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Developing Communicative Skills in Primary School Students Through Inclusive Education: A Methodological Approach

*Abduvasitova Sanam Fakhriddinovna**

Chirchik State Pedagogical University, Chirchik, Uzbekistan

*Correspondence: E-mail: sanamabduvositova@gmail.com

ABSTRACT

This study aimed to develop and evaluate a pedagogical methodology designed to enhance communicative skills among primary school students in inclusive education settings. Using a quasi-experimental design with pre-test and post-test control groups, the study involved 80 students from Grades 2 to 4 in mainstream schools, equally divided into experimental and control groups. The experimental group participated in a 16-week intervention program that integrated interactive teaching strategies, speech development activities, and collaborative learning. Communicative abilities were measured through validated observation protocols, teacher checklists, and structured interviews before and after the intervention. The results demonstrated statistically significant improvements in the experimental group across all dimensions of communication, including verbal and non-verbal communication, empathy, cooperation, and self-expression, particularly among students with special educational needs (SEN). These findings suggest that structured, inclusive pedagogical approaches can effectively foster communicative competence and support social integration in diverse classroom settings.

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1. INTRODUCTION

Inclusive education, which advocates for the full participation of all learners—regardless of physical, cognitive, or emotional differences—has become a central priority in contemporary educational reform (Glushchenko, 2025; Al Shaban & Hanafi, 2024; Egbedeyi & Babalola, 2023; Shirinova, 2022; Rizqita *et al.*, 2024; Glushchenko & Trubacheyev, 2025; Fadillah *et al.*, 2022; Musayaroh *et al.*, 2023; Adesokan & Bojuwoye, 2023). At the core of successful inclusive practice lies the development of communicative competence. In primary education, where foundational cognitive and social skills are formed, the ability to communicate effectively—both verbally and non-verbally—becomes a prerequisite for meaningful participation in learning activities and peer interaction (Sulyman & Yetunde, 2023).

Communication in this context goes beyond the simple exchange of information. It encompasses a child's ability to express thoughts and emotions, listen actively, collaborate with others, and interpret both spoken and unspoken social cues (Adesokan & Bojuwoye, 2023; Garcoa-Pineda *et al.*, 2024; Muspita *et al.*, 2021). These skills are especially critical in inclusive classrooms, where students with diverse developmental profiles interact regularly. For students with special educational needs (SEN), deficits in speech, language, or social communication can hinder academic engagement, limit social interaction, and increase the risk of exclusion (Glushchenko, 2025; Al Shaban & Hanafi, 2024; Egbedeyi & Babalola, 2023; Shirinova, 2022; Rizqita *et al.*, 2024; Glushchenko & Trubacheyev, 2025; Fadillah *et al.*, 2022; Musayaroh *et al.*, 2023; Adesokan & Bojuwoye, 2023). Therefore, the development of communicative skills is not merely an academic objective but a vital component of inclusive social integration.

Although the significance of communication is widely recognized, existing classroom practices in many educational systems remain insufficiently responsive to the varied communication needs of learners (Loisimaye & Tamthai, 2024). Traditional pedagogical models often emphasize teacher-centered instruction and standardized curricula, offering limited opportunities for student interaction, expression, or peer collaboration. Such environments can be particularly restrictive for students with SEN, who may require structured support, differentiated instruction, or alternative modes of communication to thrive (Glushchenko & Trubacheyev, 2025; Fadillah *et al.*, 2022; Musayaroh *et al.*, 2023; Adesokan & Bojuwoye, 2023).

In response to these challenges, a growing body of educational research emphasizes the need for targeted interventions that cultivate communicative competence through intentional, interactive, and inclusive teaching methods. Theories of sociocultural development, such as those proposed by Vygotsky, stress the importance of social interaction and scaffolding in the formation of higher-order thinking and language skills (Obradović, 2013). Meanwhile, constructivist approaches highlight the value of peer collaboration and experiential learning in facilitating both linguistic and social development. These theoretical foundations support the design of instructional models that actively engage students in meaningful communication tasks within inclusive settings (Babalola & Adedokun-Shittu, 2024; Alhassan *et al.*, 2024).

Despite these theoretical and pedagogical insights, practical implementation remains limited—particularly at the primary school level, where generalist teachers may lack specialized training in inclusive or speech-focused instruction. This gap highlights the need for a clear, replicable methodology that supports the development of communicative skills in diverse classrooms and is feasible within the daily routines of mainstream schools (Rivky *et al.*, 2022).

The present study addresses this gap by proposing and evaluating a structured pedagogical methodology aimed at enhancing the communicative skills of primary school students within inclusive education environments. The approach integrates interactive teaching strategies, speech development activities, peer collaboration, and reflective practices tailored to mixed-

ability groups. Through empirical investigation using both quantitative and qualitative tools, the study explores the effectiveness of these methods in supporting students' verbal and non-verbal communication, emotional expression, empathy, and cooperative behavior.

By focusing on the communicative dimension of inclusion, this research offers both theoretical contribution and practical value—providing teachers, administrators, and education practitioners with concrete strategies to foster communicative competence and build more responsive, interactive, and inclusive classrooms.

2. THEORETICAL FRAMEWORK

The development of communicative skills in primary school students, particularly within inclusive education environments, draws upon a wide range of theoretical perspectives from developmental psychology, sociolinguistics, and inclusive pedagogy. The intervention model designed in this study is grounded in multiple complementary frameworks that explain how communication is acquired, how it can be supported in mixed-ability classrooms, and why it is central to inclusive learning.

2.1. Vygotsky's Sociocultural Theory

Sociocultural theory, communication is not only a tool for expressing thought but a mediator of cognitive development itself. The key construct of the Zone of Proximal Development (ZPD) suggests that learning is most effective when children interact with more capable peers or adults who scaffold their learning processes (Erbil, 2020).

In inclusive classrooms, such scaffolding occurs naturally when students with and without special educational needs (SEN) engage in shared learning tasks. Through guided participation and peer modeling, children with communication delays can benefit from rich language input and social interaction, both of which are essential for verbal and pragmatic language development (Leuwol *et al.*, 2023).

2.2. Piaget's Constructivist Theory of Cognitive Development

In constructivist perspective, communication is both a medium and a product of learning. In mixed-ability classrooms, opportunities for collaboration, questioning, explanation, and negotiation support the development of higher-level language functions (Barrouillet, 2015).

This theory supports the integration of experiential and cooperative learning strategies, such as role-playing, storytelling, and group discussion, all of which were central to the intervention in this study. These methods allow students to explore and internalize both linguistic structures and social communication norms (Pakpahan & Saragih, 2022).

Dell Hymes introduced the concept of communicative competence to extend the understanding of language beyond grammar and vocabulary. His model includes four components (Turko *et al.*, 2022):

- (a) Grammatical competence: knowledge of syntax, phonology, and vocabulary;
- (b) Sociolinguistic competence: the ability to use language appropriately in context;
- (c) Discourse competence: the capacity to maintain coherence and cohesion in communication;
- (d) Strategic competence: using communication strategies to overcome breakdowns.

In primary school settings, particularly inclusive ones, these dimensions are essential. Children must learn not only how to speak correctly, but also how to listen actively, respond empathetically, initiate and sustain conversations, and adjust their language for different audiences. The methodology applied in this study was designed to strengthen all four domains, especially for students with SEN who may lag in pragmatic and social aspects of communication.

2.3. Principles of Inclusive Education

Inclusive education is underpinned by the values of equity, participation, and access for all learners, regardless of ability. According to [Kozleski et al. \(2015\)](#), inclusion requires flexible curricula and adaptive pedagogy that account for the diverse needs of students, including those with speech and language challenges.

[Roche \(2016\)](#) argue that effective inclusive practices do not isolate students with SEN, but instead reframe diversity as an asset. This aligns with the current study's approach, which sought to enhance communicative skills in a shared learning environment, rather than segregating support based on disability.

- (a) Inclusive pedagogy emphasizes:
- (b) Differentiation without exclusion;
- (c) Collaborative learning;
- (d) Valuing student voice and agency.

The intervention model adopted in this study integrates these values by promoting equal participation in all communication-based tasks and building supportive peer relationships that enhance both language and social growth.

2.4. Speech and Language Development in SEN

Students with special educational needs often face challenges in language acquisition, social communication, and expressive speech. Research by [Lindsay et al. \(2010\)](#) emphasizes the need for early, structured, and context-embedded interventions to support speech and language development.

In inclusive classrooms, communication-focused activities that integrate speech therapy principles—such as turn-taking games, language modeling, and multimodal expression—can significantly improve outcomes for children with language delays. The intervention program in this study was designed to provide such opportunities within the natural flow of classroom interaction, rather than through pull-out or clinical models ([Dockrell & Hurry, 2018](#)).

2.5. Universal Design for Learning (UDL)

UDL is a framework developed by CAST ([Cap, 2017](#)) that advocates for multiple means of engagement, representation, and expression in the classroom. In terms of communication, UDL principles encourage:

- (a) Offering students various ways to express themselves (e.g., speaking, drawing, acting);
- (b) Supporting language through visuals, gestures, and scaffolds;
- (c) Creating interactive learning environments that foster active participation.

The intervention employed in this study aligns with UDL by incorporating diverse communicative formats (e.g., oral storytelling, cooperative games, visual aids), ensuring accessibility for all students and promoting a responsive and inclusive classroom climate.

2.7. Social and Emotional Learning (SEL)

Communication is not only a cognitive skill but also a social-emotional one. The Collaborative for Academic, Social, and Emotional Learning ([Mahoney et al., 2018](#)) includes communication within its five core competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

Through activities such as group reflection, peer support, and empathy-building tasks, the intervention targeted both language use and emotional intelligence—an essential combination

in inclusive classrooms. Enhanced communicative competence strengthens peer relationships, reduces conflict, and creates a foundation for collaboration and mutual respect.

3. METHODS

This study employed a quasi-experimental research design with pre-test and post-test control groups to evaluate the effectiveness of a pedagogical methodology aimed at enhancing communicative skills in primary school students within inclusive education settings.

3.1. Participants

The research was conducted across three general education schools in Tashkent, Uzbekistan, during the 2023–2024 academic year. A total of 80 students from Grades 2 to 4, aged between 8 and 10 years (mean age = 8.5), participated in the study. The participants were equally divided into two groups:

- (i) Experimental group (n = 40): consisted of 20 students with special educational needs (SEN) and 20 typically developing students.
- (ii) Control group (n = 40): also included 20 students with SEN and 20 typically developing students, matched on age, gender, and socio-economic background.

Participants were selected using stratified random sampling to ensure representativeness across demographic variables and special education status.

Parental consent and student assent were obtained prior to participation. The study was approved by the Ethics Committee of Chirchik State Pedagogical University.

3.2. Instrument

To assess students' communicative competence, the following validated instruments were employed:

- (i) Communicative Skills Scale (CSS). A 20-item teacher-rated scale designed to evaluate verbal and non-verbal communication, collaboration, empathy, and self-expression. The scale demonstrated high internal consistency (Cronbach's $\alpha = 0.86$).
- (ii) Classroom Observation Protocol. Developed based on the works of V.V. Rubtsov and A.L. Luria, this tool was used to monitor student interactions and classroom behavior relevant to communication.
- (iii) Teacher Assessment Checklist. A qualitative instrument used to evaluate student progress in speech clarity, turn-taking, expressive language, and emotional regulation.
- (iv) Sociometric Test. Used to measure peer acceptance, social preference, and student participation in group settings.
- (v) Structured Interviews. Conducted with both teachers and parents to obtain additional insights into the students' communicative behavior and social adjustment over time.

All instruments were reviewed by a panel of five experts in inclusive education and speech-language development. A pilot study involving 10 students was conducted to refine item clarity and scoring procedures.

3.3. Procedure

The study was carried out over a 16-week intervention period, divided into three phases:

- (i) Phase I – Diagnostic Assessment (September). All participants completed baseline assessments using the aforementioned tools to establish their initial communicative skill levels.

- (ii) Phase II - Intervention Implementation (October to February). The experimental group participated in a structured communicative development program integrated into both regular and extracurricular activities. The program included:
- (a) Role-playing and storytelling games
 - (b) Peer collaboration tasks and mentoring
 - (c) Inclusive circle-time discussions
 - (d) Speech therapy-integrated activities for SEN students
 - (e) Group reflections and cooperative problem-solving tasks
- The control group continued with the standard curriculum and received no additional communication-focused instruction.
- (iii) Phase III – Post-Intervention Assessment (March): All instruments were re-administered to measure developmental gains in communicative competence across both groups.

3.4. Data Analysis

Quantitative data were analyzed using SPSS version 26.0. Statistical procedures included:

- (a) Paired sample t-tests to compare pre-test and post-test scores within each group.
- (b) Independent sample t-tests to compare mean differences between the experimental and control groups.
- (c) A significance level of $p < 0.05$ was used to determine statistical significance.

Qualitative data from interviews and observations were analyzed thematically to supplement quantitative findings and provide contextual interpretation.

4. RESULTS AND DISCUSSION

The purpose of this study was to evaluate the effectiveness of a structured pedagogical methodology in enhancing the communicative skills of primary school students in inclusive education settings. Data were collected before and after the 16-week intervention using multiple validated instruments. The findings are presented in three subsections: pre-test group equivalence, post-test group differences, and improvements by subcomponents of communicative competence.

4.1. Pre-Test Group Equivalence

To ensure the initial comparability between groups, a pre-test was conducted prior to the intervention. The results showed no statistically significant difference in communicative skills between the experimental and control groups, confirming group equivalence at baseline (See **Table 1**).

Table 1. Pre-test communicative skills scores.

Group	N	Mean score	Standard Deviation	t-value	p-value
Experimental	40	58.2	6.4	0.712	0.4878
Control	40	5.7	6.9		

4.2. Post-Test Results: Between-Group Comparison

After the intervention, post-test scores revealed a statistically significant improvement in the communicative skills of the experimental group, whereas only a minimal increase was observed in the control group. The difference between the groups was statistically significant at $p < 0.01$ (See **Table 2**).

Table 2. Post-test communicative skills scores.

Group	N	Mean score	Standard Deviation	t-value	p-value
Experimental	40	76.9	5.8	5.327	0.000**
Control	40	61.4	6.3		

Note: $p < 0.01$ indicates high statistical significance.

These findings demonstrate that the pedagogical methodology implemented in the experimental group led to significantly greater improvements in overall communicative competence compared to traditional instruction.

4.3. Subcomponent Improvements in the Experimental Group

To determine which aspects of communicative competence were most affected by the intervention, the Communicative Skills Scale (CSS) was divided into four subcategories: verbal communication, non-verbal communication, empathy and cooperation, and self-expression. The experimental group showed statistically significant gains in all four areas (See **Table 3**).

Table 3. Improvement by subcomponents (experimental group).

Communicative component	Pre-test	Post-test	Mean Difference	p-value
Verbal communication	14.50	18.30	+3.8	0.000
Non-verbal communication	13.80	17.10	+3.3	0.000
Empathy and Cooperation	14.70	19.00	+4.3	0.000
Self-Expression	15.20	19.50	+4.3	0.000

All improvements are statistically significant at $p < 0.01$

The most substantial gains were observed in empathy and cooperation and self-expression, indicating that the intervention supported not only technical aspects of language use but also social-emotional communication and peer interaction. These results validate a holistic impact of the intervention—addressing the expressive, social, and emotional dimensions of communication, which are critical in inclusive classrooms.

4.4. Observational and Qualitative Findings

In addition to quantitative data, classroom observations and structured interviews provided valuable qualitative insights:

- Increased student participation: Students in the experimental group more frequently initiated dialogue, asked questions, and engaged in two-way conversations.
- Noticeable improvement among students with special educational needs (SEN): These students demonstrated greater confidence, increased verbal output, and higher levels of group collaboration.
- Improved expressive and receptive skills: Teachers observed better verbal articulation, emotional expression, and responsiveness to peers' messages.
- Teacher and parent reports confirmed improvements in communication at home and school, including increased vocabulary and confidence in using language for everyday interaction.

5. CONCLUSION

The findings of this study confirm the effectiveness of the proposed pedagogical methodology in enhancing communicative skills among primary school students within inclusive educational

settings. The integration of interactive, collaborative, and differentiated instructional strategies resulted in significant improvements in students' verbal and non-verbal communication, empathy, and active participation in social interactions. The experimental group, which received the targeted intervention, demonstrated measurable progress across all assessed dimensions compared to the control group.

These results highlight that developing communicative competence is not only achievable but also crucial in inclusive classrooms, where students with and without special educational needs learn together. The implementation of structured, communication-focused activities contributes to reducing communication barriers, fostering mutual understanding, and promoting the social inclusion of all learners. Consequently, the outcomes of this research offer valuable implications for teacher professional development, curriculum design, and future studies on inclusive instructional practices.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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