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Classroom Climate and Its Impact on CWSN Learning Outcomes

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ABSTRACT— A warm, predictable, and inclusive classroom climate is repeatedly cited as a prerequisite for effective learning, yet its specific impact on the learning outcomes of Children With Special Needs (CWSN) remains under-examined in mainstream Indian school settings. This study explores how dimensions of classroom climate—emotional support, instructional clarity, peer acceptance, accessibility, and behavior management—shape cognitive and socio-emotional achievement among CWSN. Using a mixed-method survey of 100 respondents (40 CWSN students from Grades VI–VIII, 30 teachers, and 30 parents across government and private inclusive schools), the research triangulates student self-reports, teacher ratings, and parental perceptions. Quantitative data were analyzed through descriptive statistics and correlation tests, while qualitative comments were coded thematically.

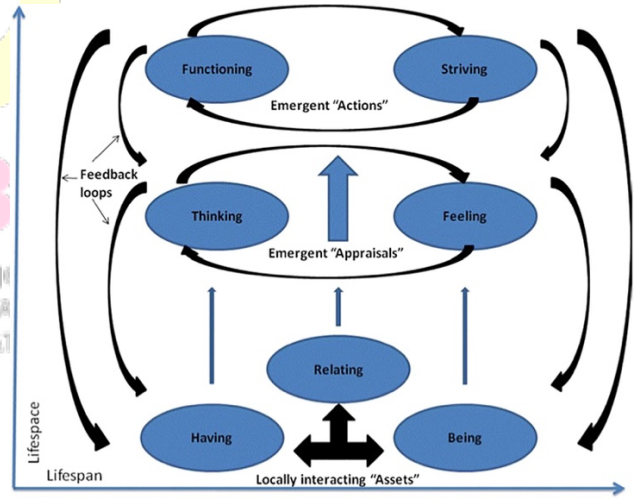


Fig.1 Classroom Climate and Its Impact,Source([1])

Results indicate that emotional safety and peer interaction quality most strongly predict improvements in comprehension scores, task persistence, and self-efficacy. Conversely, inconsistent routines, negative peer labeling, and inaccessible instructional materials correlate with

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lower engagement and achievement. The paper concludes that classroom climate is not an incidental by-product but an actionable lever for equity in learning. Recommendations include structured peer-buddy systems, Universal Design for Learning (UDL)-aligned lesson planning, predictable behavior supports, and ongoing teacher reflection tools. The scope is limited by sample size and geographical concentration, but the findings offer a practical framework for school leaders and teachers seeking to optimize climates for CWSN success.

KEYWORDS

classroom climate; CWSN; inclusive education; learning outcomes; peer acceptance; emotional safety; Universal Design for Learning (UDL)

INTRODUCTION

Inclusive education policies worldwide, and specifically in India under the Rights of Persons with Disabilities Act (2016) and Samagra Shiksha, have pressed schools to enroll and support Children With Special Needs (CWSN) in mainstream classrooms. While access has improved, meaningful participation and achievement depend on more than physical placement. The classroom climate—defined as the perceived quality of teacher-student and peer relationships, organizational structures, norms, and emotional tone—emerges as a crucial mediator between inclusion policies and actual learning outcomes.



Fig.2 CWSN Learning Outcomes,Source([2])

For CWSN, classroom climate can be the difference between marginalization and empowerment. When students perceive safety, belonging, and clarity, they are more likely to take academic risks, seek help, and persist on tasks. Conversely, climates marked by stigma or unpredictability can exacerbate anxiety, reduce engagement, and widen achievement gaps. Despite its salience, research focusing specifically on CWSN within Indian classrooms is scarce, often embedded in broader studies of inclusive practices without isolating climate as an independent variable. This study addresses that gap by empirically examining which aspects of classroom climate most significantly predict CWSN learning outcomes and by suggesting actionable strategies for educators.

REVIEW OF LITERATURE

2.1 Conceptualizing Classroom Climate

Classroom climate encompasses structural, instructional, social, and emotional layers. Fraser's (1998) learning environment framework and Wolf et al.'s socio-emotional climate constructs highlight variables such as teacher support, involvement, task orientation, and order. Contemporary inclusive education literature adds dimensions like accessibility of materials, differentiated instruction, and peer attitudes toward disability.

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2.2 CWSN and Inclusive Classrooms

Studies on inclusive education in India (e.g., NCERT, 2019; UNESCO, 2021) underscore persistent barriers: limited teacher training, inadequate assistive devices, and societal stigma. Internationally, research by Avramidis & Norwich (2002) shows teacher attitudes shaping inclusion quality, while Carter et al. (2015) emphasize peer networks as predictors of participation for students with disabilities.

2.3 Classroom Climate as a Predictor of Outcomes

Empirical studies link positive climate to academic gains and socio-emotional development. Hamre & Pianta (2005) demonstrate that emotionally supportive classrooms promote achievement, particularly for at-risk learners. For CWSN, Cook et al. (2017) found that structured routines and clear expectations reduce challenging behaviors and enhance task engagement. Yet, specific quantitative links between discrete climate factors (e.g., peer acceptance) and measurable CWSN outcomes remain underreported in the Indian context.

2.4 Universal Design for Learning and Climate

UDL's principles—multiple means of engagement, representation, and action/expression—integrate with climate by ensuring predictability, autonomy, and accessibility. A climate aligning with UDL encourages choice, provides scaffolded supports, and normalizes variability in learning, thereby benefiting CWSN and their peers alike.

2.5 Gaps Identified

Existing Indian research frequently aggregates data across diverse disability categories without examining how climate variables mediate outcomes. Moreover, few studies combine student, teacher, and parent perspectives. This study addresses these gaps through a triangulated survey and offers granular insights for classroom practice.

METHODOLOGY

3.1 Research Design

A mixed-method descriptive-correlational design was adopted. Quantitative components measured perceived classroom climate and learning outcomes using Likert-type items. Qualitative open-ended questions captured nuanced experiences and suggestions.

3.2 Sample and Sampling Technique

The total sample comprised 100 respondents: 40 CWSN students (with mild to moderate disabilities including specific learning disabilities, ADHD, low vision, and hearing impairment), 30 classroom teachers, and 30 parents/guardians. Schools were selected through purposive sampling from two urban districts and one semi-urban block to ensure variation in resources. Within schools, convenience sampling identified participants who consented and met inclusion criteria (enrolled in Grade VI–VIII inclusive classrooms for at least six months).

3.3 Tools and Instruments

1. **Classroom Climate Scale (CCS-CWSN):** Adapted from existing learning environment scales, comprising 25 items across five subscales—Emotional Safety, Instructional Clarity, Peer Acceptance, Accessibility & Supports, and Behavior Management ($\alpha = 0.86$).
2. **Learning Outcomes Checklist (LOC):** Teacher-rated and student self-assessment of academic competencies (reading comprehension, basic math operations, task completion) and socio-emotional indicators (self-efficacy, collaboration).
3. **Semi-Structured Questionnaire:** For teachers and parents to describe observed changes, barriers, and recommended improvements.

3.4 Data Collection Procedure

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Data were collected over six weeks. Students completed the CCS-CWSN with assistance from special educators to ensure comprehension. Teachers filled out the LOC and climate ratings for their classrooms. Parents provided input on perceived homework independence and motivation. Ethical protocols included informed consent, assent from children, and confidentiality of responses.

3.5 Data Analysis

Quantitative data were coded and entered into a spreadsheet. Descriptive statistics (mean, SD) summarized climate subscales and outcome scores. Pearson correlation tested associations between climate components and outcomes. Qualitative responses were thematically analyzed using an inductive approach, generating codes like "peer buddy effectiveness," "routine inconsistency," and "teacher reflection gaps."

RESULTS

4.1 Descriptive Statistics

- **Emotional Safety** (M = 3.98, SD = 0.54) showed the highest perceived strength, indicating most students felt respected and safe.
- **Peer Acceptance** (M = 3.62, SD = 0.71) varied widely, with some students reporting teasing or exclusion during group work.
- **Instructional Clarity** (M = 3.75, SD = 0.60) reflected clear explanations but inconsistent use of visual aids or simplified texts.
- **Accessibility & Supports** (M = 3.40, SD = 0.68) lagged, pinpointing irregular availability of assistive tools.
- **Behavior Management** (M = 3.55, SD = 0.65) indicated generally predictable rules but sporadic reinforcement.

Learning outcomes (scaled 1–5) averaged **3.70 (SD = 0.58)** for academic indicators and **3.85 (SD = 0.50)** for socio-emotional indicators, suggesting moderate to high achievement with room for improvement.

4.2 Correlations

Pearson correlations revealed:

- Emotional Safety and Socio-Emotional Outcomes: **r = .62, p < .01**
- Peer Acceptance and Academic Outcomes: **r = .48, p < .01**
- Instructional Clarity and Academic Outcomes: **r = .51, p < .01**
- Accessibility & Supports and Task Completion: **r = .44, p < .05**
- Behavior Management and On-Task Behavior: **r = .46, p < .05**

These findings suggest that an emotionally supportive climate most profoundly influences socio-emotional growth, while clarity and peer acceptance closely align with academic performance.

4.3 Qualitative Themes

1. **"Buddy Systems Work When Structured":** Teachers noted that pairing CWSN with empathetic peers increased participation, but success depended on clear role definition.
2. **"Predictability Reduces Anxiety":** Students and parents cited consistent schedules and visual timetables as calming, enabling students to prepare mentally.
3. **"Material Accessibility Still Patchy":** Braille or large-print materials were not always available on time; captioned videos were rare.

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4. **"Professional Development Gaps":** Teachers desired ongoing training on differentiated instruction and behavior support strategies.

4.4 Hypothesis Testing

The working hypothesis—that positive classroom climate components significantly predict CWSN learning outcomes—was supported. All five climate components showed significant positive relationships with at least one outcome variable.

DISCUSSION

The data affirm that classroom climate is a powerful lever for improving CWSN outcomes. Emotional safety's strong link to socio-emotional indicators aligns with attachment and self-determination theories, which posit that belonging and autonomy fuel motivation. Peer acceptance's correlation with academic outcomes underscores Vygotsky's emphasis on social interaction in cognitive development. Notably, instructional clarity's association with achievement confirms that transparent goals and scaffolded tasks reduce cognitive load for CWSN.

Accessibility gaps highlight structural inequities: even where teachers are supportive, absent or delayed assistive materials undermine climate consistency. Similarly, behavior management that is reactive rather than preventive detracts from predictability. These insights reinforce the need for systemic supports alongside teacher initiative.

CONCLUSION

This study demonstrates that classroom climate—comprised of emotional, social, structural, and instructional elements—significantly impacts the learning outcomes of CWSN. Emotional safety and peer acceptance emerged as particularly influential, while instructional clarity and accessibility directly affected academic performance and task completion. Transforming climate is not merely about teacher warmth; it requires intentional design of routines, differentiated resources, and peer structures. Schools must institutionalize UDL principles, invest in assistive technologies, and cultivate reflective teaching cultures. Although limited by sample size and regional focus, the findings offer clear directions: prioritize emotional and social inclusion, clarify instruction, and ensure consistent supports to convert access into success for CWSN.

SCOPE AND LIMITATION

Scope: The study focuses on middle school grades (VI–VIII) within inclusive classrooms, combining perspectives from students, teachers, and parents to provide a holistic view. It examines five specific climate components and their relationship to both academic and socio-emotional outcomes, offering a practical framework applicable to similar school contexts.

Limitations: The purposive and convenience sampling restricts generalizability beyond the selected districts. Disability categories were grouped due to small sub-sample sizes, potentially masking nuanced differences. Self-report biases may have influenced student responses, despite support from special educators. Additionally, the cross-sectional design limits causal inference; longitudinal studies could better track how climate improvements alter outcomes over time.

Recommendations and Implications for Practice

1. **Codify Emotional Safety Rituals:** Begin classes with check-ins, use calm corners, and explicitly teach empathy.
2. **Peer-Buddy and Cooperative Structures:** Rotate roles, train buddies, and evaluate group work processes to prevent tokenism.

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3. **UDL-Aligned Lesson Planning:** Offer multiple representations (visual, auditory, tactile) and varied response modes (oral, written, manipulative).
4. **Predictable Routines and Visual Supports:** Post daily schedules, use icons for transitions, and rehearse procedures.
5. **Assistive Technology and Material Accessibility:** Create a resource bank; ensure captioned videos, audio books, and alternative formats are ready in advance.
6. **Teacher Professional Development:** Provide continuous, practice-based training on differentiation, behavior supports, and collaborative problem-solving.
7. **Data-Driven Reflection:** Use brief climate surveys and outcome trackers each term to guide adjustments.

Future Research Directions

- Longitudinal studies examining climate interventions' sustained effects on CWSN achievement.
- Comparative analyses across disability types to identify differential climate needs.
- Experimental designs testing specific climate-enhancement strategies (e.g., mindfulness routines, peer-mediated instruction).
- Exploration of digital classroom climate variables in blended/online inclusive settings.

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