventions: A Systematic Review. *Remedial and Special Education*, 074193252096491. https://doi.org/10.1177/0741932520964917

de Boer, A., Pijl, S. J., & Minnaert, A. (2010). Attitudes of parents towards inclusive education: A review of the literature. *European Journal of Special Needs Education*, 25(2), 165–181. https://doi.org/10.1080/08856251003658694

de Boer, A., Pijl, S. J., & Minnaert, A. (2012). Students' Attitudes towards Peers with Disabilities: A review of the literature. *International Journal of Disability, Development and Education*, 59(4), 379–392. https://doi.org/10.1080/1034912X.2012.723944

De Bruin, K. (2020). Does inclusion work? In: L. J. Graham (Ed.), *Inclusive Education for the 21st Century* (1st ed., pp. 55–76). Crows Nest, NSW: Allen & Unwin.

Di Maggio, I., Ginevra, M. C., Santilli, S., & Nota, L. (2022). Elementary school students' attitudes towards peers with disabilities: The role of personal and contextual factors. *Journal of Intellectual & Developmental Disability*, 47(1), 3–11. https://doi.org/10.3109/13668250.2021.1920091

Dopplinger, U. (2014). How Schoolchildren Choose Their Friends, How Teachers Think about These Relationships and What Influence They Have. *Universal Journal of Educational Research*, 2(6), 480–486.

Doveston, M., & Keenaghan, M. (2006). Growing talent for inclusion: Using an appreciative inquiry approach to investigating classroom dynamics. *Journal of Research in Special Educational Needs*, 6(3), 153–165. https://doi.org/10.1111/j.1471-3802.2006.00073.x

Engelbrecht, P. (2013). Teacher education for inclusion, international perspectives. *European Journal of Special Needs Education*, 28(2), 115–118. https://doi.org/10.1080/08856257.2013.778110

Estell, D. B., Jones, M. H., Pearl, R., & Van Acker, R. (2009). Best Friendships of Students with and without Learning Disabilities across Late Elementary School. *Exceptional Children*, 76(1), 110–124. https://doi.org/10.1177/001440290907600106

Estell, D. B., Jones, M. H., Pearl, R., Van Acker, R., Farmer, T. W., & Rodkin, P. C. (2008). Peer Groups, Popularity, and Social Preference: Trajectories of Social Functioning Among Students With and Without Learning Disabilities. *Journal of Learning Disabilities*, *41*(1), 5–14. https://doi.org/10.1177/0022219407310993

Filderman, M. J., Austin, C. R., & Toste, J. R. (2019). Data-Based Decision Making for Struggling Readers in the Secondary Grades. *Intervention in School and Clinic*, 55(1), 3–12. https://doi.org/10/gf9cvb

Fischer, G. (2009). Az integrációval kapcsolatos attitűdök kutatása [Research of attitudes towards integration]. *Gyógypedagógiai Szemle*, 37(4), 254–268.

Frederickson, N. L., & Furnham, A. F. (2001). The Long-term Stability of Sociometric Status Classification: A Longitudinal Study of Included Pupils Who Have Moderate Learning Difficulties and Their Mainstream Peers. *Journal of Child Psychology and Psychiatry*, 42(5), 581–592. https://doi.org/10.1111/1469-7610.00754

Freer, J. R. R. (2021). Students' attitudes toward disability: A systematic literature review (2012–2019). *International Journal of Inclusive Education*, 27(5), 652-670. https://doi.org/10.1080/13603116.2020.1866688

Ginevra, M. C., Santilli, S., Di Maggio, I., & Nota, L. (2020). 'The Good Actions': A kindergarten children intervention to promote social and inclusive relationships. *European Journal of Developmental Psychology*, 17(6), 855–876.

Gottfried, M. A., Hutt, E. L., & Kirksey, J. J. (2019). New Teachers' Perceptions on Being Prepared to Teach Students With Learning Disabilities: Insights From California. *Journal of Learning Disabilities*, 52(5), 383–398. https://doi.org/10.1177/0022219419863790

Hajovsky, D. B., Chesnut, S. R., Helbig, K. A., & Goranowski, S. M. (2021). On the Examination of Longitudinal Trends Between Teacher–Student Relationship Quality and Social Skills During Elementary School. *School Psychology Review*, 52(6), 679-695. https://doi.org/10.1080/2372966X.2021.1883995

Hall, L. J., & McGregor, J. A. (2000). A Follow-Up Study of the Peer Relationships of Children with Disabilities in an Inclusive School. *The Journal of Special Education*, 34(3), 114–126. https://doi.org/10.1177/002246690003400301

Hallahan, D. P., Pullen, P. C., Kauffman, J. M., & Badar, J. (2020). Exceptional Learners. In: D. P. Hallahan, P. C. Pullen, J. M. Kauffman, & J. Badar, *Oxford Research Encyclopedia of Education*. Oxford: Oxford University Press. https://doi.org/10.1093/acrefore/9780190264093.013.926

Hendrickx, M. M. H. G., Mainhard, T., Boor-Klip, H. J., & Brekelmans, M. (2017). Our teacher likes you, so I like you: A social network approach to social referencing. *Journal of School Psychology*, 63, 35–48. https://doi.org/10.1016/j.jsp.2017.02.004

Herbainé Szekeres, E., & Szekeres, Á. (2016). Enyhén értelmi fogyatékos gyermekeket integráló "jó" és "rossz" közösségek összehasonlítása [Comparing "Good" and "Bad" Communities Integrating Children with Mild Intellectual Disability]. *Gyógypedagógiai Szemle*, *XLIV*(3), 149–167.

Horváth, E., Herbainé Szekeres, E., & Szekeres, Á. (2021). Using community level data-based decision making in general education: First phase of a 5-year program. In: M. David, G. Luis, & L. Agustín (Eds.), *ICERI2021 Proceedings* (pp. 5202–5210). International Academy of Technology, Education and Development (IATED).

Horváth, E., & Szekeres, Á. (2017). SMETRY: Társas kapcsolatok digitális elemzésének rendszere [SMETRY: A system for the digital analysis of social relations]. In: L. Hülber (Ed.), *II. Oktatástervezési és oktatás-informatikai konferencia. Tanulmánykötet* (pp. 89–101). Líceum Kiadó.

Horváth, E., Szenczi, B., & Szekeres, Á. (2016). Sociometric characteristics of classes integrating children with mild intellectual disabilities. In: R. Kratochvil (Ed.), *International Academic Conference on Global Education, Teaching and Learning in Budapest, Hungary 2016 (IAC-GETL 2016)* (pp. 12–13). Prague: Czech Technical University in Prague.

Jacob, U. S., Edozie, I. S., & Pillay, J. (2022). Strategies for enhancing social skills of individuals with intellectual disability: A systematic review. *Frontiers in Rehabilitation Sciences*, 3, 968314. https://doi.org/10.3389/fresc.2022.968314

Józsa, K., Fazekasné Fenyvesi, M., Szenczi, B., & Szabó, Á. (2014). Tanulásban akadályozott és tipikusan fejlődő gyermekek szóolvasási készségének, szövegértésének és olvasási motivációjának fejlődése [Development of word reading, reading comprehension and reading motivation among typically developing children and children with mild intellectual disabilities]. *Magyar Pszichológiai Szemle*, 1, 181–204.

Kavale, K. A., & Forness, S. R. (1996). Social Skill Deficits and Learning Disabilities: A Meta-Analysis. *Journal of Learning Disabilities*, 29(3), 226–237. https://doi.org/10.1177/002221949602900301

Kemp, C., & Carter, M. (2002). The Social Skills and Social Status of Mainstreamed Students with Intellectual Disabilities. *Educational Psychology*, 22(4), 391–411. https://doi.org/10.1080/0144341022000003097

Kiss, D., & Szekeres, Á. (2016). Egy és két enyhén értelmi fogyatékos tanulót integráló osztályközösségek összehasonlítása [Comparison of integrating classes one or two students with mild intellectual disabilities]. *Iskolakultúra*, 26(12), 3–15. https://doi.org/10.17543/ISKKULT.2016.12.3

Kiuru, N., Aunola, K., Lerkkanen, M.-K., Pakarinen, E., Poskiparta, E., Ahonen, T., Poikkeus, A.-M., & Nurmi, J.-E. (2015). Positive teacher and peer relations combine to predict primary school students' academic skill development. *Developmental Psychology*, 51(4), 434–446. https://doi.org/10.1037/a0038911

Klehm, M. (2014). The Effects of Teacher Beliefs on Teaching Practices and Achievement of Students With Disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 37(3), 216–240. https://doi.org/10.1177/0888406414525050

Koster, M., Nakken, H., Pijl, S. J., & van Houten, E. (2009). Being part of the peer group: A literature study focusing on the social dimension of inclusion in education. *International Journal of Inclusive Education*, 13(2), 117–140. https://doi.org/10.1080/13603110701284680

Krämer, S., Möller, J., & Zimmermann, F. (2021). Inclusive Education of Students With General Learning Difficulties: A Meta-Analysis. *Review of Educational Research*, 003465432199807. https://doi.org/10.3102/0034654321998072

Kuhne, M., & Wiener, J. (2000). Stability of Social Status of Children with and without Learning Disabilities. *Learning Disability Quarterly*, 23(1), 64. https://doi.org/10.2307/1511100

Kulawiak, P. R., & Wilbert, J. (2020). Introduction of a new method for representing the sociometric status within the peer group: The example of sociometrically neglected children. *International Journal of Research & Method in Education*, 43(2), 127–145. https://doi.org/10.1080/1743727X.2019.1621830

Lindner, K.-T., Schwab, S., Emara, M., & Avramidis, E. (2023). Do teachers favor the inclusion of all students? A systematic review of primary schoolteachers' attitudes towards inclusive education. *European Journal of Special Needs Education*, 38(6), 766–787. https://doi.org/10.1080/08856257.2023.2172894

Lusk, S., & Cook, D. (2009). Enhancing career exploration, decision making, and problem solving of adolescent girls with disabilities. *Journal of Vocational Rehabilitation*, 31, 145–153. https://doi.org/10.3233/JVR-2009-0484

McCoy, S., & Banks, J. (2012). Simply academic? Why children with special educational needs don't like school. *European Journal of Special Needs Education*, 27(1), 81–97. https://doi.org/10.1080/08856257.2011.640487

Méhes, K., & Győriné Stefanik, K. (2017). Úton-útfélen.... Autizmussal élő középiskolás diákok szociometriai helyzete és viktimizációja [The sociometric position and victimization of students with autism in high school]. In: A. Zsolnai, & L. Kasik (Eds.), *Új kutatások a neveléstudományokban 2016* (pp. 103–112). Szeged: SZTE BTK Neveléstudományi Intézet.

Mérei, F. (1996). *Közösségek rejtett hálózata [Latent network of communities]*. Osiris Kiadó.

Monjas, M. I., Martín-Antón, L. J., García-Bacete, F.-J., & Sanchiz, M. L. (2014). Rechazo y victimización al alumnado con necesidad de apoyo educativo en primero de primaria [Rejection and victimization of students with special educational needsin first grade of primary education]. *Anales de Psicología*, 30(2), 499–511. https://doi.org/10.6018/analesps.30.2.158211

Mrug, S., Molina, B. S. G., Hoza, B., Gerdes, A. C., Hinshaw, S. P., Hechtman, L., & Arnold, L. E. (2012). Peer rejection and friendships in children with Attention-Deficit/Hyperactivity Disorder: Contributions to long-term outcomes. *Journal of Abnormal Child Psychology*, 40(6), 1013–1026. https://doi.org/10.1007/s10802-012-9610-2

Ochoa, S. H., & Olivarez, A. (1995). A Meta-Analysis of Peer Rating Sociometric Studies of Pupils with Learning Disabilities. *The Journal of Special Education*, 29(1), 1–19. https://doi.org/10.1177/002246699502900101

Park, S. S., Koh, Y., & Block, M. E. (2014). *Contributing Factors for Successful Inclusive Physical Education*. Retrieved from: https://api.semanticscholar.org/CorpusID:150012942 (access: 2023/07/21).

Pavri, S. (2004). General and Special Education Teachers' Preparation Needs in Providing Social Support: A Needs Assessment. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 27(4), 433–443. https://doi.org/10.1177/088840640402700410

Pavri, S., & Hegwer-DiVita, M. (2006). Meeting the Social and Emotional Needs of Students with Disabilities: The Special Educators' Perspective. *Reading & Writing Quarterly*, 22(2), 139–153. https://doi.org/10.1080/10573560500242200

Perlusz, A. (1995). *Hallássérült tanulók az általános iskolában. Integráltan tanuló hallássérült gyermekek szociometriai vizsgálata [Students with hard of hearing in primary school. The sociometry of integrated children with hard of hearing]*. ELTE-BTK.

Rafferty, Y., Piscitelli, V., & Boettcher, C. (2003). The Impact of Inclusion on Language Development and Social Competerne among Preschoolers with Disabilities. *Exceptional Children*, *69*(4), 467–479. https://doi.org/10/gffcnt

Reed, F. D. D., McIntyre, L., Dusek, J. B., & Quintero, N. (2011). Preliminary Assessment of Friendship, Problem Behavior, and Social Adjustment in Children with Disabilities in an Inclusive Education Setting. *Journal of Developmental and Physical Disabilities*, 23, 477–489.

Roberts, J., & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in mainstream schools. *International Journal of Inclusive Education*, 20(10), 1084–1096. https://doi.org/10.1080/13603116.2016.1145267

Schneider, B. H. (2016). *Childhood friendships and peer relations: Friends and enemies* (Second Edition). Routledge, Taylor & Francis Group.

Schwab, S. (2019). Friendship stability among students with and without special educational needs. *Educational Studies*, 45(3), 390–401. https://doi.org/10.1080/03055698.2018.1509774

Schwab, S., & Alnahdi, G. H. (2023). Does the same teacher's attitude fit all students? Uncovering student-specific variance of teachers' attitudes towards all of their students. *International Journal of Inclusive Education*, 1–16. https://doi.org/10.1080/13603116.2023.2221235

Schwab, S., Gebhardt, M., Krammer, M., & Gasteiger-Klicpera, B. (2014). Linking self-rated social inclusion to social behaviour. An empirical study of students with and without special education needs in secondary schools. *European Journal of Special Needs Education*, 30. https://doi.org/10.1080/08856257.2014.933550

Schwab, S., Hessels, M., Gebhardt, M., Krammer, M., & Gasteiger-Klicpera, B. (2015). The Relationship Between Social and Emotional Integration and Reading Ability in Students With and Without Special Educational Needs in Inclusive Classes. *Journal of Cognitive Education and Psychology*, 14, 180–198. https://doi.org/10.1891/1945-8959.14.2.180

Szekeres, Á. (2012). Integráltan tanuló, enyhén értelmi fogyatékos gyermekek szociális helyzetének felmérése szociometria segítségével [Assessing the social position of integrated children with mild intellectual disabilities using sociometry]. *Iskolakultúra*, 11, 3–23.

Szekeres, Á. (2014). Social integration of children with mild intellectual disabilities in the primary school. *Procedia - Social And Behavioral Sciences*, 116, 1855–1860.

Szekeres, Á., & Horváth, E. (2014a). Befogadó közösségek szociometriai sajátosságai, fókuszban az enyhén értelmi fogyatékos fiúk és lányok társas helyzetével [Sociometric characteristics of inclusive communities, focusing on social position of boys and girls with mild intellectual disabilities.]. In: A. Buda (Ed.), *XIV. Országos Neveléstudományi Konferencia: Oktatás és nevelés – gyakorlat és tudomány: Tartalmi összefoglalók* (p. 339). Debreceni Egyetem Neveléstudományok Intézete.

Szekeres, Á., & Horváth, E. (2014b). Enyhén értelmi fogyatékos gyermekeket integráló iskolai osztályok szociometriai jellemzői [Sociometric patterns of classes integrating children with mild intellectual disabilities]. *Magyar Pszichológiai Szemle*, 69(1), 263–281.

Szekeres, Á., & Horváth, E. (2015a). Enyhe intellektuális képességzavarban érintett tanulókat integráló közösségek utánkövetéses vizsgálata [Follow-up study of communities integrating students with mild intellectual disabilities]. In: A. Vargha (Ed.), *Lélek-net a léleknek: Az ember a változó technikai közegek világában: A Magyar Pszichológiai Társaság XXIV. Országos Tudományos Nagygyűlése: Kivonatkötet* (pp. 101–102). Magyar Pszichológiai Társaság.

Szekeres, Á., & Horváth, E. (2015b). Enyhén értelmi fogyatékos gyermekeket integráló iskolai osztályok szociometriai jellemzői [Sociometric patterns of classes integrating children with mild intellectual disabilities]. In: Lányiné Engelmayer Ágnes & Győri Miklós (Eds.), *Gyógypedagógiai lélektan* (pp. 263–281). Budapest: Akadémiai Kiadó.

Szenczi, B., Vígh, T., Szekeres, Á., & Zentai, G. (2017). Integráltan tanuló SNI-diákok szövegértés eredményei az adaptált Országos kompetenciamérésen [The results of the reading comprehension of integrated, students with SEN in the adapted National Competency Measurement]. In A. Zsolnai & L. Kasik (Eds.), *Új kutatások a neveléstudományokban 2016* (pp. 142–169). Szeged: SZTE BTK Neveléstudományi Intézet.

EADSNE, (2012). *Teacher Education for Inclusion: Profile of Inclusive Teachers*. European Agency for Development in Special Needs Education.

Van Mieghem, A., Verschueren, K., Petry, K., & Struyf, E. (2020). An analysis of research on inclusive education: A systematic search and meta review. *International Journal of Inclusive Education*, 24(6), 675–689. https://doi.org/10.1080/13603116.2018.1482012

Voyer, A.-P., Tessier, R., & Nadeau, L. (2017). Sociometric status and the attribution of intentions in a sample of adolescents with cerebral palsy. *Disability and Rehabilitation*, 39(5), 477–482. https://doi.org/10.3109/09638288.2016.1147618

Vuran, S. (2005). The Sociometric Status of Students with Disabilities in Elemantary Level Integration Classes in Turkey. *Eurasian Journal of Educational Research*, *0*(18), Article 18.

Woodgate, R. L., Gonzalez, M., Demczuk, L., Snow, W. M., Barriage, S., & Kirk, S. (2020). How do peers promote social inclusion of children with disabilities? A mixed-methods systematic review. *Disability and Rehabilitation*, 42(18), 2553–2579. https://doi.org/10.1080/09638288.2018.1561955

HCSO, (2015). *Yearly obligatory statistical survey of education (census) in 2014/2015*. Hungarian Central Statistical Office.

HCSO, (2019). *Yearly obligatory statistical survey of education (census) in 2018/2019*. Hungarian Central Statistical Office.