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The Effects of School Size on Student Participation and Sense of Community

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ABSTRACT

Purpose: The size of a school is a crucial factor influencing educational outcomes, yet its impact on student participation and the sense of community remains complex and multifaceted. This study aims to explore how different school sizes affect these dimensions, focusing on qualitative aspects of student experiences and institutional dynamics to provide a deeper understanding of the educational landscape.

Methodology: A qualitative research design was adopted, utilizing semi-structured interviews to collect data from 29 participants, including students, teachers, and school administrators from various sized schools. Theoretical saturation was reached to ensure a comprehensive exploration of the themes. Data were analyzed using NVivo software to facilitate thematic analysis and ensure systematic handling of the interview transcripts.

Findings: Five main themes were identified: Student Engagement, Sense of Community, Learning Environment, Administrative Influence, and Challenges and Barriers. Sub-themes such as Academic Participation, Support Networks, Classroom Dynamics, and Policy Making illustrated the specific ways in which school size impacts educational practices and student perceptions. Smaller schools were generally found to foster a stronger sense of community and engagement, whereas larger schools provided more diverse opportunities but faced challenges in maintaining a personalized learning environment.

Conclusion: The study concludes that school size significantly influences the educational environment, affecting everything from student engagement to administrative strategies. While smaller schools excel in creating a cohesive community, they often struggle with resource limitations and opportunity diversity. Larger schools, on the other hand, offer extensive resources and opportunities but may lack the close-knit community feel that enhances student engagement and sense of belonging.

Keywords: School size, Student engagement, Sense of community, Educational outcomes, Qualitative research, Educational policy.

1. Introduction

The educational landscape is continuously shaped by multifaceted variables that significantly impact students' academic achievements and personal development. Among these, the size of a school and its inherent community characteristics play pivotal roles in influencing students' sense of belonging, engagement, and overall well-being (Beh-Pajooch et al., 2011; Burckhardt et al., 2016; Chavoshi Najafabadi & Davoodi, 2019; Lee & Loeb, 2000; Siddiqui & M. Ventista, 2018). School size has been a subject of considerable academic inquiry, particularly concerning its effects on students' psychological and behavioral outcomes. As noted by Lee and Loeb (2000), smaller schools often foster a more personalized learning environment, which can lead to enhanced teacher attitudes and improvements in students' academic performances. Conversely, larger schools may offer broader curricular options and extracurricular activities but can struggle with creating a cohesive sense of community (Lee & Loeb, 2000).

The concept of school as a community is integral to the development of positive school climates that enhance student connectedness and engagement (Battistich & Hom, 1997). A strong sense of community within a school is associated with reduced involvement in problem behaviors and increased academic motivation (Battistich & Hom, 1997). Furthermore, the feeling of being part of a school community is significantly linked to students' perceptions of safety, further highlighting the critical role of community dynamics in educational settings (Lenzi et al., 2017).

Research by McNeely, Nonnemaker, and Blum (2002) underscores the importance of promoting school connectedness, pointing out that such efforts yield substantial benefits in adolescent health and academic success. This sense of connectedness is not merely beneficial for immediate academic outcomes but also fosters long-term psychological well-being among students (McNeely et al., 2002). Moreover, Osterman (2000) emphasizes that the need for belonging is a fundamental human drive that schools must address to enhance students' engagement and retention (Osterman, 2000).

The relationship between school size and community feeling is complex. Vieno et al. (2005) conducted a multilevel analysis revealing that a democratic school climate, which often characterizes smaller educational settings, is conducive to fostering a stronger community sense. This democratic environment supports transparency, inclusiveness, and shared decision-making, which are vital

for nurturing a sense of belonging among students (Vieno et al., 2005).

However, the benefits of smaller school sizes are not without challenges. Finn, Gerber, Achilles, and Boyd-Zaharias (2001) found that while small classes have enduring effects on academic performance, the dynamics of small educational institutions may also impose limits on the resources and opportunities available to students. These limitations can affect the scope of educational programs and the variety of extracurricular activities offered, which are critical components of student life and essential for broadening student experiences and skills (Finn et al., 2001).

Prati, Albanesi, and Cicognani (2018) highlight another dimension by exploring the aggressive behaviors in schools, noting that a strong sense of community can mitigate such behaviors and promote a safer and more inclusive learning environment (Prati, Albanesi, & Cicognani, 2018). This finding is paralleled by Payne, Gottfredson, and Gottfredson (2003), who discuss how communal school organizations enhance student bonding and significantly reduce school disorder (Payne et al., 2003).

In summary, the literature provides a robust framework for understanding the intricate relationships between school size, student participation, and community sense. By integrating these perspectives with empirical data from qualitative research, this study aims to contribute valuable insights into the ongoing discussion about optimal educational environments and their effects on student outcomes. Through this exploration, it seeks to offer actionable recommendations for educators and policymakers striving to enhance both the effectiveness of educational institutions and the well-being of their students.

2. Methods and Materials

2.1. Study Design and Participants

This study utilized a qualitative research methodology to explore the impact of school size on student participation and sense of community. The primary data collection technique employed was semi-structured interviews, which were chosen due to their flexibility in allowing participants to express their thoughts and experiences in depth while still providing some direction to ensure the relevance of the data to the research questions.

Participants were recruited from a diverse range of educational settings, including small, medium, and large schools, to ensure a comprehensive understanding of experiences across different school sizes. The selection

process was guided by purposive sampling to focus on individuals who are directly involved with or affected by the dynamics of school size, including students, teachers, and administrators. Theoretical saturation was the goal, with the recruitment process continuing until no new themes emerged from the interviews, ensuring that the collected data sufficiently represented the studied phenomenon.

2.2. Measures

2.2.1. Semi-Structure Interview

Interviews were conducted face-to-face where possible, and via secure video conferencing platforms where necessary, to accommodate geographic and scheduling constraints. Each interview lasted approximately 45-60 minutes, was audio-recorded with participant consent, and transcribed verbatim to facilitate detailed analysis.

The semi-structured interviews were designed around a core set of guiding questions, which were supplemented by follow-up questions as needed to clarify responses or delve deeper into particular areas of interest. This approach ensured that while specific topics were addressed consistently across interviews, there was also room for participants to introduce and elaborate on issues they perceived as significant.

2.3. Data Analysis

The transcribed interviews were analyzed using NVivo, a software designed for qualitative data analysis, which facilitated the organization, coding, and thematic analysis of the textual data. Initial codes were generated based on a preliminary review of the transcripts, and these were refined and grouped into themes in an iterative process, as part of a constant comparison method. This method allowed for the identification of recurring patterns and themes related to the influence of school size on student participation and community sense.

3. Findings and Results

In the present study, a total of 29 participants were involved, comprising a diverse demographic profile essential for understanding the varied impacts of school size. The participant group included 11 students, 10 teachers, and 8 school administrators, ensuring a broad range of perspectives. Of the students, 6 attended a small school (less than 200 students), 3 attended a medium-sized school (200-500 students), and 2 attended large schools (over 500 students). The teachers were similarly distributed with 4 teaching in small schools, 3 in medium schools, and 3 in large schools. Administrators were recruited from different school settings, with 3 from small, 2 from medium, and 3 from large schools. Gender distribution was relatively balanced with 15 females and 14 males participating in the study.

Table 1

The Results of Qualitative Analysis

Categories	Subcategories	Concepts
Student Engagement	Academic Participation	Class discussions, Project involvement, Homework engagement
	Extracurricular Activities	Sports participation, Clubs, Music and arts, Volunteer groups
	Social Interaction	Peer interactions, Mentorship, Social events
	Leadership Opportunities	Student council, Leadership roles, Peer leadership
	Communication with Faculty	Open-door policies, Faculty accessibility, Student-faculty meetings
Sense of Community	Belonging and Identity	School pride, Shared values, Community events
	Support Networks	Peer support, Counseling services, Academic advising
	Safety and Inclusion	Anti-bullying policies, Inclusive practices, Safety measures
Learning Environment	Classroom Dynamics	Class size, Teacher-student ratio, Interactive learning
	Physical Environment	School layout, Facilities quality, Resource availability
Administrative Influence	Innovative Practices	Technology use, Teaching methods, Curriculum flexibility
	Policy Making	School policies, Decision-making processes, Stakeholder involvement
	Resource Allocation	Budget management, Resource distribution, Funding priorities
	Staff Development	Professional training, Staff evaluations, Recruitment strategies
Challenges and Barriers	Adaptability to Student Needs	Special education, Personalized learning, Response to feedback
	Overcrowding	Space limitations, Class availability, Facility strains

In the qualitative analysis of the effects of school size on student participation and sense of community, five main themes emerged from the data, each consisting of various subthemes with specific concepts detailed below.

3.1. Student Engagement

Student engagement was a central theme, with several aspects highlighting how students interact within their school environments. Under the subtheme of Academic Participation, concepts such as class discussions, project involvement, and homework engagement were frequently mentioned. Participants noted the impact of school size on these elements, with one student stating, "In smaller classes, it's easier to get involved and feel like your contributions matter." Extracurricular Activities also featured prominently, with sub-concepts including sports participation, clubs, and volunteer groups. A teacher remarked, "Our larger school offers more clubs and sports, but it can be overwhelming for some students to find their niche." Social Interaction, another subtheme, captured concepts like peer interactions and social events, where a student commented, "You know almost everyone in a small school, which can be comforting but sometimes limiting." Leadership Opportunities and Communication with Faculty were also noted, with students in smaller schools reporting greater ease in accessing leadership roles and faculty members.

3.2. Sense of Community

The theme of community was articulated through subthemes such as Belonging and Identity, where concepts like school pride and shared values were highlighted. "There's a real sense of pride in our achievements, no matter how small the school is," one administrator noted. The Support Networks subtheme included peer support and academic advising, with a counselor mentioning, "Support networks are crucial, and in smaller settings, they're more personalized." Safety and Inclusion was also discussed, with policies and practices aimed at fostering an inclusive environment being particularly valued in smaller educational settings.

3.3. Learning Environment

Participants discussed the Classroom Dynamics, emphasizing the impact of class size and teacher-student ratios, which one teacher described as "critical for

personalized attention." The Physical Environment, including school layout and facilities quality, was also highlighted, especially the differences in resource availability between larger and smaller schools. Innovative Practices, such as the use of technology and flexible teaching methods, were seen as more feasible in certain school sizes.

3.4. Administrative Influence

This theme encompassed Policy Making, with emphasis on how decisions are made and who is involved, where an administrator pointed out, "Smaller schools can be more agile in decision-making." Resource Allocation was another critical subtheme, with discussions around how resources are distributed impacting program offerings. Staff Development was recognized for its importance in maintaining high educational standards, particularly in how staff are trained and supported.

3.5. Challenges and Barriers

Finally, the theme of Challenges and Barriers illustrated the specific difficulties faced by different school sizes. Adaptability to Student Needs, such as personalized learning plans, was often more challenging in larger settings. Overcrowding was a significant concern, particularly in larger schools, as noted by a principal: "Managing space and resources in a large school requires constant attention to avoid overcrowding and ensure all students have access to necessary facilities."

4. Discussion and Conclusion

In the qualitative study examining the effects of school size on student participation and sense of community, five main themes were identified. These themes encompassed Student Engagement, Sense of Community, Learning Environment, Administrative Influence, and Challenges and Barriers. Each theme was further subdivided into several categories, reflecting the multifaceted nature of how school size influences various aspects of the educational experience.

The theme of Student Engagement was dissected into several categories, highlighting different aspects of how students interact within their school environments. The categories included Academic Participation, which involved class discussions, project involvement, and homework engagement, suggesting active involvement in the learning process. Extracurricular Activities was another category,

featuring sports participation, clubs, and volunteer groups, indicating a wide range of involvement opportunities outside the classroom. Social Interaction and Leadership Opportunities were also prominent, with the former category covering peer interactions and mentorship, and the latter focusing on roles like student council and peer leadership. Finally, Communication with Faculty was noted as a critical aspect, emphasizing the importance of open-door policies and faculty accessibility.

Under the Sense of Community theme, categories such as Belonging and Identity, Support Networks, and Safety and Inclusion were identified. Belonging and Identity encompassed school pride and shared values, highlighting the emotional and cultural integration within the school. Support Networks included peer support, counseling services, and academic advising, pointing to the structural and interpersonal support mechanisms in place. Safety and Inclusion covered anti-bullying policies and inclusive practices, which are essential for a secure and accepting school environment.

This theme covered the physical and psychological aspects of the school's educational spaces. Categories like Classroom Dynamics, Physical Environment, and Innovative Practices were discussed. Classroom Dynamics included elements such as class size and teacher-student ratio, impacting the direct learning experience. The Physical Environment category highlighted the school layout and facilities quality, affecting the functionality and comfort of learning spaces. Innovative Practices focused on the adoption of new technologies and teaching methods, facilitating modern and adaptive learning experiences.

The influence of school administration was captured in categories such as Policy Making, Resource Allocation, and Staff Development. Policy Making involved discussions on school policies and decision-making processes, while Resource Allocation dealt with how resources are distributed and managed. Staff Development focused on the training, evaluation, and recruitment strategies for school staff, underlining the importance of human resources in educational quality.

Finally, the theme of Challenges and Barriers illuminated some of the difficulties encountered by schools of different sizes. Categories included Adaptability to Student Needs, highlighting challenges like personalized learning and special education, and Overcrowding, which dealt with the logistical issues of space limitations and resource strains in larger school settings.

Our study's results indicate that smaller schools tend to facilitate higher levels of student engagement, particularly in academic participation and leadership opportunities. This observation is consistent with the findings of Lee and Loeb (2000), who reported that smaller school sizes are associated with improved student achievement and more positive teacher attitudes, potentially due to a more personalized learning environment (Lee & Loeb, 2000). The increased opportunities for leadership in smaller schools can be seen as a direct consequence of fewer students competing for limited roles, thus allowing more individuals the chance to assume responsibility and develop leadership skills.

A strong sense of community was notably more prevalent in smaller schools, as suggested by the increased reports of belonging and identity, support networks, and safety and inclusion. This aligns with Battistich and Hom's (1997) findings that a strong sense of community within a school correlates with reduced involvement in problem behaviors and enhanced academic motivation (Battistich & Hom, 1997). Similarly, Prati, Cicognani, and Albanesi (2018) noted that a robust school community contributes to better student well-being, which supports our observations linking smaller schools with a more cohesive community feel (Prati, Cicognani, & Albanesi, 2018).

Participants from smaller schools described their learning environments as more supportive and interactive, which correlates with Finn et al.'s (2001) discussion on the enduring benefits of small classes. These environments often provide more personalized attention and greater accessibility to resources tailored to individual needs, facilitating a better educational experience overall (Finn et al., 2001).

The flexibility in policy-making and resource allocation in smaller schools as observed in our study resonates with the findings by Payne, Gottfredson, and Gottfredson (2003), who emphasize the effectiveness of communal school organization in enhancing student bonding and reducing school disorder (Payne et al., 2003).

Despite the advantages, smaller schools face challenges such as limited resources and less diversity in course offerings, which echoes Finn et al.'s (2001) concerns about the constraints imposed by smaller educational settings. These challenges highlight the need for careful resource management and innovative program design to ensure that small schools can offer diverse and comprehensive educational experiences (Finn et al., 2001).

This study illuminated the significant effects of school size on student participation and sense of community through the identification of five main themes: Student

Engagement, Sense of Community, Learning Environment, Administrative Influence, and Challenges and Barriers. Within these themes, diverse categories such as Academic Participation, Support Networks, Classroom Dynamics, Policy Making, and Overcrowding revealed the intricate ways in which school size influences various educational outcomes. These findings underscore the complexity of educational dynamics and highlight the profound impact of school size on both student experiences and institutional effectiveness.

The results of this study clearly demonstrate that school size plays a crucial role in shaping the educational environment and the quality of student life. Smaller schools tend to offer a more connected and supportive community, which facilitates enhanced student engagement and a strong sense of belonging. However, they also face challenges in resource diversity and the breadth of opportunities available. Conversely, larger schools provide a wider range of activities and resources but may struggle with creating a cohesive community and personalized learning experiences. These insights are vital for educators and policymakers who aim to optimize educational settings to foster both academic success and personal development in students.

This study is not without limitations. The reliance on semi-structured interviews, though rich in qualitative insights, limits the generalizability of the findings across broader populations. Additionally, the study achieved theoretical saturation with a relatively small sample of 29 participants, which might not fully capture the diversity of experiences in different school settings or regions. Moreover, the focus on only qualitative data may overlook quantitative measures that could provide different perspectives on the influence of school size.

Future research should consider incorporating a mixed-methods approach to complement the qualitative insights with quantitative data, which could enhance the generalizability and depth of the findings. Additionally, expanding the participant base to include a wider variety of school settings and geographic locations could provide a more comprehensive understanding of the effects of school size. Examining the long-term impacts of school size on student outcomes post-graduation could also offer valuable insights into the enduring effects of educational environments.

The findings of this study have several implications for educational practice. Schools, especially smaller ones, should focus on maximizing the advantages of their close-knit communities by enhancing support networks and

inclusive practices. For larger schools, strategies to foster a sense of belonging and engagement among a wider student body should be prioritized, such as creating smaller learning communities within the larger school environment. Policymakers should consider these factors when designing educational policies and allocating resources, ensuring that schools of all sizes are equipped to provide optimal learning conditions and community engagement opportunities. This balanced approach could significantly improve student experiences and educational outcomes across the spectrum of school sizes.

Authors' Contributions

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

No conflict of interest was reported.

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Ethical Considerations

This study adhered to ethical principles such as confidentiality and voluntary participation.

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