

# A SENSE OF BELONGING FOR PROMOTING INCLUSION IN A DISTANCE LEARNING SECONDARY SCHOOL

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## ABSTRACT

The research investigates the sense of belonging in distance learning environments within Latvian secondary schools, aiming to address challenges in fostering inclusion and engagement in virtual settings. The study was conducted across two distance education schools, involving 245 students and 23 teachers. Data collection was carried out through questionnaires tailored to assess perceptions of belonging, the learning environment, relationships, and cooperation. Quantitative data were analysed using descriptive statistics, analysis of variance (ANOVA), and correlation analysis. Results indicate that students generally report a positive sense of belonging, with a Belonging Index score averaging 25 out of 32. However, the study found no significant correlation between belonging-promoting activities (such as the learning environment, relationship-building and cooperative learning) and the students' sense of belonging. Both teachers and students acknowledged the presence of these activities, but their impact on fostering a strong sense of community was limited. Discrepancies were also noted between teachers' and students' perceptions of the frequency and effectiveness of these activities.

The research underscores the importance of enhancing meaningful interactions and collaborative opportunities to strengthen students' sense of belonging in distance education. The findings suggest that while current activities are somewhat effective, they may not be the primary drivers of belonging in a virtual learning context, pointing to areas for further improvement and targeted strategies.

**Keywords:** *distance learning, inclusive education, sense of belonging, secondary education, online engagement.*

## Introduction

Access to education is a critical aspect of societal development, especially in contemporary times where diversity and inclusivity are valued. One significant mode of education that addresses these needs is distance learning, which offers quality, affordable, and accessible education, thanks to advancements in digitalization (Valsts izglītības attīstības aģentūra, 2021; Guri-Rosenblit, 2009). While the concept of distance education has

historical roots dating back to the 19th century, its modern incarnation has evolved significantly, particularly within Latvia, where students now have the opportunity to engage in distance learning from as early as Grade 1 (Valsts izglītības attīstības aģentūra, 2021).

Amidst the global pandemic, the relevance of distance learning has been underscored, with its popularity expected to persist (Amemado, 2020; Xie et al., 2020; Rajeh et al., 2021). It is essential to differentiate between distance learning and emergency remote learning, with the former emphasizing tailored learning environments and materials that promote self-directed learning. However, implementing a constructivist approach to learning, which encourages active participation and collaboration, poses challenges for educators in the distance education realm (Olusegun, 2015; Vrasidas, 2000).

Central to effective distance learning is fostering a sense of belonging among students, which promotes inclusivity and engagement. This involves creating a supportive environment where students feel accepted and valued, contributing to their motivation and participation in the learning process (Goodenow, 1993; Baumeister & Leary, 1995; Mahar et al., 2012; Allen et al., 2021). While traditional notions of community are based on physical interactions, distance education necessitates redefining these concepts to suit virtual environments (Shaffer & Anundsen, 1993).

The concept of belonging is not only foundational in traditional educational settings but also critical in online and distance learning environments, where physical separation can challenge students' sense of connection and community. A comprehensive examination of the literature reveals a consistent emphasis on the importance of belonging for student engagement, emotional well-being, and academic achievement.

Greenwood and Kelly (2019) conducted a systematic review that explores how educational staff perceive and cultivate a sense of belonging among students. Their findings highlight the importance of a supportive school culture, underscoring the active role that educators must play in fostering belonging. This aligns with the current study's focus on distance education, where creating such a culture requires deliberate and innovative strategies.

Similarly, Peacock et al. (2020) emphasized the significance of belonging in online learning environments. They demonstrated that a strong sense of belonging can significantly enhance student engagement and mitigate feelings of isolation, which are common challenges in virtual classrooms. Their research highlights the need for educators to be proactive in creating interactive and inclusive online learning experiences.

McMillan and Chavis (1986) provided a foundational theory on the sense of community, which has been adapted to various educational contexts, including online learning. Their theory underscores the psychological and emotional dimensions of belonging, which are essential for student retention and success in distance education. These dimensions become even more critical in online settings, where traditional social interactions are absent, also highlighted by Seifert and Bar-Tal (2023).

Shea et al. (2005) and Shackelford and Maxwell (2012) examined the role of learner-to-learner interaction and teaching presence in building a sense of community in online education. Their studies found that these interactions are crucial for developing a supportive learning environment, directly influencing students' motivation and academic

performance. This highlights the importance of structured opportunities for interaction in online courses.

Furthermore, Goodenow (1993) was first to define the relationship between classroom belonging and academic outcomes among adolescents. She created a scale for measuring the perceived belonging or psychological membership in the school environment and found a strong positive correlation between students' sense of belonging and their motivation and achievement, providing a basis for similar investigations in distance learning contexts. The importance of nurturing the feeling of belonging through deliberate community-building in order to achieve academic success, a theme that resonates strongly within the reworked framework of online education as highlighted in research done by Peacock and Cowan (2019).

Lastly, Gunawardena and McIsaac (2004) and Guri-Rosenblit (2009) discussed the broader challenges and misconceptions associated with distance education. Their work highlights the necessity of developing strategies to promote inclusion and a sense of community in online environments, addressing common barriers to student engagement and success.

Despite the substantial body of literature on belonging in educational settings, there remains a gap in understanding its dynamics within the specific context of Latvian distance learning. This gap is particularly notable given that Latvian students are often excluded from international education surveys (Izglītības un zinātnes ministrija, 2022). Therefore, investigating the factors that contribute to a sense of belonging in Latvian distance education institutions is both timely and necessary. The current study aims to address this gap, exploring strategies to enhance students' sense of belonging in a Latvian distance learning secondary school setting.

**The primary research problem** addressed in this study was the challenge posed by distance learning in fostering a sense of belonging among students, given its lack of regular in-person interactions.

To address this research problem some **research questions** were formulated:

- RQ1 – What factors contribute to a sense of belonging in distance learning, and how do these factors compare across two different schools?
- RQ2 – To what extent are the factors that promote belonging implemented in everyday learning?
- RQ3 – What is the relationship between the belonging activities mentioned in the theory and students' sense of belonging?

**The aim** of this study was to investigate the aspects that influence students' sense of belonging in distance learning and to develop recommendations for promoting a sense of belonging and an inclusive environment in distance learning secondary schools.

To achieve the aim of this study, some **objectives** were set as follows: analyze the literature on the topic of sense of belonging in distance learning. Develop teacher and student questionnaires based on activities and recommendations for promoting a sense of belonging. Survey teachers to determine the extent to which belonging-promoting methods and activities are utilized and identify additional recommendations from their personal

experiences. Survey students to assess the implementation and effectiveness of belonging-promoting activities and gather suggestions for further fostering a sense of belonging. Analyze the survey results and formulate recommendations to enhance a sense of belonging in distance education secondary schools. Develop recommendations for fostering a sense of belonging and an inclusive environment in distance learning secondary schools.

## Methodology

This study employed theoretical research methods grounded in social integration and community-building theories within educational settings, particularly focusing on distance learning environments (Goodenow, 1993; Shackelford & Maxwell, 2012). Data was collected through teacher and student questionnaires designed to assess perceptions and experiences related to the sense of belonging and inclusion in distance education. A case study approach was adopted to allow for an in-depth exploration of the sense of belonging within the specific context of distance education secondary schools. This approach enables a nuanced understanding of the experiences and perceptions of students and teachers, which might not be captured through other research methods (Yin, 2009). Quantitative data obtained from the study are analysed using descriptive statistics, analysis of variance, and correlation analysis to identify patterns and relationships among variables (Field, 2013).

## Measurements

In this research, data collection was conducted through carefully designed questionnaires targeting both students and teachers in distance learning secondary schools. The questionnaires were adapted from established instruments, with modifications made to align with the specific context of Latvian distance education (Goodenow, 1993; Mullis & Martin, PIRLS 2016 Assessment Framework (2nd ed.), 2015; Mullis et al., 2016; OECD, 2019). To create the Sense of Belonging Index, questions were drawn from well-known educational assessments like Goodenow's PSSM, PIRLS, TALIS and OECD PISA, ensuring the reliability and validity of the measurements. Ideas from Beldarrain, Y. (2006), Elias, T. (2010) and Shen et al. (2008) were used to create the questions for the environment section, and ideas from Conrad, D. (2005), Peacock et al. (2020) and Shackelford, J. L., & Maxwell, M. (2012) were used for the Relationship Index. Lastly, to create the Cooperation Index, ideas from Conrad, D. (2005), Shackelford, J. L., & Maxwell, M. (2012) and Jiang, W. (2017) were utilized. The student questionnaire focused on the effectiveness and frequency of specific belonging-enhancing activities within the school environment, while the teacher questionnaire aimed to gather insights into the frequency of these activities as perceived by educators.

## Data Collection

The study was conducted across two distance learning secondary schools in Latvia. A total of 245 students and 23 teachers participated. Participants were selected through

a non-probability sampling method, specifically convenience sampling, which allowed the inclusion of individuals readily available and willing to participate in the study. The questionnaires were distributed electronically, ensuring accessibility for all participants regardless of their location, in line with the digital nature of distance education (Dillman et al., 2014).

## Data Analysis

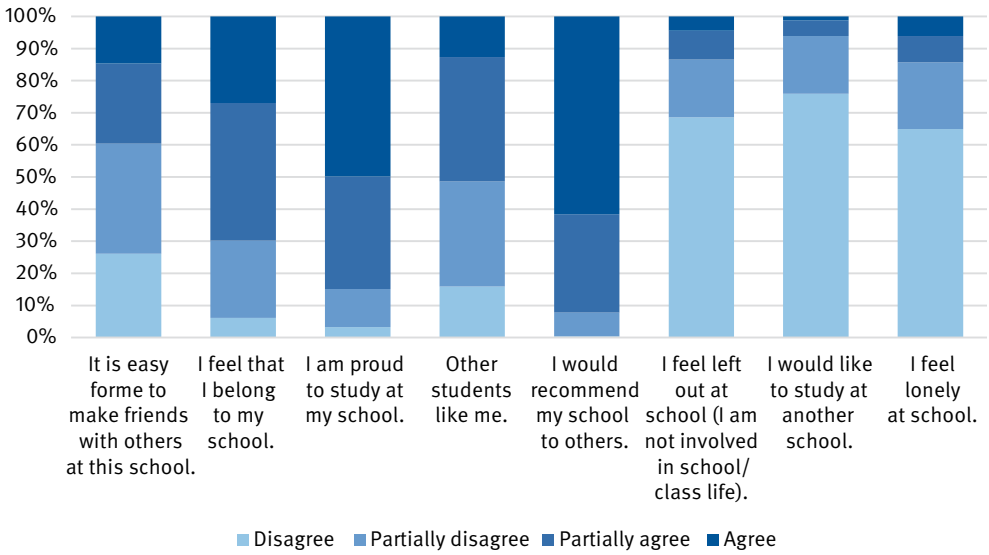
The data collected from the questionnaires were subjected to both descriptive and correlation statistical analyses. Descriptive statistics, including measures of central tendency (mean, median) were utilized to summarize and describe the main features of the data (Field, 2013). In addition to descriptive analysis, analysis of variance (ANOVA) was employed to assess differences in perceptions between different groups (e.g., students vs. teachers), and correlation analysis was used to explore the relationships between the frequency of belonging-promoting activities and students' reported sense of belonging. These statistical tools were chosen to ensure a comprehensive understanding of the data, allowing for the identification of patterns and relationships that are critical to the research questions. Data analysis was conducted using SPSS, which provided the tools necessary for conducting both descriptive and correlation statistical analyses.

## Ethical Considerations

This study was conducted with strict adherence to ethical guidelines. Participants were informed that by submitting their responses, they were providing their consent to participate in the study, acknowledging their understanding of the study's purpose, procedures, and any associated risks. Participation was entirely voluntary, and participants were informed of their right to withdraw from the study at any point. The confidentiality of all participant data was rigorously maintained, ensuring privacy and anonymity.

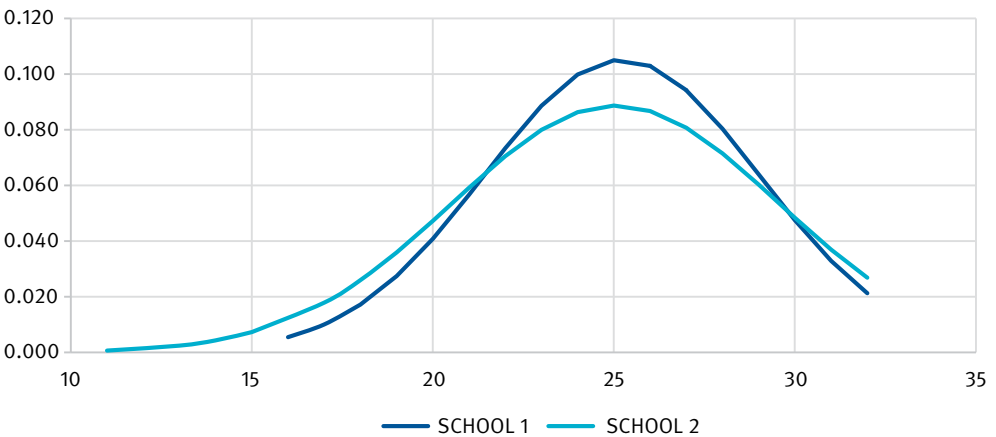
## Results

In this study, both students and teachers offered valuable insights into the factors that contribute to belonging within the context of distance education. Students were asked to express their level of agreement with each statement on a Likert scale, ranging from disagree to agree. The responses were then scored, with positive statements contributing positively to the index and negative statements contributing negatively. The cumulative score from these responses formed the Belonging Index with a Cronbach Alfa coefficient of 0.76, providing a single metric to represent the overall sense of belonging among the students. A significant factor contributing to a sense of belonging was the students' connection to their school. Despite many students admitting to having few or no friends at school, this lack of social connections did not significantly affect their overall sense of belonging. They expressed pride in attending their school and a willingness to recommend it to others, with most students indicating they did not feel excluded or lonely (See Figure 1).



**Figure 1** Distribution of responses to the statements that make up the Belonging Index

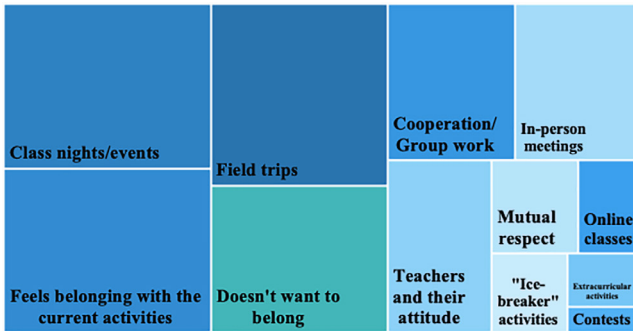
Further comparison of the Belonging Index between the two surveyed schools revealed no statistically significant differences. The average score in both schools was around 25 out of a possible 32, indicating a generally positive and consistent sense of belonging among students across both institutions (See Figure 2).



**Figure 2** Differences between schools in the Belonging Index

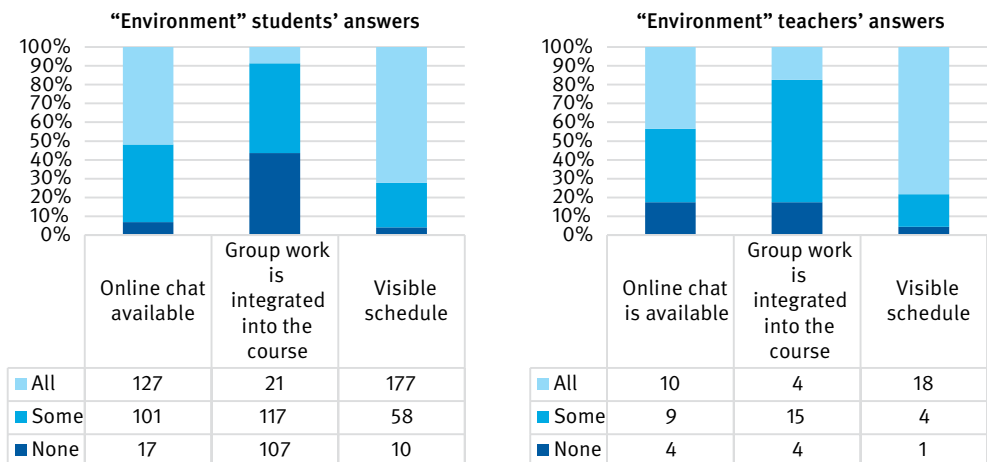
Further qualitative insights were gathered from open-ended questions posed to both teachers and students. Teachers highlighted several activities they believe promote a sense of belonging, such as organizing trips or educational expeditions, working with parents, and involving students in competitions, Olympiads, and international projects.

Additionally, teachers mentioned the importance of face-to-face activities, celebrating holidays together, and fostering self-evaluation and reflection in the educational model. On the student side, 104 students provided suggestions for enhancing their sense of belonging, with many indicating satisfaction with the existing activities. However, some students expressed that they chose distance learning specifically to avoid participation in such activities (See Figure 3).



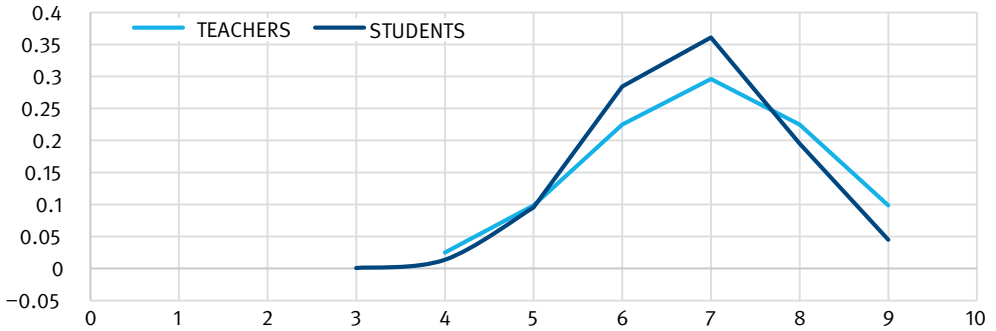
**Figure 3** Distribution of students' recommendations

During the study, students and teachers also offered insights into the extent the factors that promote belonging, along with specific activities, were integrated into the learning environment. A significant portion reported opportunities for communication via online chat in most courses, although the frequency of use varied. However, activities that promoted group collaboration without teacher involvement were perceived as less common, and there was a difference in perceptions between teachers and students regarding their occurrence. Both groups, however, agreed on the presence of structured elements in their courses, such as clear timetables for assignments and deadlines (See Figure 4).



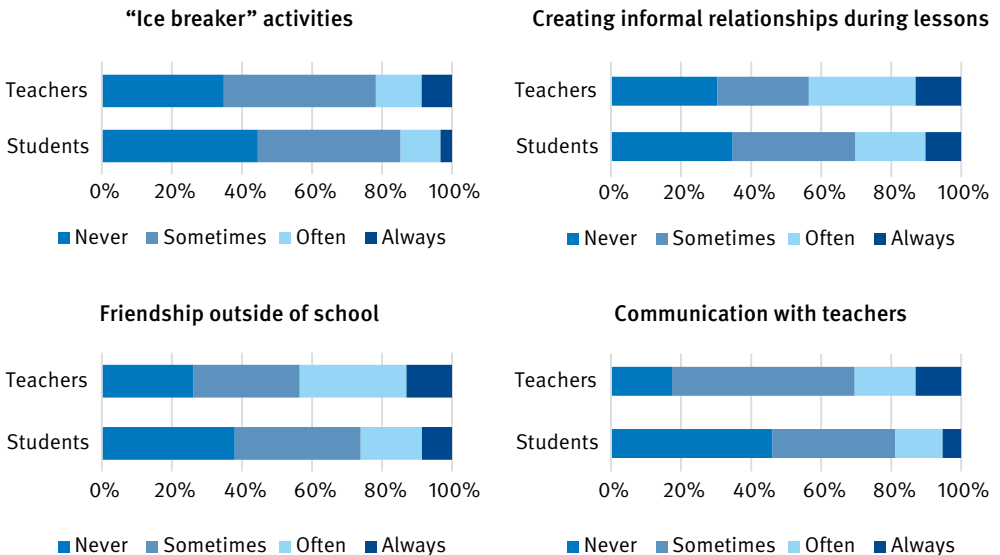
**Figure 4** Students’ and teachers’ answers in the Environment section

When summarizing the responses to the questions on activities integrated into the learning environment, there was no statistical difference in the mean scores of teachers' and students' responses. Overall, both students and teachers responded positively about the mentioned activities (See Figure 5).



**Figure 5** Difference between teachers' and students' opinions in the Environment section

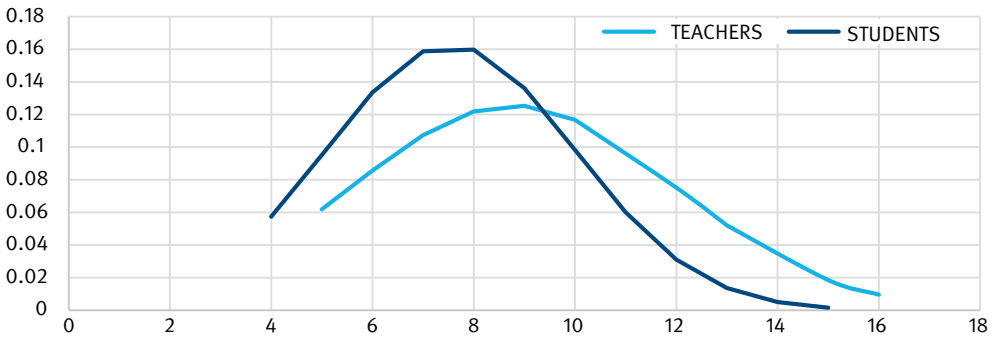
In terms of relationship-building, while teachers reported more frequent positive communication with students, students perceived these interactions as less frequent, suggesting a gap in the implementation of relationship-building activities. Students and teachers indicated a lack of encouragement for forming relationships outside of school, with students noting infrequent ice-breaker activities and occasional interactions around personal interests during lessons. This gap suggests areas where relationship-building efforts could be improved (See Figure 6).



**Figure 6** Students' and teachers' answers to the frequency of implementation of the activities in the "Relationship" section

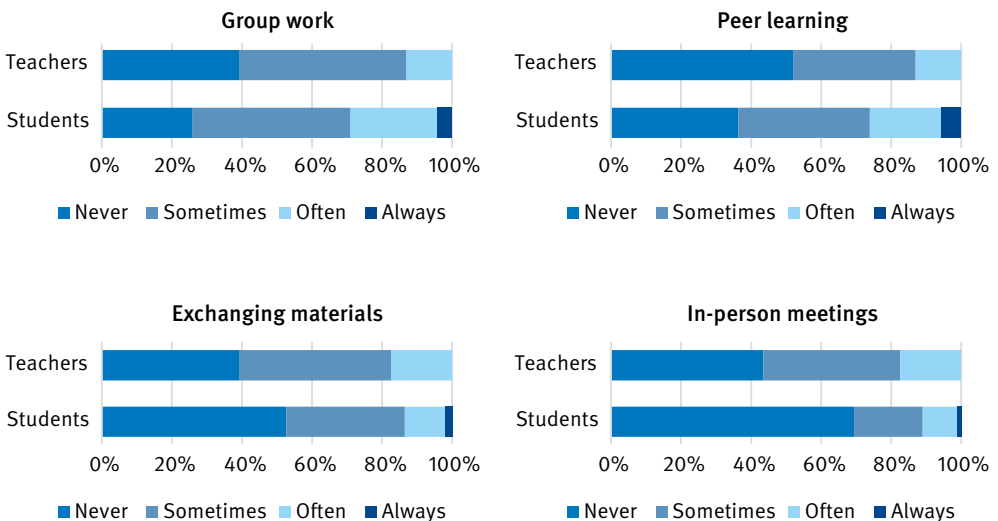


The Relationship Index, with a Cronbach alpha coefficient of 0.72, was created to ensure that the combined data was consistent and comparable across the different question and allow comparison between teachers and students and the mentioned activities and belonging. Summarizing these activities, showed a statistically significant difference between teachers' and students' responses, with teachers generally responding more positively (See Figure 7). However, no correlation was found between the Relationship Index and the Belonging Index, suggesting that these activities did not directly contribute to a heightened sense of belonging among students.



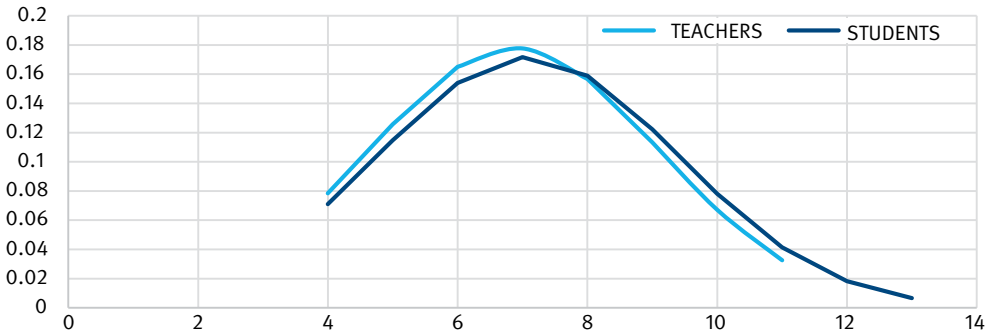
**Figure 7** Difference between teachers' and students' opinions on the Relationships index

Similarly, opportunities for collaborative learning, such as group work and peer sharing of materials, were viewed as limited by both students and teachers. In-person meetings, another potential avenue for fostering belonging, were also reported to be infrequent, further indicating areas where implementation could be improved (See Figure 8).



**Figure 8** Students' and teachers' answers to the frequency of implementation of the activities in the "Cooperation" section

The Cooperation Index, which had a Cronbach's alpha of 0.74, showed no significant differences between teachers' and students' views on the frequency and effectiveness of cooperative activities (See Figure 9). Like the Relationship Index, the Cooperation Index did not correlate with the Belonging Index, further indicating that these collaborative activities, while present, do not necessarily enhance students' overall sense of belonging.



**Figure 9** Difference between teachers' and students' views on the Cooperation index

The relationship between activities aimed at promoting belonging that are mentioned in the theory and students' actual sense of belonging was assessed through the Relationship and Cooperation Indices and questions regarding the learning environment. The Relationship Index revealed a statistically significant difference between teachers' and students' perceptions, with teachers generally responding more positively. Despite this, there was no significant correlation between the Relationship Index and the Belonging Index, suggesting that the activities designed to foster relationships may not directly contribute to a heightened sense of belonging among students. Similarly, the Cooperation Index and the questions regarding environment did not correlate with the Belonging Index, further indicating that these activities, while present, do not necessarily enhance students' overall sense of belonging.

In conclusion, the findings of this study indicate that while students generally report a positive sense of belonging, the factors theorized to promote this sense, such as relationship-building and cooperation activities, do not show a significant impact when measured through the respective indices. This suggests that while these activities are valued and somewhat implemented, they may not be the primary drivers of belonging in a distance learning context. The insights provided by both students and teachers suggest potential areas for improving the implementation and effectiveness of these activities, with an emphasis on enhancing meaningful interactions and collaborative opportunities that could further strengthen students' sense of belonging.

## Discussion

The findings of this study provide nuanced insights into the dynamics of belonging, learning environments, collaboration, and relationships within the context of distance education. These insights are valuable for educators, policymakers, and researchers.

Despite the inherent challenges of distance learning, the study revealed a generally positive sense of belonging among students. This finding underscores the resilience and adaptability of students in navigating virtual learning environments, consistent with the observations of Greenwood and Kelly (2019), who emphasize the importance of educators in fostering belonging even in virtual settings. Similarly, Peacock et al. (2020) assert that a strong sense of belonging is crucial for student engagement in online learning environments, reinforcing the positive results of this study. However, while students expressed satisfaction with the current activities designed to promote belonging, there remains untapped potential for further enhancement. Goodenow (1993) found a positive correlation between belonging and academic outcomes, but the findings of this study indicate that the activities aimed at promoting belonging did not strongly correlate with students' sense of belonging, suggesting areas for improvement.

Opportunities for collaboration and relationship-building are critical components of a thriving educational community. The study identified specific areas where improvement is needed in facilitating collaborative activities and encouraging interpersonal connections. This finding aligns with McMillan and Chavis (1986), who argue that fostering a sense of community is vital for student retention and success. By incorporating student feedback, educators can tailor interventions to better meet the diverse needs of students, thereby fostering a stronger sense of belonging and engagement. However, contrary to these findings, Shea et al. (2005) and Shackelford and Maxwell (2012) emphasize the importance of structured learner-to-learner interaction in building a sense of community, suggesting that more structured approaches may be necessary to achieve similar outcomes in different contexts.

The study also highlighted discrepancies between teacher and student perceptions regarding the frequency of communication and the effectiveness of collaborative activities. Addressing these disparities is crucial for fostering mutual understanding and trust between educators and students. By bridging the gap between perception and reality, educators can cultivate more meaningful and effective learning experiences. This discrepancy could be further explored in light of the broader challenges discussed by Gunawardena and McIsaac (2004) and Guri-Rosenblit (2009), who emphasize the need for targeted strategies to promote inclusion and community in distance education.

Moving forward, it is imperative to build upon the findings of this study to inform evidence-based practices in distance education. By leveraging technology and innovative pedagogical approaches, educators can create more dynamic and interactive learning environments that promote student engagement and success. This perspective is supported by McMillan and Chavis (1986), who highlight the importance of community in educational settings, and by recent reports from Oxford Learning College (2023) and

the World Economic Forum (2022), which emphasize the growing significance of digital platforms in education.

The initial hypothesis of this study posited that a strong sense of belonging is essential for boosting student engagement and inclusivity in virtual learning environments. The findings partially support this hypothesis, as students report a positive sense of belonging. However, the lack of a significant correlation between belonging-promoting activities and the Belonging Index suggests that these activities alone may not be sufficient to enhance the sense of belonging, challenging the hypothesis that these factors are crucial drivers of engagement.

Given these insights, future research could explore additional or alternative factors that might influence a sense of belonging in online education, such as personalized learning experiences, mentorship programs, or the role of cultural and linguistic diversity in fostering inclusivity.

In summary, while this study provides valuable insights into the sense of belonging in Latvian distance learning schools, it also highlights the complexity of fostering this sense in virtual environments and suggests areas for further exploration and innovation in educational strategies.

## Conclusions

This study aimed to investigate the sense of belonging among students in Latvian distance learning schools, particularly focusing on the impact of the learning environment, relationship-building and cooperative activities on students' sense of belonging.

The study found that students generally report a positive sense of belonging in their distance learning environments. This indicates that the virtual educational setting in Latvia is supportive and capable of fostering a sense of community among students.

Contrary to expectations, the results showed that there is no strong correlation between the learning environment, relationship-building and cooperative activities and students' overall sense of belonging. Although these activities are appreciated by students, they do not significantly enhance their sense of belonging, suggesting that other factors may play a more critical role.

The study identified notable discrepancies between teacher and student perceptions regarding the frequency and effectiveness of collaborative activities. This misalignment points to the need for improved communication and better alignment of expectations between educators and students.

In conclusion, while the research confirms that students in Latvian distance learning schools generally feel a sense of belonging, it also underscores the complexity of fostering this feeling through conventional means. The findings challenge educators to rethink and innovate their approaches to enhancing student engagement and inclusivity in virtual learning environments. Future research should continue to explore diverse strategies that could more effectively contribute to students' sense of belonging in distance education.

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