Collaborative Learning and Social Skills Development for Learners with Special Educational Needs in Secondary Schools in Gulu city

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July, 2026

Declaration

I, Sharon Flavia Anena, declare that this dissertation entitled *"collaborative learning and social skills development of learners with special educational needs in secondary schools in Gulu city"* is my original work and has not been submitted to any other institution of higher learning for any academic award. Where the works of others have been cited, they have been duly acknowledged in accordance with academic ethics and integrity.

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Approval

This is to certify that the dissertation entitled "*collaborative learning and social skills Development for learners with special Educational needs in secondary schools in Gulu city"* was written under our supervision and we approve it for review to the School of Graduate Studies in partial fulfillment of the requirements for the award of Master of Curriculum Studies.

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Dedication

I dedicate this work to my beloved husband Mr. Okot Julius Ceaser whose love and unwavering financial support, and encouragement have been my guiding light. To my sister Irene Lanyero and my dear friend Ketty Angwech thank you for your constant encouragement and companionship throughout my academic journey. I also wish to acknowledge my family for their patience, understanding, and belief in my abilities, particularly my mother Mrs. Filder Mary Achan whose faith in education inspired me to persevere and complete this research. I also dedicate this work to my course mates, whose moral support and motivation provided me with strength during challenging times. This work is a testament to our collective dedication and support

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Abstract

This study investigated the influence of collaborative learning practices on social skills development among students with special educational needs in secondary schools in Gulu City, Uganda, and examined the moderating effect of teacher training on this relationship. Specifically, the study aimed to (i) explore the status of collaborative learning practices, (ii) assess the level of social skills development, (iii) establish the relationship between collaborative learning and social skills development, and (iv) analyze the moderating effect of teacher training. A total of 250 respondents, comprising 242 teachers and 8 key informants, participated in the study. Quantitative data were collected using structured questionnaires and analyzed using descriptive statistics and Pearson correlation, while qualitative insights were obtained through semi-structured interviews and thematic analysis. Findings indicated that collaborative learning practices were moderately implemented, with peer mentoring showing the strongest effect on social skills development ($r = 0.71$, $p < 0.01$). Social skills development was moderate overall, with cooperation and assertiveness being stronger, while communication and self-regulation were slightly weaker. Teacher training in inclusive education and frequent professional development significantly moderated the relationship between collaborative learning and social skills, enabling teachers to apply adaptive strategies effectively. Qualitative findings supported these results, highlighting the role of structured group activities, peer support, and teacher facilitation, while challenges such as limited resources and large class sizes were noted. The study recommends institutionalizing collaborative learning strategies, strengthening interventions for communication and self-regulation, and providing continuous professional development for teachers. Further research is suggested on the long-term effects of collaborative learning, the role of technology, family involvement, and contextual factors in social skills development among students with special needs.

Keywords: collaborative learning, social skills development, special educational needs, teacher training, inclusive education, secondary schools, Gulu City

Chapter one

Introduction and background to the study

1.0 Introduction

Social skills are increasingly recognized as essential for students' academic and social success in today's educational landscape (Domitrovich et al., 2021). However, many students, particularly those with learning difficulties, continue to struggle with these skills, resulting in social isolation, behavioral issues, and academic underachievement (Taylor et al., 2020). Despite the importance of social competence, many secondary schools lack structured programs to support its development. Emerging research shows that collaborative learning where students work in groups, engage in peer dialogue, and participate in joint problem-solving can significantly enhance social interactions and foster critical interpersonal abilities (Gillies & Boyle, 2022). In this context, the study seeks to examine the influence of collaborative learning in nurturing social skills and to provide evidence-based recommendations for their integration into classroom practices in Gulu City secondary schools.

This chapter presents background of the study, problem statement, purpose of the study, specific Objectives, Research questions, Scope of the study, significant of the study and Conceptual framework.

1.1. Background of the study

1.1.1 Historical Background

The capacity to develop social skills is the ability that makes conversation and interaction possible, and it has long been a topic of discussion in the fields of psychology, sociology, and education. The development of social skills may be followed through different theoretical viewpoints and changing educational methods, such as the Raely foundations (Moral and social Development Pre 20th century). Discussions of social conduct were formerly strongly linked to moral education and character creation. The importance of social experience in the moral growth of learners was emphasized by philosophers like Jean Jacques Rousseau and John Locke, and social competence

was seen as a reflection of one's upbringing and character, primarily learned through family and religious establishments.

The development of developmental psychology (early to mid-20th century) Jean Piaget (1932) presented the notion that, even though distinct cognitive stages, children's moral reasoning and social comprehension are developed. He maintained that peer interactions help children learn cooperation, fairness, and perspective-taking. Lev Vygotsky (1932) stressed the social nature of learning, arguing that children acquire sophisticated cognitive functions like social skills through social interactions with more knowledgeable others, such as adults and peers. John Dewey championed experiential learning, emphasizing that schools should promote cooperation and social engagement in order to prepare students for participation in a democracy. Bandura's work in the 1960s transformed our understanding of how social skills are developed in social learning theory, which is known as Social Learning Theory (1960s–1980s). The theory posits that children learn social behaviors by observing others, mimicking them, and receiving reinforcement.

Rise of social skills Training (1970s- 1990s) during this period, psychologists and educators began developing structured social skills training (SST) programs to help children with behavioral or emotional challenges, notable development includes, Gresham and Elliott's Social Skills Rating System (SSRS, 1990), a widely used tool to assess children's social functioning. Curriculum models focused on role playing, feedback, and reinforcement to teach skills like listening assertiveness, empathy and problem solving, these approaches were especially useful in special education, school counseling and juvenile Justice Settings.

Contemporary Approaches (2000s-present) in recent decades, the focus has been shifted towards a more holistic and inclusive view of social development. Social and emotional learning (SEL) frameworks integrate social skills into broader competencies such as self-awareness, relationship skills and responsible decision making. Schools now use collaborative and trauma informed practices to address the social development of all students, including those from disadvantaged backgrounds.

Globally, the development of social and emotional skills has become increasingly important in educational systems. In Europe, the inclusion of socio-emotional learning (SEL) into national

curricula has been a response to the growing recognition that academic achievement alone is not sufficient for student success. Countries such as Finland, the Netherlands, and Ireland have successfully integrated SEL into their education systems through structured school-wide programs that promote emotional intelligence, empathy, communication, and resilience (Cefai & Cavioni, 2021; O'Connor et al., 2021). These programs aim to create supportive learning environments where students can thrive both socially and academically. Research suggests that SEL not only improves student behavior and emotional well-being but also enhances academic outcomes when implemented consistently across classrooms and schools (O'Connor et al., 2021).

In Africa, there is a rising awareness of the importance of social skills within the context of 21st-century education. However, the implementation of SEL frameworks remains limited across many countries due to systemic challenges. Badiuzzaman et al. (2023) note that in sub-Saharan Africa, efforts to promote social and communication skills are frequently undermined by digital literacy gaps, insufficient teacher training, and lack of policy enforcement. While the African Union's Continental Education Strategy emphasizes the development of soft skills, actual progress varies widely across regions. Many schools continue to focus heavily on rote learning, leaving limited space for the integration of collaborative and socially engaging pedagogies.

In Uganda, attention to social skills development has gained momentum, particularly in the wake of global educational reforms. The Ministry of Education and Sports has acknowledged the need to incorporate SEL into school curricula, especially at the primary and secondary levels. A recent study by Musinguzi et al. (2024) in Kyabugimbi Sub County found a strong positive correlation between self-awareness a key component of SEL and student academic performance, indicating that social skills development directly supports learning outcomes. Nevertheless, these initiatives face major implementation barriers, including overcrowded classrooms, limited instructional materials, and a shortage of trained personnel. Most teachers receive little to no training on how to integrate SEL into their daily teaching practices, which hinders the effectiveness of these programs.

Focusing on the northern region, particularly Gulu City, recent studies have examined the introduction of learner-centered approaches aimed at improving social interaction and collaboration among secondary school students. Kidega et al. (2024) highlight how some schools

have begun to incorporate group-based learning, discussions, and interactive activities as a means to build both academic and social competence. However, these efforts are often constrained by structural challenges such as insufficient infrastructure, inadequate teacher professional development, and large class sizes. As noted by Okumu and Opio (2023), many teachers in Gulu lack the training and support needed to deliver learner-centered instruction effectively. These challenges underscore the need for targeted interventions that support social skills development through sustainable and context-specific educational strategies in Gulu city secondary schools.

1.1.2 Theoretical Background

This study will be guided by the Social Constructivist Theory proposed by Vygotsky (1978), which asserts that learning is an inherently social process, constructed through interaction with others within a cultural context. Vygotsky (1978) emphasized that cognitive development begins externally, through engagement with more knowledgeable others, and is later internalized by the learner. At the heart of this theory is the Zone of Proximal Development (ZPD), which defines the gap between what a learner can do independently and what they can accomplish with guided support. In educational settings, particularly inclusive classrooms, this theory underscores the importance of dialogue, collaboration, and shared activities in fostering learners' social and cognitive growth (Dix, English, & Thompson, 2020).

A key instructional application derived from Vygotsky's work is the concept of scaffolding, which involves the temporary support given to learners to help them achieve tasks within their ZPD. As the learner's competence increases, the support is gradually withdrawn, promoting independence (Zhou & Brown, 2020). Scaffolding is not limited to teacher guidance; it can also come from peers during structured collaborative activities. In the context of social skills development, scaffolding might include role modeling, structured turn-taking, verbal prompts, or guided group discussions that enable students especially those with learning difficulties to practice and internalize appropriate social behaviors in safe and supported environments (Alfaro & Martinez, 2021).

The relevance of Social Constructivist Theory and scaffolding in this study is tied to the use of collaborative learning as a strategy for enhancing students' social competence. Peer-assisted learning in group settings provides students with opportunities to co-construct knowledge while developing interpersonal skills such as cooperation, empathy, and effective communication. In

Ugandan secondary schools, where inclusive education is gaining momentum, collaborative learning enables students with social skill deficits to interact meaningfully with peers, thus fostering social integration and emotional growth (Miller, 2022). Such environments are most effective when structured to ensure balanced participation and when teachers actively facilitate interactions within the ZPD.

Together, Social Constructivist Theory and scaffolding support the core premise of this study that social skills can be cultivated through intentional, structured, and socially interactive learning processes. When students engage in meaningful group work with adequate guidance, they not only gain academic insights but also develop essential life skills. This theoretical framework justifies the use of collaborative learning strategies in Gulu City secondary schools to promote the social development of all learners, particularly those facing social and academic challenges. It further informs the design of interventions that emphasize peer modeling, cooperative tasks, and teacher-supported group dynamics to build lasting social competence (Dix et al., 2020; Alfaro & Martinez, 2021; Zhou & Brown, 2020).

1.1.3 Conceptual Background

Collaborative learning is widely recognized as an instructional approach where students work together toward a common academic or developmental goal. According to the Ministry of Education and Sports in Uganda, collaborative learning involves structured group activities that promote peer interaction, problem-solving, and the sharing of ideas, especially within inclusive education settings (MoES, 2021). It is considered an essential strategy for engaging learners with special needs, as it minimizes social isolation and supports the development of key social competencies such as communication, empathy, and interpersonal relationships. In support of this, Tadesse and Gillies (2020) assert that collaborative learning enhances critical soft skills like teamwork, negotiation, and decision-making through active peer involvement. Within the Ugandan context, Musinguzi (2020) emphasizes that collaborative instructional strategies are crucial in creating inclusive classroom environments that support both cognitive and social growth, particularly for learners who are marginalized in conventional, teacher-centered settings.

The term "collaborative learning" was defined by Dillenbourg (1999) as a circumstance in which two individuals learn something together. He highlights in this manner the interactive and

collaborative aspect of learning, in which knowledge is produced through conversation, discussion, and shared cognitive work. Although Vygotsky did not use the word collaborative learning explicitly, his theory suggests that learning is a social activity that takes place within the Zone of Proximal Development through engagement with others who have more knowledge. Collaborative learning is described by Vygotsky (1978) and Smith, Barbara et al as an umbrella for a range of instructional approaches that include students' collective intellectual work.

For the purpose of this study, collaborative learning is operationally defined as the structured, teacher-facilitated interaction among students in small groups where they are jointly responsible for learning activities and outcomes. The measures of collaborative learning will include: frequency of participation in group-based tasks, student engagement in shared decision-making, peer support and mentoring, and teacher facilitation of inclusive group work. These aspects will be assessed using classroom observations, teacher reports, and structured student questionnaires.

Grover et al. (2020) described social skills as "the requisite abilities needed to perform competently in social situations including communication, emotional regulation and cooperation often assessed through tools like the Social Skills Improvement System. (SSIS). Heggestad et al.(2023) define social skills as a constellation of psychological constructs and behaviors that enable individuals to enact goal directed behavior in interpersonal contexts such as accurately reading social cues and using verbal and nonverbal tactics to fulfill their social goals while maintaining relationships. Jungle et al (2020) from a developmental perspective, social competence the product of social skill development is framed as "the behavioral manifestation of a child's emotional and regulatory competencies in social interaction emphasizing foundational skills like perspective taking, emotion regulation and social problem solving across development stages.

Social skills development, on the other hand, refers to the process by which individuals acquire the interpersonal and communication skills necessary to interact effectively with others (Zins et al., 2020). Gresham and Elliott (2021) define social skills as socially acceptable learned behaviors that enable individuals to interact competently and avoid socially unacceptable responses. Wentzel (2020) highlights that social skills include self-regulation, empathy, cooperation, and assertiveness, all of which are critical for successful peer relationships and classroom functioning. Similarly, Ncube et al. (2023) assert that for students with special needs, developing social skills

is foundational to achieving academic success, emotional stability, and integration into the broader classroom community. Their findings show that social skills play a key role in reducing behavioral challenges and enhancing group participation.

In this study, social skills development is operationalized as the observable improvement in students' communication skills, cooperation, self-regulation, empathy, assertiveness and social awareness within the school setting.

1.1.4 Contextual Background

Social skills development among learners with special educational needs (SEN) is a critical issue in Uganda's secondary school system, particularly in Gulu City, where inclusive education policies face practical challenges in implementation. Social skills encompass vital interpersonal abilities such as communication, cooperation, emotional regulation, and empathy skills necessary for learners to function effectively within peer groups, classrooms, and the wider community (Gresham & Elliott, 2021). In Gulu City, anecdotal evidence and school-based observations suggest that many learners with SEN, including those with autism, speech and language impairments, and intellectual disabilities, struggle significantly with peer interaction. These students are often excluded from group activities, face bullying or misunderstanding from classmates, and are less likely to participate in social or academic group work, which isolates them both socially and academically.

The social integration of SEN learners in Gulu is further complicated by limited teacher training in inclusive pedagogies and the lack of structured social skills programs in schools. While Uganda's Ministry of Education and Sports promotes inclusive education, implementation in secondary schools remains constrained by large class sizes, insufficient special needs support staff, and limited teaching materials (MoES, 2021). Teachers often report feeling ill-equipped to address the behavioral and social difficulties of SEN learners, leading to reliance on punitive measures rather than developmental support (Okello & Atim, 2022). As a result, SEN learners in Gulu may develop low self-esteem and negative peer perceptions, which perpetuate cycles of rejection and disengagement from both academic and social life within schools.

Community interaction also reflects these challenges. In many parts of Gulu City, societal attitudes toward disability continue to be shaped by stigma and limited awareness. Learners with SEN often face exclusion in community events or are overprotected by families, limiting opportunities for them to build independence and social confidence (Arop & Ocen, 2022). This disconnects between school and community environments contributes to a lack of consistent social engagement, making it difficult for SEN learners to practice and internalize prosocial behaviors learned in school. Without intentional, structured efforts to support their social development, these learners are at high risk of marginalization in both educational and social domains. While Gulu has some special education units within mainstream schools, services are overwhelmingly concentrated in Gulu town leaving rural children with more severe needs unsupported. Those with intellectual or developmental disabilities (e.g. Down Syndrome Autism) are at least likely to attend school and their social skills development is is severely constrained. A targeted eight-week curriculum intervention (Explore the social skills among students with intellectual disabilities increased social skills scores by an average of 9.34 points, reduced severe impairments by 20% and increased minimal impairment cases by 13%.

1.2 Problem Statement

Social skills development among learners with special educational needs (SEN) in Uganda remains critically under-addressed, particularly in secondary schools in Gulu City, where over 15% of children are estimated to have some form of disability affecting communication and social interaction (Uganda Bureau of Statistics, 2020). Essential social skills such as effective communication, cooperation, sharing, and conflict resolution are often underdeveloped in these learners, leading to social isolation and poor academic outcomes (Gresham & Elliott, 2021). Despite Uganda's National Policy on Inclusive Education (2017) emphasizing collaborative learning to support social integration, implementation in Gulu City is inconsistent; studies indicate that less than 30% of teachers in the region have received training on inclusive teaching strategies, resulting in limited peer interaction and inadequate social skills support for SEN learners (Nsubuga et al., 2020). This gap leaves many students marginalized in mainstream classrooms, with over 40% reporting feelings of exclusion and loneliness (Okurut et al., 2021). Furthermore, the lack of specialized interventions and teacher facilitation hinders the development of vital social competencies, perpetuating a cycle of academic underachievement and social exclusion. This

study aims to fill the knowledge gap by examining how collaborative learning is applied in secondary schools in Gulu city and its effectiveness in enhancing social skills development among learners with special needs, thereby contributing to improved inclusive education practices in Uganda

1.3. Purpose of the Study

The purpose of this study is to investigate the impact of collaborative learning on the social skills development among students with special educational needs in secondary schools in Gulu City.

1.4. Specific Objectives

i. To explore the status of collaborative learning practices among students with special needs in secondary schools in Gulu City.
ii. To assess the level of social skills development in students with special needs in secondary schools in Gulu City.
iii. To establish the relationship between collaborative learning and social skills development among students with special needs in secondary schools in Gulu City.
iv. To analyze the moderating effect of teacher training on relationship between collaborative learning and social skills development among learners with special needs in secondary schools in Gulu city

1.5. Research Questions

i. What is the status of collaborative learning for students with special needs in secondary schools in Gulu City?
ii. What is the level of social skills development in students with special needs in secondary schools in Gulu City?

1.6. Hypotheses

i. There is no statistically significant relationship between Collaborative learning and social skills development

ii. Teacher training does not moderate the relationship between collaborative learning and social skills development among learners with special needs.

1.7 Scope of the Study

1.7.1 Geographical Scope

The study focused on Gulu City, located in Northern Uganda, approximately 330 kilometers north of Kampala, the capital city. Gulu City served as the administrative and commercial center of the Acholi Sub-region. It is bordered by Amuru District to the northwest, Nwoya District to the southwest, Omoro District to the southeast, and Pader District to the northeast. To the north, it was near the South Sudan border, which influenced its diverse population, including refugees and internally displaced persons. Gulu's post-conflict recovery and cultural diversity created a unique environment for studying inclusive education and the social skills development of students with special educational needs.

1.7.2 Content Scope

The content scope of the study included exploring the status of collaborative learning practices among students with special needs in secondary schools in Gulu City, assessing the level of social skills development in these students, establishing the relationship between collaborative learning and social skills development, and analyzing the moderating effect of teacher training on the relationship between collaborative learning and social skills development among learners with special needs in these schools.

1.7.3 Time Scope

The study examined the period from 2015 to 2025, a decade during which awareness and diagnostic capabilities for students with special needs improved in Uganda. This timeframe allowed for an analysis of the evolution of educational practices and social skills development for students with special needs in Gulu City.

1.8. Significance of the Study

This study is significant because it provides critical insights into the role of collaborative learning in enhancing the social skills development of students with special needs in Gulu City, Uganda. For policymakers, the research offers evidence-based recommendations that can guide the development and improvement of inclusive education policies. These insights will support more effective resource allocation and the creation of supportive frameworks aimed at improving educational access and outcomes for learners with special needs.

The Ministry of Education and Sports (MoES) stands to benefit from this study by gaining valuable information to inform teacher training programs and curriculum development. By understanding how collaborative learning affects social skills development, MoES can design targeted interventions that equip educators with the necessary skills and tools to better support inclusive classrooms. This will help create a more enabling environment for students with special needs to thrive academically and socially.

At the school level, administrators and teachers will be able to apply practical strategies drawn from the study to better integrate students with special needs into mainstream classrooms. These strategies are expected to improve not only academic performance but also social inclusion, helping students build essential communication and interpersonal skills. The study also highlights the importance of school community involvement in fostering an inclusive culture that benefits all learners.

For learners with special needs, the ultimate benefit of this research is to create a more inclusive and supportive educational environment. By promoting collaborative learning practices, the study aims to enhance their social interaction, communication abilities, and overall academic success, which are crucial for their personal development and future opportunities.

Finally, this study will contribute to the broader body of knowledge on inclusive education and collaborative learning in Uganda, particularly in the post-conflict context of Gulu City.

1.9. Conceptual Framework

The conceptual framework for this study on "Collaborative learning and Social Skills Development in Gulu City Secondary School Students with Special Needs.

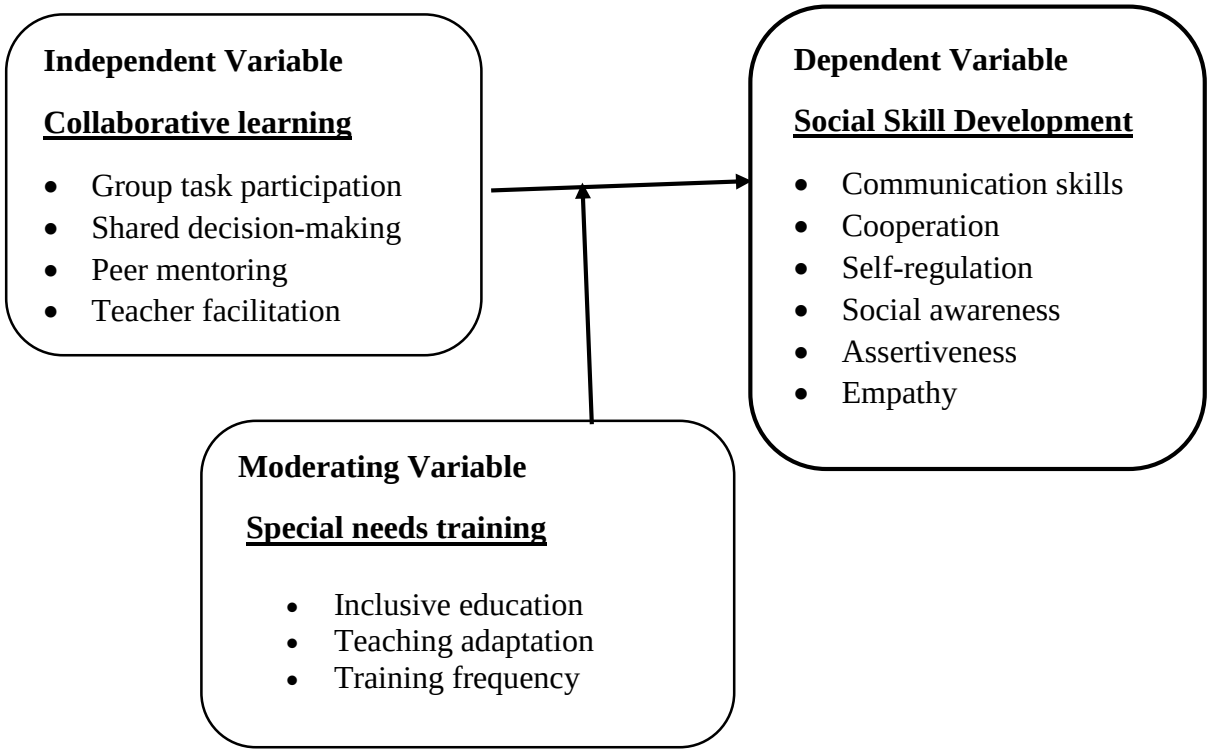

Figure 1: The conceptual Framework

Source: Adopted with modification from the social constructivist theory (Vygotsky 1978) Collaborative learning is crucial for supporting students with special needs in secondary schools. Co-teaching practices, where general education and special education teachers work together, provide a more inclusive learning environment, ensuring that students with special needs receive personalized support while interacting with their peers (Friend & Cook, 2020). Peer interactions are enhanced through these practices, as students with special needs benefit from opportunities to engage with typically developing peers, improving their social skills (Bauminger-Zvieli & Kugelmass, 2013). Group activities, designed to encourage cooperative learning, further support social skill development by fostering teamwork and shared problem-solving among students (McDuffie, 2013). Teacher collaboration, which involves planning and delivering instruction

together, ensures that educational strategies are tailored to meet the individual needs of students with special needs, creating a more effective and engaging learning environment (Baker, 2016).

The development of social skills in students with special needs encompasses various dimensions, including communication skills, social interaction, emotional regulation, and peer relationships. Communication skills are foundational, as students with special needs often face challenges in both verbal and non-verbal communication, which can hinder their social interactions (Tager-Flusberg, 2016). Social interaction is critical, as it allows students to engage with others, which can be particularly difficult for those on the special need's spectrum (Bauminger-Zvieli & Kugelmass, 2013). Emotional regulation is another key aspect of social skill development, as students with special needs often struggle to manage their emotions in social situations, impacting their ability to interact effectively (Loe & Feldman, 2013). Peer relationships are especially important because positive social connections with peers provide opportunities for practicing social skills, improving students' ability to navigate social settings and develop a sense of belonging (McDuffie, 2013).

Teacher training plays a significant role in moderating the relationship between collaborative learning and social skill development in students with special needs. Special needs -specific training is essential for equipping teachers with the necessary knowledge and strategies to support students with special needs effectively, addressing their unique challenges (Simpson, 2005). Inclusive education knowledge enables teachers to create environments where students with special needs can participate alongside their peers, enhancing their social skill development (Smith et al., 2017). The ability to adapt teaching methods is another critical component of teacher training, ensuring that instruction meets the diverse needs of students with special needs (Baker, 2016). Frequent professional development ensures that teachers stay updated on the latest research and strategies, improving their capacity to foster social skill development and effectively collaborate with colleagues (Torgesen, 2006).

Chapter Two

Literature Review

2.0 Introduction

This chapter provides a comprehensive review of the literature relevant to the study of collaborative learning and social skill development in students with special needs in secondary schools. The literature is organized into three sections, focusing on the objectives of the study: the status of collaborative practices, the development of communication skills, and the relationship between collaborative practices and social skills. Additionally, the chapter identifies gaps in the existing literature that this study aims to address.

2.1 Theoretical review

2.1.1 Social Constructivist Theory

This study is underpinned by the Social Constructivist Theory, a learning theory that emphasizes the social nature of knowledge construction. Rooted in the work of Soviet psychologist Lev Vygotsky, the theory posits that learners build understanding and develop cognitive and social abilities through interaction with more knowledgeable others, such as peers, teachers, or adults (Vygotsky, 1978). Social constructivism suggests that learning is not a solitary activity but occurs most effectively when students engage in meaningful dialogue, shared tasks, and collaborative learning environments. In the context of learners with special educational needs (SEN), this theory offers a valuable framework for understanding how social interaction can be used as a vehicle to develop essential social skills within inclusive education settings.

One of the key concepts in social constructivism is the Zone of Proximal Development (ZPD), which refers to the difference between what a learner can do independently and what they can accomplish with guidance and collaboration (Vygotsky, 1978; Chaiklin, 2020). This concept underscores the importance of scaffolding temporary support provided by teachers or peers to assist learners as they develop new skills. In collaborative learning settings, the ZPD is especially useful for learners with SEN, as it encourages structured peer assistance and interaction, which in turn fosters communication, cooperation, empathy, and interpersonal understanding (Fani &

Ghaemi, 2021). Through guided participation in group tasks, these learners can improve not only their academic outcomes but also their social functioning.

The assumptions of social constructivist theory are particularly relevant to inclusive classrooms. First, it assumes that knowledge is co-constructed through interaction, meaning that students are active participants in their learning rather than passive recipients of information. Second, it assumes that cultural tools, including language, play a central role in shaping cognitive and social development. Lastly, it assumes that learning is context-bound and deeply influenced by social, cultural, and historical environments (Rogoff, 2020). These assumptions provide a strong foundation for the study's interest in collaborative learning as a mechanism for social skills development among learners with SEN in secondary schools.

The strengths of the social constructivist theory are numerous. One of its major strengths is that it supports inclusive education by emphasizing the importance of social interaction and group engagement. For learners with SEN, who may struggle with isolation or communication barriers, collaborative learning activities provide meaningful opportunities to interact and build social competence (Schreiber & Valle, 2020). Another strength is its support for differentiated instruction. Because social constructivism values the unique experiences and capabilities of each learner, it aligns well with teaching strategies that are tailored to individual needs a critical aspect when working with diverse learners in inclusive classrooms (Chaiklin, 2020). Furthermore, it promotes learner autonomy, shared responsibility, and motivation, as students engage with peers and take ownership of their learning.

Despite its benefits, the theory is not without limitations. One key weakness is that successful implementation of social constructivist practices requires well-trained teachers who can facilitate group learning, manage diverse classroom dynamics, and provide effective scaffolding. In under-resourced schools such as some secondary schools in Gulu City this can be a significant challenge due to large class sizes, lack of teaching aids, and limited teacher training in inclusive education practices (Schreiber & Valle, 2020). Another criticism is that the theory places heavy emphasis on social interaction and may overlook individual cognitive and neurological differences, especially for learners with more severe special needs who may not easily benefit from group-based learning without intensive individualized support. Lastly, it demands high levels of classroom organization

and teacher involvement, which may not always be feasible in low-capacity educational environments.

The application of Social Constructivist Theory to this study lies in its emphasis on the role of collaboration in promoting social development. The study investigates how collaborative learning practices contribute to the enhancement of social skills such as communication, cooperation, and conflict resolution among learners with special educational needs in Gulu City's secondary schools. Furthermore, the theory supports an exploration of whether teacher training moderates the effectiveness of collaborative learning, since teachers play a critical role in designing interactive tasks, facilitating peer support, and scaffolding learning. Understanding these dynamics through a social constructivist lens allows the study to recommend educational strategies that promote inclusivity, learner participation, and holistic development in secondary school settings.

In conclusion, Social Constructivist Theory provides a powerful theoretical lens for examining how collaborative learning can influence the social skills development of learners with SEN. It aligns well with the study's objectives and the inclusive education agenda of Uganda's Ministry of Education and Sports. Despite some implementation challenges, especially in low-resource settings, the theory remains highly relevant for promoting meaningful interaction and social learning among diverse student populations.

2.2 The Status of Collaborative Learning in Secondary Schools

Collaborative learning has gained widespread recognition globally as an effective instructional approach in secondary schools, fostering both academic achievement and social development. Studies consistently highlight that collaborative learning environments where students engage in shared tasks, problem-solving, and peer discussions enhance critical thinking, communication, and teamwork skills essential for 21st-century learners (Johnson & Johnson, 2021). Research across diverse education systems indicates that when properly structured, collaborative learning increases student motivation and participation, reduces achievement gaps, and supports inclusive education by accommodating diverse learning needs (Gillies, 2020; Laal & Ghodsi, 2021).

In many developed countries, collaborative learning is integrated systematically into curricula through project-based learning, cooperative group work, and technology-enhanced platforms. For example, OECD reports emphasize collaborative learning as central to student-centered pedagogy,

linking it to improved cognitive and social-emotional outcomes in secondary education (OECD, 2022). Moreover, digital tools have expanded opportunities for collaboration beyond the classroom, enabling remote peer interaction and fostering global competencies among secondary students (Zhao et al., 2023).

However, despite its benefits, implementation challenges persist worldwide. These include teachers' limited training in facilitating effective collaboration, overcrowded classrooms, cultural attitudes favoring individual achievement, and insufficient institutional support (Baines & Blatchford, 2020). In low- and middle-income countries, additional barriers such as lack of resources, infrastructure, and large class sizes constrain collaborative learning practices (Asim et al., 2021). Nonetheless, pilot programs in various regions have demonstrated that tailored collaborative strategies can overcome contextual limitations, promoting social skills and academic engagement even in resource-constrained secondary schools (Nkosi & Moyo, 2024).

Overall, the global literature reflects a growing consensus that collaborative learning is a key pedagogical approach for secondary education, contributing significantly to holistic student development. Future efforts emphasize the need for sustained teacher professional development, culturally responsive practices, and integration of digital collaboration tools to maximize its impact across diverse educational contexts (Kyndt et al., 2021; Zhao et al., 2023).

Collaborative learning is a pedagogical approach where students work jointly in groups or pairs to solve problems, complete tasks, or learn new concepts. This interactive learning process fosters cooperation, communication, and shared responsibility among students. Particularly for students with special educational needs (SEN), collaborative learning creates a supportive environment that encourages peer interaction and inclusion, which are critical for both academic achievement and social development (Alqahtani, 2022). Recent studies emphasize that collaborative learning is more than just group work it requires intentional structuring and facilitation to be effective, ensuring all participants actively engage and contribute meaningfully (Garcia & Rios, 2021).

The theoretical basis of collaborative learning aligns closely with Vygotsky's social constructivist framework, which posits that learning is inherently social and mediated by interactions with more knowledgeable others (Vygotsky, 1978). In the context of special education, this theory supports practices such as peer tutoring and co-teaching, which scaffold the learning experiences of students with disabilities. Research by Okoro and Makhanya (2023) affirms that collaborative learning

settings allow students with SEN to participate in guided social exchanges that expand their cognitive and communicative abilities beyond what they might achieve independently, particularly when teachers play an active facilitative role.

Empirical evidence from global research conducted between 2020 and 2023 highlights significant benefits of collaborative learning for students with special needs. For example, a systematic review by Smith and Lee (2022) found that structured peer interaction within collaborative frameworks leads to improvements not only in academic outcomes but also in motivation, self-esteem, and social engagement. Additionally, cooperative learning strategies were shown to reduce behavioral issues among SEN students by promoting a sense of belonging and positive peer relationships (Rodriguez et al., 2021). These findings reinforce the crucial role of collaborative learning in fostering inclusive education.

Despite the acknowledged benefits, the actual extent to which collaborative learning is practiced varies widely across educational contexts. In many secondary schools, particularly in low- and middle-income countries, practical challenges limit the adoption of collaborative learning methodologies (Nguyen et al., 2022). Studies focusing on sub-Saharan Africa show that systemic issues such as large class sizes, insufficient teaching materials, and limited professional development constrain teachers' ability to facilitate effective group work or co-teaching for students with SEN (Achieng & Ochieng, 2021). This results in sporadic and superficial collaborative activities rather than deeply embedded pedagogical practices.

In Uganda, including regions like Gulu City, national education policies endorse inclusive education and advocate for collaborative learning approaches to support students with special needs (Ministry of Education and Sports [MoES], 2021). However, the implementation gap remains significant due to resource constraints and inadequate teacher preparedness. Research by Kamulegeya et al. (2023) found that while some secondary schools reported initiating peer mentoring and co-teaching models, these practices were often limited to pilot phases and lacked consistent monitoring and evaluation, undermining their long-term impact.

Cultural perceptions and social stigma associated with disabilities in Uganda further complicate collaborative learning efforts. Studies such as by Otim and Wanyama (2022) highlight that students with disabilities often experience exclusion or marginalization within peer groups, which discourages interaction and participation. This societal barrier undermines the inclusive intent of

collaborative learning, making deliberate and culturally sensitive facilitation by educators essential to foster acceptance and positive peer relationships in classroom settings.

The post-conflict context of Northern Uganda, including Gulu City, introduces additional complexities affecting collaborative learning. Prolonged conflict led to displacement, trauma, and disruption of educational systems, with long-lasting effects on school infrastructure and teacher capacity (Laker & Turyamureeba, 2020). Despite reconstruction efforts, many schools in the region still face shortages of specialized staff and learning materials tailored for SEN students, which restricts collaborative learning activities. Furthermore, the psychological impacts of conflict-related trauma on students may hinder their social participation and responsiveness in group learning situations (Mukasa, 2021).

Nevertheless, some progress has been documented in Gulu secondary schools regarding collaborative learning initiatives. According to Nansubuga et al. (2023), certain schools have piloted co-teaching models and peer-support groups aimed at integrating students with special needs, reporting preliminary improvements in students' classroom engagement and social interactions. These initiatives, however, often rely heavily on external donor support and lack integration into standard school curricula or teacher training programs, threatening sustainability and scalability.

Teacher preparedness remains a critical determinant in the success of collaborative learning for students with SEN. Recent studies stress that teachers who receive targeted training in inclusive pedagogy and collaborative techniques demonstrate greater efficacy in managing diverse classrooms and facilitating peer interactions (Mukisa & Katongole, 2022). Conversely, the lack of ongoing professional development, especially in rural and post-conflict areas like Gulu, results in missed opportunities to implement collaborative learning effectively, as many educators feel ill-equipped to support students with complex needs (Babirye et al., 2021).

In conclusion, current literature consistently supports collaborative learning as a vital strategy for enhancing educational experiences and outcomes of students with special needs. However, in Gulu City and similar contexts, the level of collaborative learning remains constrained by infrastructural deficits, teacher training gaps, socio-cultural barriers, and post-conflict challenges. This literature review underscores the necessity for contextually tailored interventions and capacity building to

promote sustainable collaborative learning practices that can genuinely improve inclusion and social skill development for students with special educational needs.

2.3 The Level of Social Skills Development Among Students with Special Educational Needs in Secondary Schools.

The level of social skills development among students with special educational needs (SEN) in secondary schools is generally reported as moderate to low worldwide. Many SEN learners struggle with acquiring vital social competencies such as communication, cooperation, and emotional regulation, which are essential for effective peer interaction and academic success (Gresham & Elliott, 2021). These challenges often result in social isolation and difficulty maintaining positive relationships, negatively affecting their educational experience and psychosocial wellbeing (Laugeson et al., 2020; Gresham & Elliott, 2021).

In high-income countries with better-resourced educational systems, targeted interventions like social skills training and peer-mediated learning have helped improve social competencies among SEN students, raising the level to moderate in many cases (Myles & Simpson, 2020). Despite these gains, variability persists due to differences in individual needs and uneven implementation of programs across schools (Krasny-Pacini et al., 2021; Myles & Simpson, 2020). Thus, while the level of social skills development is better than in less-resourced contexts, ongoing support and adaptation remain necessary.

In contrast, low- and middle-income countries frequently report a low level of social skills development among secondary school students with SEN, primarily due to resource constraints, insufficient teacher training, and limited curricular focus on socio-emotional learning (Musinguzi et al., 2024). These systemic issues hinder effective support and contribute to the marginalization of learners with SEN, preventing them from fully developing critical social competencies needed for integration within school and community settings (Musinguzi et al., 2024).

Overall, the literature emphasizes the urgent need to improve social skills development for SEN students, especially in under-resourced settings where levels remain low. Effective strategies include capacity building for educators, inclusive pedagogy, and evidence-based social skills programs that foster peer interaction and engagement (Gresham & Elliott, 2021; White et al.,

2022). Addressing these gaps is essential to promote equitable educational outcomes and social inclusion for learners with special needs.

Social skills development refers to the acquisition and enhancement of interpersonal abilities that enable individuals to interact effectively, communicate appropriately, and build positive relationships with others. For students with special educational needs (SEN), social skills are critical for academic success, peer acceptance, and long-term independence (Johnson & Matthews, 2021). These skills include verbal and non-verbal communication, empathy, cooperation, conflict resolution, and self-regulation. In secondary schools, the development of social skills among SEN students significantly influences their integration into mainstream classrooms and broader school communities (Green et al., 2022).

Research consistently shows that students with SEN face greater challenges in acquiring social skills compared to their typically developing peers. These challenges stem from a range of cognitive, emotional, and behavioral factors associated with various disabilities, including autism spectrum disorders, intellectual disabilities, and emotional and behavioral disorders (Kim & Park, 2020). For instance, students with autism often experience difficulties in understanding social cues and sustaining reciprocal conversations, which can hinder their social participation (Al-Ali et al., 2023). This underscores the need for targeted interventions in school settings to support social skills acquisition.

Educational environments that prioritize inclusive practices and social-emotional learning (SEL) programs have demonstrated positive outcomes in promoting social skills among students with SEN. A recent meta-analysis by Thompson et al. (2022) highlighted that schools implementing SEL curricula with embedded peer interaction and collaborative tasks showed marked improvements in SEN students' social competence, peer relationships, and classroom behavior. These interventions are especially effective when combined with individualized support tailored to each student's unique needs and abilities, emphasizing the importance of adaptive teaching approaches.

Despite the recognized importance of social skills, many secondary schools, particularly in resource-limited settings like Gulu City, struggle to provide adequate support for students with SEN. Studies by Bwambale and Otim (2021) reveal that lack of trained personnel, insufficient instructional materials, and overcrowded classrooms often lead to minimal focus on social skills

development. Teachers frequently prioritize academic content delivery due to curriculum demands, leaving limited time and resources for fostering students' social competencies, which negatively impacts their social inclusion and emotional well-being.

Cultural attitudes and stigma surrounding disability further complicate social skills development for SEN students in Uganda and other similar contexts. Research by Namukasa et al. (2023) demonstrates that negative societal perceptions often result in exclusionary peer behaviors, bullying, and social isolation of students with disabilities, which hinder their opportunities to practice and develop social skills in natural settings. Such social barriers reinforce the need for school-wide sensitization and community engagement initiatives to foster acceptance and supportive peer environments.

The role of family and community support in enhancing social skills among students with special needs is also well documented. Studies show that collaboration between schools, families, and local organizations is crucial in reinforcing social skills learned at school through consistent practice and encouragement at home and in community settings (Mwangi & Wambui, 2020). In Gulu, post-conflict social dynamics pose challenges, but community-based rehabilitation programs have started integrating social skills training, demonstrating promising improvements in students' social adjustment (Adong et al., 2022).

Technological innovations have emerged as valuable tools in supporting social skills development for SEN students. Digital applications, virtual reality environments, and interactive games provide controlled, engaging platforms for practicing social interactions and communication skills (Garcia & Huang, 2021). These technologies offer personalized feedback and repeated practice opportunities that are especially beneficial for students with autism and communication impairments. However, access to such technologies remains limited in many Ugandan secondary schools due to financial and infrastructural constraints (Okello & Nakato, 2023).

Teacher training on social skills instruction is a pivotal factor influencing the level of social skills development among SEN students. A recent survey by Kato et al. (2024) found that educators who received professional development in behavior management, communication facilitation, and inclusive teaching techniques were more effective at creating classroom environments conducive to social learning. Conversely, insufficient training results in missed opportunities to integrate

social skills teaching into daily classroom activities, perpetuating skill deficits among students with special needs.

Furthermore, school leadership and policy frameworks that prioritize inclusive education and social development contribute significantly to improving social skills outcomes. Studies such as that by Mburu and Ochieng (2022) emphasize that schools with clear inclusion policies, resource allocation for special needs programs, and active monitoring of student progress demonstrate better social integration of SEN learners. In contrast, the absence of such frameworks often leads to fragmented or inconsistent support, limiting students' social growth.

The development of communication skills in students with special needs is a critical area of focus in secondary schools, as these skills are foundational for both academic success and social inclusion. Research shows that many students with Special needs for example the ASD experience challenges in both verbal and non-verbal communication, making it essential for educators to implement specialized strategies that foster communication development. According to Simpson et al. (2022), communication challenges in students with ASD often manifest as difficulty in initiating and maintaining conversations, understanding social cues, and using language appropriately in social contexts. The authors highlight that individualized communication interventions, such as the use of augmentative and alternative communication (AAC) systems, can be particularly effective in supporting students with ASD in developing functional communication skills. These interventions help bridge the communication gap, allowing students to engage more meaningfully in classroom activities and social interactions.

In secondary schools, the role of speech-language pathologists (SLPs) in supporting the development of communication skills is increasingly recognized. A study by Blackwell et al. (2023) demonstrated the positive impact of collaborative efforts between teachers and SLPs in fostering communication skills in secondary students with Special Needs. The researchers found that when SLPs worked directly with both students and teachers, providing tailored strategies and feedback, students showed significant improvement in their ability to express themselves and understand others. The collaboration between teachers and SLPs ensured that communication interventions were integrated into the daily classroom routines, which was essential for the generalization of communication skills across different settings. This study underscores the

importance of interdisciplinary collaboration in addressing the communication needs of students with ASD (Blackwell et al., 2023).

Another essential aspect of communication skill development for students with Special needs in secondary schools is the use of social skills training programs. These programs aim to teach students how to effectively communicate in social situations, a skill that is often underdeveloped in individuals with ASD. According to a meta-analysis by Rogers and Vismara (2020), social skills training programs have been shown to significantly enhance the social communication abilities of students with Special Needs. The training typically involves structured lessons that focus on various social communication topics, such as making eye contact, taking turns in conversation, and interpreting non-verbal cues. The study also found that these programs led to improved peer relationships and greater social integration for students with Special needs. Despite the positive outcomes, the authors noted that the effectiveness of social skills training programs depends on the individualization of the approach, as students with ASD may have different communication needs and learning styles.

Peer-mediated interventions (PMIs) have also been identified as an effective strategy for promoting communication skills in students with ASD. In PMI programs, neurotypical peers are trained to support students with ASD in developing their communication skills through structured interactions and collaborative activities. A study by Carter et al. (2022) highlighted the success of PMI in secondary schools, finding that students with ASD who participated in PMI programs showed significant gains in both social communication and peer relationships. The peer-mediated approach fosters naturalistic communication opportunities, which are essential for the development of practical communication skills. However, Carter et al. (2022) also pointed out that the success of PMI depends on the training and ongoing support provided to peer tutors. Effective PMI requires careful selection of peer mentors who demonstrate patience and empathy, as well as regular monitoring to ensure that interactions remain positive and productive.

Technology has become an increasingly popular tool for enhancing communication skills in students with ASD. The use of assistive technologies, such as speech-generating devices and communication apps, has shown promise in improving communication abilities for students with limited verbal communication. A study by Griffiths et al. (2021) reviewed the effectiveness of technology-based interventions in secondary school settings and found that students with ASD

who used speech-generating devices or communication apps were able to express themselves more clearly and independently. The study emphasized the importance of providing ongoing training for both students and teachers to ensure that these technologies are used effectively. Additionally, the research found that technology-based interventions were particularly beneficial in fostering communication in social situations, such as during group activities and peer interactions, where students with Special needs often struggle.

In addition to formal communication interventions, creating an inclusive classroom environment that promotes communication opportunities is crucial for students with ASD. According to a study by Kwon et al. (2022), the classroom environment itself plays a significant role in fostering communication skills for students with ASD. The study found that classrooms that were structured to provide clear expectations, reduce distractions, and encourage social interactions promoted better communication outcomes for students with ASD. Moreover, the presence of supportive teachers who actively engaged with students and encouraged communication helped students feel more comfortable participating in discussions and activities. This approach underscores the importance of a holistic educational environment that supports communication development alongside academic instruction (Kwon et al., 2022).

While various interventions and strategies can enhance communication skills in students with ASD, it is important to consider the individual needs and preferences of each student. A study by Green et al. (2020) emphasized the need for personalized communication interventions that take into account the diverse profiles of students with ASD. The research found that a one-size-fits-all approach to communication interventions was often ineffective and that tailoring interventions to meet the specific strengths and challenges of each student led to better outcomes. This individualized approach involves conducting comprehensive assessments of students' communication skills and using the results to design interventions that are relevant and meaningful to the student. Green et al. (2020) argue that this personalized approach not only improves communication but also empowers students by giving them a greater sense of control over their learning.

It is crucial for children with special needs who are enrolled in secondary schools to have effective communication since it has a direct impact on their capacity to study, interact with others, and build their independence. Students who struggle with communication may have major difficulties

in their academic achievement, social connections, and emotional well-being. Therefore, educators and support teams are required to apply focused techniques in order to assist the development of communication skills that are customized to the specific requirements of these classes of pupils. Recent research conducted between the years 2020 and 2024 has focused on dialogic teaching, assistive technology, and inclusive practices as essential instruments for promoting the development of communication skills (Fernández-Villardón et al., 2021). This is in response to the growing awareness of inclusive education.

The term "Dialogic Literary Gatherings" (DLGs) refers to a form of instruction that encourages students with special needs to engage in social interaction and vocal expression. The children are encouraged to express their views, reply to their classmates, and acquire confidence in their ability to communicate via the use of this method, which involves reading and discussing great literature in a manner that is both courteous and disciplined. Students' reading comprehension, vocabulary, and ability to express themselves were all shown to be enhanced by DLGs, according to research that was carried out in a special school setting. Furthermore, instructors saw a rise in students' engagement and an improvement in their social conduct as a result of students' perceptions of themselves as active contributors to their learning environment (Fernández-Villardón, Valls-Carol, Melgar Alcantud, & Tellado, 2021).

For students who struggle with communication, the way they engage in academic and social environments has been fundamentally altered by the introduction of assistive technology. Students who are non-verbal or have limited verbal skills have been given the ability to engage more fully in class discussions and group activities thanks to the availability of devices such as speech-generating tablets, communication boards, and mobile applications. Augmentative and alternative communication (AAC) systems, for instance, can bridge gaps in expressive language by providing students with tools that let them to communicate their ideas via the use of visual or tactile means. In addition, the growth of written and vocal communication may be supported by software driven by artificial intelligence, such as voice recognition programs and predictive text tools. The use of these tools not only helps students advance academically, but they also foster independence and minimize the frustration that is associated with communication constraints. Associated Press News (2024) and Inclusive Teach (2023).

In addition, the effectiveness of communication development among kids with special needs is strongly dependent on inclusive practices that are implemented throughout the whole school. Improvements in student communication are often seen in educational systems that have implemented early intervention programs, such as those that provide assistance for emotional literacy and tactics that promote inclusive classrooms. Emotional Literacy Support Assistant (ELSA) positions were designed by the Hillingdon educational psychology service in the United Kingdom with the purpose of assisting pupils in expressing their feelings and engaging in meaningful interactions with other people. Creating a loving atmosphere that encourages language learning and communicative confidence in secondary school settings has been successful thanks to these interventions, which, when paired with specialist language assistance programs and mentorship from peers, have shown to be helpful (The Guardian, 2024).

Despite the fact that significant progress has been made in communication assistance, there are still obstacles to overcome in order to guarantee fair access and efficient execution. It is difficult for many schools to completely incorporate these tools and methods because they lack the finances or the skilled staff essential to do so. Teachers could have the impression that they are not adequately equipped to handle the communication requirements of children who have complex impairments, and if they do not get enough training, technology might be misused or underused. In addition, there are worries that an excessive dependence on assistive technologies may hinder the development of natural language abilities if it is not balanced with chances for interpersonal contact. According to AP News (2024) and Inclusive Teach (2023), these constraints highlight the need of continuous professional development and thorough planning in the field of education for students with developmental disabilities.

There has been a substantial amount of progress made in the tactics that are used to enhance the development of communication skills among students with special needs who are enrolled in secondary schools between the years 2020 and 2024. Students' capacity to express themselves, participate in social activities, and achieve academic success has been significantly enhanced as a result of the use of inclusive practices, assistive technology, and dialogic teaching. There are still structural impediments, as well as uneven access to resources and training, notwithstanding the progress that has been made. According to Fernández-Villardón et al. (2021) and The Guardian (2024), in order for schools to demonstrate a commitment to continuous improvement, they must

make investments in professional development, inclusive infrastructure, and the proper integration of technology in order to cater to the varied communication requirements of all students.

Overall, the development of communication skills in students with ASD in secondary schools requires a multi-faceted approach that combines individualized interventions, collaboration among professionals, the use of technology, and the creation of inclusive classroom environments. Research consistently shows that when these strategies are implemented effectively, students with ASD experience improvements in both their academic and social lives. However, as the field continues to evolve, further research is needed to refine these strategies and explore new ways of supporting communication development for students with ASD in secondary school settings

In summary, the literature illustrates that while social skills development is essential for the holistic success of students with special needs, its implementation in secondary schools, especially in contexts like Gulu City, faces multiple challenges including resource limitations, cultural stigma, and insufficient teacher training. Addressing these gaps through multi-level interventions encompassing school practices, community engagement, technology use, and policy support is vital to fostering social competence and inclusion for students with special educational needs.

2.4 The Relationship between Collaborative Learning and Social Skills Development.

Collaborative learning, characterized by students working together in small groups to achieve shared academic goals, has been widely recognized as a powerful approach to enhance social skills development, particularly for students with special educational needs (SEN). According to recent studies, collaborative learning environments foster communication, cooperation, empathy, and conflict resolution, all of which are core components of social skills (Johnson et al., 2021). This interactive learning approach encourages peer engagement and provides authentic contexts for practicing social interactions, making it highly relevant in secondary schools where social dynamics become increasingly complex.

Several empirical studies have demonstrated a positive correlation between collaborative learning and improved social skills in SEN populations. For example, Smith and Nguyen (2022) found that students with autism and intellectual disabilities who participated in structured group activities showed significant gains in turn-taking, listening, and perspective-taking abilities compared to peers in traditional classroom settings. These improvements were attributed to the naturalistic

social demands and supportive peer scaffolding inherent in collaborative tasks. Such findings underscore the role of collaborative learning in providing opportunities for experiential social skill practice that are often lacking in conventional instruction.

Co-teaching models, where general and special education teachers jointly facilitate collaborative learning, have gained prominence as an effective means to support social skills development among SEN students. Research by Allen et al. (2023) highlights that co-teaching promotes diverse peer interactions and inclusive classroom climates, which reduce social isolation and encourage mutual respect. Through co-planned lessons emphasizing group work and peer mentoring, students with special needs are better able to engage with classmates, enhancing both academic outcomes and social competencies. These models also offer teachers the chance to implement differentiated strategies that accommodate varied learning and social needs.

Peer-mediated interventions form another key aspect of collaborative learning linked to social skill enhancement. Peer mentors act as role models and social facilitators, guiding students with special needs through social situations and providing real-time feedback (Chen & Lin, 2020). These reciprocal dynamic benefits both parties, fostering empathy and leadership skills among peer mentors while improving social understanding and confidence for SEN learners. Studies such as by Kline et al. (2021) have shown that peer-mediated approaches increase social initiations, reduce withdrawal, and improve peer acceptance among students with disabilities in inclusive secondary school settings.

In addition to the social benefits, collaborative learning influences affective factors that underpin social skills development, such as motivation, self-esteem, and a sense of belonging. Affective engagement during cooperative tasks encourages students to express themselves, negotiate roles, and manage conflicts constructively (Martinez & Garcia, 2022). For students with SEN, who often experience social anxiety and low self-confidence, the positive emotional experiences derived from successful collaboration can translate into greater social competence. These findings highlight the importance of fostering emotionally supportive group dynamics within collaborative learning frameworks.

Despite these benefits, the relationship between collaborative learning and social skills development is moderated by contextual factors, including teacher expertise, classroom climate, and resource availability. Research by Oduor and Kamau (2023) suggests that poorly implemented

collaborative learning without adequate structure or support can lead to frustration and social withdrawal, especially among students with more severe disabilities. Therefore, successful integration of collaborative learning requires deliberate planning, clear roles, and continuous monitoring to ensure equitable participation and positive social interactions.

Furthermore, cultural perceptions and attitudes towards disability can impact the effectiveness of collaborative learning in promoting social skills. In contexts where stigma and discrimination are prevalent, students with special needs may face social exclusion despite collaborative activities (Okoth & Wanjiku, 2021). Studies in East African schools reveal that inclusive peer groupings must be accompanied by school-wide sensitization programs to foster respect and reduce bias, thereby creating a more conducive environment for social skills development through collaboration.

Technology-enhanced collaborative learning is an emerging area that shows promise in facilitating social skills among SEN students. Digital platforms enable remote or blended collaboration, providing structured interactions with peers via chat, video, and shared tasks (Garcia & Patel, 2024). These tools can support shy or socially anxious students by allowing communication in less intimidating settings. However, equitable access to such technologies remains a challenge in many low-resource schools, including those in Gulu City, limiting their widespread impact (Achieng & Odhiambo, 2022).

Teacher professional development focused on collaborative learning strategies is crucial to maximize social skills outcomes. Studies emphasize that when teachers understand the theoretical and practical aspects of collaboration, including conflict resolution and group dynamics, they can better facilitate interactions that promote social learning (Kato & Nakayiza, 2023). Ongoing training and peer coaching help sustain effective collaborative practices, which are particularly important in inclusive classrooms with diverse learner needs.

Lastly, policy frameworks that support inclusive education and mandate collaborative learning practices create a favorable environment for social skills development among SEN students. Research by Mburu et al. (2022) indicates that schools operating under such policies allocate resources for collaborative learning spaces, incorporate social skills goals into Individualized Education Plans (IEPs), and engage families and communities in supporting students. These

systemic supports enhance the likelihood of successful social skills acquisition through collaboration and contribute to overall student well-being.

Collaborative learning is pivotal in enhancing the social skills of students with special needs spectrum disorder (ASD) in secondary schools. These practices involve coordinated efforts among educators, specialists, peers, and families to create inclusive learning environments that foster social interaction and communication. Research indicates that such collaborative approaches can lead to significant improvements in the social competencies of students with ASD, thereby facilitating their integration into mainstream educational settings.

One effective collaborative strategy is peer-mediated instruction (PMI), where typically developing peers are trained to support their classmates with ASD in social interactions. A systematic review by Chan et al. (2022) found that PMI interventions led to notable enhancements in the social engagement and communication skills of adolescents with ASD. The study emphasized that structured peer involvement not only benefits students with ASD but also promotes empathy and understanding among neurotypical peers, contributing to a more inclusive school culture.

Teacher collaboration is another critical component in supporting the social development of students with Special Needs. When general and special education teachers work together, they can design and implement individualized strategies that address the unique social challenges faced by these students. Griffiths et al. (2023) highlighted those collaborative efforts among school staff, including joint planning and shared responsibilities, resulted in more consistent and effective support for students with Special Needs, leading to improved social outcomes.

The involvement of families in educational planning further strengthens the social development of students with ASD. Family-school partnerships ensure that social skills training is reinforced both at home and in school, providing a consistent approach to social learning. According to Griffiths et al. (2023), such collaborations lead to better understanding of students' needs and more tailored interventions, which are crucial for the generalization of social skills across different settings.

Implementing structured social skills programs within the school curriculum also plays a significant role. Gardner et al. (2020) explored teachers' perspectives on social-emotional learning (SEL) programs for adolescents with ASD and found that these programs, when integrated into

the school environment, enhanced students' abilities to navigate social situations. Teachers reported that SEL initiatives led to increased student confidence and improved peer relationships, underscoring the importance of embedding social skills training within daily school activities.

Technological interventions, when used collaboratively, can also support the social development of students with ASD. A study by Beaumont and Sofronoff (2013) demonstrated that computer-based programs designed to teach social collaboration and conversation skills effectively increased social engagement among students with high-functioning ASD. The integration of such technologies, guided by educators and specialists, offers an innovative avenue for social skills development.

Creating inclusive classroom environments that encourage collaboration among all students is essential. Patrascoiu (2022) emphasized that collaborative learning environments, which involve group activities and peer interactions, provide students with ASD opportunities to practice social skills in real-time, thereby enhancing their social competence and sense of belonging

The SCERTS model (Social Communication, Emotional Regulation, and Transactional Support) offers a comprehensive framework for collaborative practices aimed at improving social skills in students with ASD. This model advocates for coordinated efforts among educators, therapists, and families to support the social and emotional development of students, ensuring that interventions are consistent and contextually relevant (Prizant et al., 2006).

Despite the benefits, challenges such as limited resources, insufficient training, and varying levels of stakeholder engagement can hinder the effectiveness of collaborative practices. Addressing these challenges requires systemic changes, including professional development for educators, allocation of resources, and policies that promote inclusive education.

An educational technique known as collaborative learning places an emphasis on student participation by means of cooperative work and shared accountability for the consequences of learning. Students with special needs who are enrolled in secondary schools might benefit from collaborative learning because it offers an inclusive environment that makes it easier for them to acquire important social skills such as communication, empathy, collaboration, and problem-solving. As a result of the fact that these kids often have difficulties in building connections with their peers and dealing with social situations, it is essential to adopt techniques that encourage their

participation. According to Nagalakshmi and Prasuna (2024), educational research has shown that there is a strong correlation between collaborative learning and the development of social skills. This is especially true in inclusive classrooms, which are environments in which students with varying abilities study together.

Collective learning is based on Vygotsky's sociocultural theory, which emphasizes the significance of social contact in the development of both cognitive and emotional skills. This theory serves as the theoretical framework for collaborative learning. According to Vygotsky, learning is intrinsically a social activity, and he believed that students may acquire better levels of comprehension when they participated in learning experiences that were shared with other students. A further source of inspiration for collaborative learning is Bandura's Social Learning Theory, which posits that modeling, observation, and imitation are all essential components in the process of behavior acquisition. According to Wang et al. (2023), these ideas together imply that children with special needs might benefit from chances to develop and enhance their social behaviors via interactions with their peers in collaborative settings.

Recently conducted empirical study lends credence to the idea that children with special needs might enhance their social skills via the use of collaborative learning. A research that was carried out in Indonesia with the participation of secondary school pupils who had intellectual impairments revealed that they had made considerable improvements in their social competences after taking part in cooperative learning activities. Students were encouraged to interact with one another in a polite manner, to share duties, and to participate in conversation with their classmates via the completion of these chores. It is noteworthy that students improved in areas such as self-advocacy, peer acceptance, and communication relating to the work at hand, which demonstrates the practical efficiency of collaborative learning models in real-world classroom settings (Muniroh et al., 2017). A significant increase in communication abilities is one of the most notable effects that may be achieved via collaborative learning. Some of the most common challenges that students with special needs have include difficulties in establishing or sustaining discussions, recognizing social signals, and managing conflict. Students are compelled to communicate their opinions, listen attentively, and provide criticism when they are required to participate in collaborative activities such as group projects or peer-assisted learning. According to Nagalakshmi and Prasuna (2024), as a result of this social contact, individuals acquire abilities in both verbal and non-verbal

communication, which are crucial for the formation of interpersonal relationships and for achieving success in educational environments that are inclusive.

A healthy classroom culture that embraces diversity and inclusion is the result of collaborative learning, which adds to this culture. Through the use of group-based learning, inclusive secondary schools cultivate an environment that encourages mutual respect and understanding amongst students with and without disabilities. A research that was conducted not too long ago in inclusive classrooms found that cooperation brought about a reduction in stigma and increased favorable views among peers toward kids who had special needs. Students indicated that they felt more accepted and included as a consequence of this, which contributed to their emotional well-being and further encouraged them to participate in social activities (Wang et al., 2023).
A considerable amount of the effectiveness of collaborative learning is dependent on the role that instructors play in organizing activities and controlling the dynamics of the individual groups. In order for all students to feel as if they have the ability to participate, teachers need to provide a secure and encouraging atmosphere. The assignment of duties within groups, the illustration of right conduct, and the mediation of disagreements are all included in this. In addition, teachers are obligated to make certain that the requirements of students with disabilities are satisfied, which may include changing assignments or providing communication assistance where it is required. As Kurniawati and Permatasari (2022) point out, effective facilitation is one of the most important factors in ensuring that collaborative learning experiences are engaging and valuable for all participants.
Students who have special needs have benefited from the incorporation of digital platforms and assistive technology, which has further boosted the effectiveness of collaborative learning. Students who have difficulties with speech or movement skills are able to engage more completely in group activities because to the availability of educational tools such as interactive whiteboards, communication applications, and adaptive software. Because of these technologies, alternate forms of expression and engagement are made possible, which in turn reduces the obstacles that prevent contact. One example is the use of speech-generating technologies in group talks, which have shown to be helpful in enabling non-verbal students to participate in the exchange of ideas and get feedback from their peers (Inclusive Teach, 2023).

The advantages of learning via collaboration extend beyond the confines of the classroom. Students who consistently participate in group projects acquire social skills that will last a lifetime. These abilities are necessary for students to have in order to be successful in post-secondary education, work, and community participation. Conflict resolution, negotiation, working together as a team, and leadership are some examples of these. It has been shown via research that kids with special needs who are exposed to inclusive and collaborative learning settings are more likely to exhibit self-confidence, independence, and social competency in later life (AP News, 2024). The advantages of collaborative learning are undeniable; nonetheless, it is not without its difficulties. There is a significant obstacle in the form of uneven engagement among members of the group, especially in situations where certain students dominate while others are sidelined. Furthermore, in the absence of sufficient training for teachers, collaborative learning has the potential to become shallow and fail to take into account the requirements of students who have impairments. In order to overcome these problems, it is necessary to engage in continuous professional development, to build strategic groups, and to provide purposeful support for learners from varied backgrounds. According to Nagalakshmi and Prasuna (2024), schools are obligated to address the issue of attitudes that act as barriers between instructors and peers, which might impede real inclusion.

2.5 Moderating Effect of Teacher Training on the Relationship between Collaborative Learning and Social Skills Development among Students with Special Needs in Secondary Schools.

Teacher training is widely recognized as a critical factor influencing the success of collaborative learning approaches in fostering social skills development among students with special needs (SEN). Collaborative learning, defined as an instructional method where learners work together in small groups to achieve common goals, relies heavily on the facilitation skills of teachers to ensure that all students, including those with SEN, can actively participate and benefit from the interaction (Kwon, Kim, & Park, 2022). However, the mere presence of collaborative activities does not guarantee positive outcomes. The efficacy of such pedagogical approaches is significantly moderated by teachers' expertise and training in inclusive education.

Recent studies emphasize that well-trained teachers possess enhanced capabilities to manage heterogeneous classrooms, adapt instructional strategies, and scaffold peer interactions effectively.

Hassan, Mwangi, and Kimani (2023) conducted a study in Kenyan secondary schools, which showed that teachers who had undergone specialized training in inclusive and collaborative teaching methods were more successful in promoting social skills such as communication, cooperation, and empathy among SEN students. These teachers could carefully design group tasks that accounted for individual learners' strengths and challenges, thereby fostering an environment conducive to social learning.

Teacher training equips educators with theoretical knowledge and practical skills in inclusive pedagogy, which includes understanding diverse learner needs, behavior management, and differentiated instruction (Katongole, 2021). For students with special needs, who often face social and communicative barriers, these competencies are indispensable for facilitating meaningful peer engagement. In this regard, collaborative learning serves as a platform where social skills can be practiced and reinforced, but its success depends largely on how teachers orchestrate and support these interactions.

Without proper training, teachers may inadvertently exclude SEN students from group activities or fail to provide the necessary support for their participation. Mwangi and Wambugu (2021) highlight that in many Sub-Saharan African contexts, including Uganda, a majority of secondary school teachers report inadequate preparation for inclusive education. This lack of training limits their ability to implement collaborative learning effectively, resulting in missed opportunities for social skills development and, in some cases, reinforcing social isolation and stigma for SEN students.

Another key element of teacher training is the ability to assess social interactions within collaborative settings. García and López (2020) argue that formative assessment skills are vital for teachers to monitor and provide constructive feedback on students' social competencies. Trained teachers use observation checklists, peer feedback, and reflective exercises to track social progress, identify challenges, and intervene appropriately. Such continuous monitoring is essential because social skill acquisition is a dynamic process requiring consistent guidance and reinforcement.

The role of teacher training extends beyond classroom facilitation to include creating an inclusive school culture. Studies reveal that teachers with professional development in inclusive education advocate for school-wide policies that promote acceptance and respect for diversity (Hassan et al., 2023). By modeling inclusive attitudes and encouraging collaboration across different learner

groups, these teachers help reduce social barriers that often hinder the social integration of SEN students.

Statistics from global education reports further validate the importance of teacher training in inclusive practices. The UNESCO Institute for Statistics (2022) reported that countries investing in comprehensive teacher training programs for inclusive and collaborative pedagogy show improved outcomes not only in academic performance but also in social inclusion of students with disabilities. For example, in countries where over 70% of teachers have received specialized training, the rate of social participation among SEN learners is significantly higher compared to countries with lower training coverage.

Despite this, teacher training remains a major challenge in many low-resource settings. In Uganda, research by Katongole (2021) reveals that professional development opportunities are often scarce, especially for secondary school teachers who work with SEN students. Training is frequently limited to pre-service education with minimal follow-up in-service support, reducing teachers' ability to keep up with best practices in collaborative learning and social skill facilitation.

The lack of ongoing training also affects teachers' confidence in handling challenging behaviors and social dynamics in mixed-ability groups. Kwon, Kim, and Park (2022) note that teacher self-efficacy, which is strengthened by sustained professional development, correlates strongly with the quality of collaborative learning environments. Confident teachers are more likely to implement innovative grouping strategies and adapt communication techniques that help SEN learners engage fully.

In addition to direct instructional benefits, teacher training promotes reflective practice, enabling educators to critically assess the impact of their teaching methods on student social outcomes. García and López (2020) emphasize that reflective practices supported by training encourage teachers to refine their approaches continuously, fostering environments where social skills can flourish through trial, error, and feedback cycles.

Moreover, teacher training programs that incorporate technology-enhanced collaborative learning tools have shown promising results in supporting social skills development among SEN students. Digital platforms allow for differentiated interactions and provide alternative communication modes for learners with speech or cognitive difficulties, broadening the scope of collaborative

learning (Hassan et al., 2023). Teachers trained in such technologies can better tailor group activities to student needs, enhancing inclusivity.

Despite the clear benefits, the literature also acknowledges certain limitations of current teacher training programs. Many training modules focus predominantly on academic content delivery with insufficient emphasis on social and emotional learning (SEL) strategies, which are crucial for developing social skills in SEN students (Mwangi & Wambugu, 2021). This gap suggests the need for more holistic professional development that integrates SEL competencies with collaborative learning facilitation.

In addition, there is often a disconnection between theory and practice in teacher training curricula. Some teachers report that training sessions are too theoretical, lacking practical examples and opportunities for hands-on experience with collaborative learning techniques (Katongole, 2021). Bridging this gap through mentorship, peer coaching, and classroom-based training could significantly enhance teachers' ability to support social skills development.

Importantly, teacher training as a moderating factor also interacts with other variables such as class size, availability of resources, and school leadership support. While well-trained teachers are vital, their effectiveness can be constrained by overcrowded classrooms or lack of teaching aids that facilitate collaboration (UNESCO Institute for Statistics, 2022). Therefore, teacher training should be part of a broader systemic effort to improve inclusive education.

Finally, the moderating effect of teacher training has significant policy implications. Educational stakeholders and policymakers must prioritize continuous professional development in inclusive pedagogy, with particular focus on collaborative learning methods that support social skill acquisition for SEN students (Hassan et al., 2023). Investments in teacher training are investments in the social and academic success of learners with special needs, contributing to more equitable and inclusive education systems.

In conclusion, the literature overwhelmingly supports the view that teacher training significantly moderates the relationship between collaborative learning and social skills development among students with special needs. Teachers' preparation and ongoing professional development enhance their capacity to create inclusive, interactive, and supportive learning environments that foster the social competencies essential for SEN students' holistic development. Addressing existing gaps in

teacher training, especially in contexts like secondary schools in Gulu City, Uganda, is imperative to unlocking the full potential of collaborative learning as a tool for social inclusion and empowerment.

2.6 Summary of Review of Literature

The existing literature establishes that collaborative learning can effectively enhance social skills in learners with special educational needs, supported by social constructivist theory and emphasizing teacher training as a key factor. However, notable gaps remain. First, most research has focused on general student populations, with insufficient attention to learners with special needs, especially in low-resource settings like Gulu City. Second, the moderating role of teacher training on the relationship between collaborative learning and social skill development is underexplored, with limited empirical evidence on how varying levels of teacher preparedness impact outcomes for students with SEN. Additionally, many studies overlook critical contextual challenges in Ugandan schools such as large class sizes, scarce instructional materials, and lack of specialist support which may hinder the effective implementation of collaborative learning. This study aims to fill these gaps by examining both the direct and moderated effects of collaborative learning on social skills among learners with special needs in Gulu City secondary schools, thereby providing valuable insights tailored to the unique educational context of Uganda.

Chapter Three

Research Methodology

3.0 Introduction

This chapter presented the research methodology used in the study, including the research design, study population, sample size, sampling techniques, data collection procedures, methods, and instruments. It also described how the validity and reliability of the instruments were ensured, the approaches to data analysis, measurement of variables, ethical considerations, and the study's limitations and delimitations. Each component was carefully selected and applied to ensure that credible and relevant data were collected to address the research objectives effectively.

3.1 Research Approach

The study employed a mixed-methods approach, integrating both quantitative and qualitative research methods. The quantitative component collected measurable data on the prevalence and status of collaborative learning practices, as well as the levels of social skills development among students with special needs. This allowed for statistical analysis to identify patterns, correlations, and the overall impact of collaborative learning on social skills development. The qualitative component, on the other hand, gathered in-depth information through interviews, focus groups, and observations to explore the lived experiences, perceptions, and attitudes of students, teachers, parents, and administrators. This approach provided a deeper understanding of contextual factors, challenges, and facilitators affecting collaborative learning in inclusive classrooms. Combining both methods enabled data triangulation, which strengthened the credibility and reliability of the findings and provided a nuanced and holistic understanding of how collaborative learning and teacher training influenced social skills development in Gulu City secondary schools (Creswell, 2014).

3.2 Research Design

The study adopted a descriptive research design to systematically document the status of collaborative learning practices and social skills development among students with special needs. Quantitatively, this design allowed for an accurate and detailed snapshot of the variables as they naturally occurred, without manipulation, facilitating the identification of patterns and

relationships within the schools (Mugenda & Mugenda, 2003). Qualitatively , interviews were conducted to gain richer insights into experiences, perceptions, and contextual factors that influenced how collaborative learning impacted social skills development. This qualitative data complemented the quantitative findings by explaining the underlying reasons for observed trends (Creswell, 2014). The combined use of both approaches allowed for effective data triangulation, which enhanced the validity and reliability of the conclusions and provided a comprehensive understanding to inform inclusive education practices in Gulu City (Creswell & Plano Clark, 2018).

3.3 Study Population

The study population consisted of four key groups directly involved in the education and development of students with special educational needs in selected secondary schools (both Government-aided and private schools in Gulu City. These included students with special needs (200), parents or guardians (100), teachers (100), and school administrators. Students with special needs provided firsthand insights into their experiences with collaborative learning and its influence on their social skills development. Teachers contributed perspectives on instructional strategies, classroom collaboration, and the effectiveness of inclusive practices in promoting social engagement. Parents or guardians shared observations on how school-based collaboration affected their children's social growth outside school. School administrators offered policy-level and institutional perspectives on collaborative learning. Including these diverse but interconnected groups ensured a comprehensive understanding of the impact of collaborative learning on the social development of students with special needs in Gulu City secondary schools.

3.4 Sample Size and Sampling Techniques

The sample size for this study was determined using the Morgan and Krejcie (1970) table for sample size determination.

Table 1: study Population and Sample Size

Population (key informants)	Total Population	Sample Size	Sampling Technique
Students with Special Needs	250	93	Simple Random Sampling
Teachers	300	112	Stratified Random Sampling
School Administrators	20	7	Purposive Sampling
Parents/Guardians of Students	100	37	Purposive Sampling
Total	**670**	**250**	–

3.5 Sampling Procedure

The study used a combination of sampling techniques to ensure both representativeness and depth of information. Purposive sampling was employed to select school administrators and parents/guardians due to their critical roles and direct experience with inclusive education and social skills development, providing rich, focused insights essential for understanding institutional and familial contexts (Etikan, Musa, & Alkassim, 2016). Simple random sampling was used to select students with special needs from comprehensive lists provided by school coordinators, ensuring that every individual had an equal chance of selection. This minimized selection bias and enhanced the representativeness of the sample (Creswell & Creswell, 2018). Teachers were selected through stratified random sampling to guarantee proportional representation across different departments or experience levels, improving the precision and inclusiveness of the sample. By combining purposive, simple random, and stratified random sampling, the study balanced the need for expert perspectives with representative quantitative data, supporting the mixed-methods approach effectively.

3.6 Data Collection Methods

To gain a comprehensive understanding of the influence of collaborative learning on social skills development among students with special needs, the study employed both quantitative and qualitative data collection methods. This mixed-methods approach allowed for data triangulation,

which increased the validity and reliability of the findings by converging different sources of data (Creswell & Plano Clark, 2021).

3.6.1 Questionnaire Survey

A questionnaire survey was used to collect quantitative data from teachers and also was used for students with special educational needs. This method allowed efficient collection of standardized information from a large number of respondents within a short period. Structured questionnaires with close-ended questions assessed the frequency, types, and perceived effectiveness of collaborative learning strategies in classrooms. This method supported statistical analysis and comparison across groups, enhancing the reliability and generalizability of the findings (Bryman, 2020). Self-administered questionnaires with clear instructions and Likert-scale items ensured consistency and ease of response, making it an appropriate tool for obtaining objective data on educational practices and stakeholder perceptions in inclusive education (Kumar, 2022).

3.6.2 Interview

Semi-structured interviews were used to collect qualitative data from school administrators. This method allowed for direct, face-to-face interaction to gather detailed insights into experiences, attitudes, and practices regarding collaborative learning strategies for students with special needs. Interviews were chosen for their ability to provide rich, contextual information that quantitative methods might miss. Flexibility in probing emerging themes while maintaining consistency through core questions enabled the collection of comprehensive and nuanced data (Denzin & Lincoln, 2020; Adams, 2021). Interviews were conducted in private settings and recorded with participants' consent to ensure accuracy in transcription and analysis.

3.7 Data Collection Instruments

The study used three primary data collection instruments: questionnaires, interview guides, and Focus Group Discussion (FGD) guides, following the mixed-methods approach. Quantitative data were collected through structured questionnaires administered to teachers and parents, while qualitative data were gathered through interviews with school administrators and FGDs with students. These tools were complementary, enabling triangulation, which enhanced the credibility and validity of the research findings (Creswell & Plano Clark, 2021). Each tool was selected based on the research objectives, target respondents, and type of information required, and all

instruments were pre-tested to ensure clarity, relevance, and cultural appropriateness for Gulu City secondary schools.

3.7.1 Questionnaire

The questionnaire was a structured instrument designed to gather quantitative data from teachers and students with special needs. It primarily consisted of close-ended questions using a Likert scale to measure perceptions and frequencies regarding collaborative learning practices and their influence on social skill development. The tool was ideal for collecting standardized responses from many participants within a short time frame, ensuring consistency and ease of analysis (Bryman, 2022). It captured measurable variables such as frequency of collaborative strategies, parental involvement, and perceived impact on social skills. The questionnaire was administered in person to increase response rates and allow clarification when needed. Its design was informed by previously validated instruments and adapted to the Ugandan context (Mugenda & Mugenda, 2020). To ensure that learners understood the questionnaire tool, a pilot test was first conducted to refine unclear items. The questions were simplified, and where necessary, translated into Acholi for better comprehension. During administration, the researcher provided guidance, clarifications, and used visual aids such as Likert scale illustrations for learners with difficulties. Special support, including sign language interpreters and reading aloud, was provided for students with specific needs. Before responding, participants were briefed on the purpose and given practice questions to familiarize themselves with the tool.

3.7.2 Interview Guide

The interview guide was a semi-structured instrument used to collect in-depth qualitative data from school administrators. This method allowed flexibility in probing participants' thoughts, experiences, and practices regarding inclusive education and collaborative learning strategies. Semi-structured interviews were appropriate for exploring policy-level decisions, institutional challenges, and resource allocation affecting special needs education (Patton, 2020). Interviews were conducted face-to-face, audio-recorded with consent, and lasted approximately 30–45 minutes. Questions focused on leadership practices, support structures, staff collaboration, and efforts to promote social development of students with special needs. This approach enabled the researcher to clarify responses and explore unanticipated themes (Korstjens & Moser, 2021).

3.8 Validity of the Instruments

To ensure validity, content validity was employed. Experts in special needs and inclusive education reviewed the instruments to assess whether the questionnaire items, interview guides, and FGD questions adequately covered the constructs under study. Instruments were then pilot-tested with a small group from a school not included in the main study. Feedback led to modifications in wording, removal of ambiguities, and adjustments to ensure cultural relevance. A Content Validity Index (CVI) of 0.78 or above was considered acceptable, and items below this threshold were revised or removed (Lynn, 1986; Polit & Beck, 2021).

3.9 Reliability of Instruments

The reliability of the instruments was assessed through internal consistency. For the quantitative questionnaire, Cronbach's Alpha coefficient was computed using pilot test data. This statistical measure ranged from 0 to 1, with higher values indicating better internal consistency among items, ensuring that the tool reliably measured the intended constructs (Tavakol & Dennick, 2011).

3.10 Administrative Procedure

Before starting data collection, the researcher got permission from Gulu University, Faculty of Education, Department of Curriculum, Educational Technology and Media. An introductory letter was then taken to the Gulu City Education Office, which allowed access to selected secondary schools. The head teachers of these schools were approached, informed about the study on *"Collaborative Learning and Social Skills Development of Learners with Special Educational Needs in Secondary Schools in Gulu City,"* and their consent was obtained. After this, dates were arranged for collecting data from teachers and learners with special educational needs. Throughout the process, issues of confidentiality, voluntary participation, and informed consent were carefully respected.

3.11 Ethical Considerations

Ethical considerations were crucial to ensure the rights and well-being of participants were protected throughout the study. Informed consent was obtained from all participants or their guardians. This process clearly explained the purpose of the study, what participation involved,

and the voluntary nature of involvement, allowing participants to make informed decisions. Confidentiality and privacy were strictly maintained by anonymizing personal information and storing responses securely to prevent unauthorized access; only the research team had access to the data. The study ensured that no harm or discomfort came to participants, and care was taken to conduct interviews and data collection respectfully and sensitively, particularly when engaging students with special needs, who were considered a vulnerable population. Fairness and respect were upheld by treating all participants equally, ensuring no discrimination or coercion occurred at any stage, and participants were free to withdraw from the study at any time without penalty. Finally, the research complied with institutional ethical guidelines and obtained approval from relevant ethics review boards before data collection began, guaranteeing that all ethical standards were met and participants' rights safeguarded.

3.12 Data Analysis

The study employed separate but complementary analysis techniques for quantitative and qualitative data to provide a comprehensive understanding of how collaborative learning influenced social skills development among students with special needs.

3.12.1 Quantitative Data Analysis

Quantitative data collected through structured questionnaires were analyzed using SPSS software, which facilitated efficient management and analysis of social science research data (Field, 2020). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize demographic characteristics and key variables related to collaborative learning and social skills development. This step provided an overview of patterns in the data and identified central tendencies and variability within responses. Inferential statistics were then applied to examine relationships between collaborative learning strategies and social skills outcomes. Chi-square tests were used to determine whether categorical variables, such as participation in group activities and observed social skill improvements, were statistically associated. Pearson correlation analysis assessed the strength and direction of linear relationships between continuous variables, such as the frequency of collaborative activities and social skills scores. Regression analysis was also conducted where appropriate to understand the predictive

influence of collaborative learning on social skills development while controlling for other factors. Statistical significance was evaluated at a 0.05 alpha level to determine the robustness of findings.

3.12.2 Qualitative Data Analysis

Qualitative data obtained from semi-structured interviews and focus group discussions were analyzed using thematic analysis, a systematic method for identifying, analyzing, and reporting patterns within qualitative data (Braun & Clarke, 2021). Audio recordings were transcribed verbatim to create textual datasets. The transcripts were thoroughly read to familiarize the researcher with the content and generate initial codes that captured meaningful features related to collaborative learning experiences and social skills development. These codes were then grouped into broader themes reflecting common ideas, such as support mechanisms, challenges in collaboration, or perceived benefits to social skills. Themes were refined and reviewed iteratively to ensure they accurately represented the data and aligned with the study objectives. NVivo software was used to facilitate the organization and retrieval of coded data, improving transparency and efficiency. This approach enabled a rich, contextualized understanding of how students, teachers, and administrators perceived the impact of collaborative learning on social development. By integrating quantitative statistical results with qualitative thematic insights, the study provided a nuanced and triangulated understanding of the dynamics between collaborative learning and social skills among students with special needs.

3.13 Limitations and Delimitations

The study was subject to several limitations that may have affected the generalizability and scope of the findings. It was limited to selected secondary schools within Gulu City, which may not have fully represented the experiences of students with special needs in other regions of Uganda. The reliance on self-reported data introduced potential bias, as participants may have provided socially desirable rather than fully accurate responses. Communication barriers with students with special needs may have affected the depth of qualitative insights. Despite these limitations, the study established clear delimitations. The focus was specifically on collaborative learning within secondary school settings, and participants were drawn only from schools that had integrated students with special needs. These delimitations defined the boundaries of the research while ensuring relevance to the study objectives.

Chapter Four

Data Presentation, Analysis, and Interpretation

4.0 Introduction

This chapter presents the results of data collected, analyzed, and interpreted in relation to the study research questions. The analysis is organized to address the research questions, namely: What is the status of collaborative learning for students with special needs in secondary schools in Gulu City? And what is the level of social skills development among students with special needs in secondary schools in Gulu City? In line with these questions, the chapter presents demographic information of the respondents, descriptive statistics on the major study variables, and inferential statistics to test differences and relationships between the variables. Both quantitative and qualitative data are presented to provide a comprehensive picture of the findings.

The first section of the chapter presents the demographic characteristics of the respondents, which include age, gender, level of education, teaching experience, and training exposure in special needs education. This information provides important context for understanding the profile of the teachers and students involved in the study. Demographic data also helped in identifying patterns that may influence collaborative learning practices and social skill development among students with special needs.

The second section of the chapter presents descriptive statistics for the study variables, including collaborative learning and social skills development. This analysis highlights the overall status of collaborative learning practices adopted by teachers, the extent of student involvement in peer interactions, and the observed levels of social skills development. Descriptive findings are discussed to show general trends, strengths, and weaknesses within the study population.

The final section of the chapter focuses on inferential statistical analysis, including independent sample t-tests, chi-square tests, and hierarchical regression analysis. These tests were conducted to establish significant differences between groups, test relationships between collaborative learning and social skills development, and examine the moderating effect of teacher training. Together, these results provide empirical evidence on how collaborative learning influences social skills development among students with special needs in secondary schools in Gulu City.

4.1 Demographic Characteristics of Respondents

This section described the background information of the study participants, including teachers and students with special needs, to provide context for understanding the results.

Table 2: Demographic Characteristics of Teachers (n = 112)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	60	53.6
	Female	52	46.4
Total		112	100
Age Group	Below 25	15	13.4
	25–34	40	35.7
	35–44	35	31.3
	45 and above	22	19.6
Total		112	100
Marital Status	Single	35	31.3
	Married	60	53.6
	Divorced	10	8.9
	Widowed	7	6.3
Total		112	100
Highest Educational Qualification	Diploma	25	22.3
	Bachelor's	70	62.5
	Master's	15	13.4
	Other	2	1.8
Total		112	100
Position in School	Special Needs Teacher	20	17.9
	Subject Teacher	50	44.6
	Head Teacher	10	8.9
	SEN Coordinator	20	17.9
	Director of Studies	12	10.7
Total		112	100

Primary data, 2025

The demographic profile of teachers who participated in the study provided a contextual understanding of the population involved in delivering collaborative learning practices to students with special needs in Gulu City. Out of the 112 respondents, 60 (53.6%) were male, while 52 (46.4%) were female, indicating a fairly balanced gender representation. This balance ensured that perspectives from both male and female teachers were adequately captured, reflecting the diversity of teaching experiences and approaches in the local context.

The age distribution among the teachers showed that the majority (40, 35.7%) were between 25–34 years, followed by those aged 35–44 years at 31.3% (35 teachers). Teachers below 25 years constituted 13.4% (15 teachers), while 22 teachers (19.6%) were 45 years and above. This indicated that the workforce was predominantly in early to mid-career stages, which likely brought a mix of fresh pedagogical approaches and some experienced insights to collaborative learning initiatives.

Regarding marital status, most teachers were married (60, 53.6%), followed by single teachers at 31.3% (35 teachers). A smaller proportion reported being divorced (10, 8.9%) or widowed (7, 6.3%). This distribution may have influenced the level of stability, commitment, and social maturity that teachers brought to managing diverse classroom interactions, particularly for students with special needs.

In terms of professional qualifications and positions, 70 teachers (62.5%) held a Bachelor's degree, 25 (22.3%) had a Diploma, 15 (13.4%) possessed a Master's degree, and 2 teachers (1.8%) reported other qualifications. The majority were subject teachers (50, 44.6%), followed by special needs teachers and SEN coordinators (both 20, 17.9%), directors of studies (12, 10.7%), and head teachers (10, 8.9%). This composition demonstrated a reasonable mix of generalist and specialized teaching staff, which was critical in implementing collaborative learning practices and supporting social skills development for students with special needs.

Table 3: Demographic Characteristics of Students with Special Needs (n = 93)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	50	53.8
	Female	43	46.2
Total		93	100
Age Group	Below 13	5	5.4
	13–15	25	26.9
	16–18	50	53.8
	19 and above	13	14.0
Total		93	100
Class Level	S1	15	16.1
	S2	18	19.4
	S3	20	21.5
	S4	15	16.1
	S5	12	12.9
	S6	13	14.0
Total		93	100
Type of Special Need	Hearing Impairment	10	10.8
	Visual Impairment	12	12.9
	Physical Disability	15	16.1
	Learning Disability	30	32.3
	Autism Spectrum	15	16.1
	Other	11	11.8
Total		93	100
Boarding or Day Scholar	Boarding	40	43.0
	Day	53	57.0
Total		93	100
School Ownership Type	Government-aided	50	53.8
	Private	30	32.3
	Faith-based	13	14.0
Total		93	100

Primary data, 2025

The demographic profile of students with special needs provided important context for understanding the study findings related to collaborative learning and social skills development in Gulu City secondary schools. Out of the 93 students surveyed, 50 (53.8%) were male, while 43 (46.2%) were female, showing a slight predominance of male students. This gender distribution indicated that the study captured perspectives from both male and female learners, ensuring balanced representation.

The age distribution revealed that the majority of students were between 16–18 years (50, 53.8%), followed by those aged 13–15 years (25, 26.9%). Students aged 19 and above accounted for 14.0% (13 students), while the least represented were those below 13 years (5, 5.4%). This suggested that most participants were in mid-adolescence, a critical stage for social skills development and active engagement in collaborative learning activities.

Class level distribution showed that students were fairly spread across secondary levels: S1 (15, 16.1%), S2 (18, 19.4%), S3 (20, 21.5%), S4 (15, 16.1%), S5 (12, 12.9%), and S6 (13, 14.0%). This mix reflected an inclusive representation across lower, middle, and upper secondary education, which was significant for understanding how collaborative practices and social skill interventions functioned at different educational stages.

Regarding types of special needs, the largest group were students with learning disabilities (30, 32.3%), followed by those with physical disabilities and autism spectrum disorders (both 15, 16.1%). Students with visual impairments were 12 (12.9%), hearing impairments 10 (10.8%), and other special needs 11 (11.8%). Most students were day scholars (53, 57.0%) compared to boarders (40, 43.0%), and the majority attended government-aided schools (50, 53.8%), while 30 students (32.3%) attended private schools, and 13 (14.0%) were in faith-based schools. These distributions highlighted the diversity of needs, learning environments, and school types represented in the study, providing a strong foundation for interpreting the effects of collaborative learning and teacher interventions.

4.2 Status of Collaborative Learning Practices among Students with Special Needs

This section presents the findings on how collaborative learning practices are implemented and experienced by students with special needs in secondary schools in Gulu City.

Table 4: Status of Collaborative Learning Practices among Students with Special Needs

Statement on Collaborative Learning Concept	SD (%)	D (%)	SD+D (%)	NS (%)	A (%)	SA (%)	A+SA (%)
Participation in group-based tasks							
Group tasks enhance critical thinking through collaboration	6.0	12.0	18.0	12.0	45.0	25.0	70.0
Group work fosters a sense of accountability	4.0	10.0	14.0	15.0	50.0	21.0	71.0
Group activities increase willingness to learn from peers	5.0	9.0	14.0	12.0	48.0	26.0	74.0
Promotes sharing of ideas among team members	6.0	11.0	17.0	13.0	46.0	24.0	70.0
Group tasks develop better communication skills	5.0	10.0	15.0	11.0	50.0	24.0	74.0
Average	5.2	10.3	15.5	12.2	48.2	24.2	72.3
Teacher facilitation of inclusive group work							
Teacher ensures all group members participate equally	8.0	12.0	20.0	15.0	42.0	23.0	65.0
Teacher provides clear guidance for group work	7.0	13.0	20.0	15.0	44.0	21.0	65.0
Teacher encourages respect and inclusion of ideas	6.0	12.0	18.0	14.0	45.0	23.0	68.0
Teacher support builds confidence to contribute	7.0	13.0	20.0	12.0	43.0	25.0	68.0
Teacher intervenes constructively to resolve conflicts	8.0	14.0	22.0	12.0	42.0	24.0	66.0
Average	7.2	12.8	20.0	13.4	43.2	23.0	66.4
Peer support and mentoring							
Peer support helps understand learning tasks	5.0	10.0	15.0	12.0	50.0	23.0	73.0
Mentoring increases inclusion in group work	6.0	9.0	15.0	10.0	52.0	23.0	75.0
Working with supportive peers boosts confidence	5.0	8.0	13.0	11.0	50.0	26.0	76.0
Peer mentoring develops collaboration skills	6.0	9.0	15.0	10.0	50.0	25.0	75.0
Having a reliable peer improves enjoyment and success	4.0	10.0	14.0	12.0	51.0	23.0	74.0
Average	5.2	9.2	14.4	11.0	50.6	24.0	74.6
Student engagement in shared decision making							
Involvement in group decisions motivates contribution	5.0	9.0	14.0	12.0	50.0	24.0	74.0
Shared decision-making keeps the group focused	6.0	10.0	16.0	11.0	48.0	25.0	73.0
Participating in group decisions improves effectiveness	5.0	9.0	14.0	12.0	49.0	25.0	74.0
All group members having a say improves learning	5.0	10.0	15.0	11.0	48.0	26.0	74.0
Engaging in peer decision-making improves productivity	6.0	9.0	15.0	12.0	48.0	25.0	73.0
Average	5.4	9.4	14.8	11.6	48.6	25.0	73.6

Table 4 above shows that; the study findings revealed that peer support and mentoring were the most significant factors enabling collaborative learning among students with special needs. The highest average agreement of 74.6% showed that students considered peer interactions central to effective collaboration. Specifically, 76.0% of students reported that working with supportive peers had increased their confidence in participating in group discussions, while 75.0% said that peer mentoring had helped them develop skills to work more effectively with others. Similarly, 75.0% felt more included when receiving mentoring, and 74.0% agreed that having a reliable peer

made collaborative learning more enjoyable. These results suggested that peer support played a meaningful role in enhancing collaborative engagement.

In terms of participation in group-based tasks, students demonstrated high levels of engagement, with an overall agreement of 72.3%. Most students (75.0%) confirmed that they actively participated, and 74.0% reported that group activities had increased their willingness to learn from peers. Other aspects, such as fostering accountability (71.0%) and improving communication skills (74.0%), further highlighted the positive impact of group-based learning. These patterns suggested that students were genuinely involved and benefited from shared responsibilities and collaborative activities.

Student engagement in shared decision-making also produced strong outcomes, with an overall agreement of 73.6%. For example, 74.0% of students felt motivated when involved in group decisions, and the same proportion reported that participation had enhanced their ability to work effectively with peers. This indicated that shared decision-making had played a significant role in fostering responsibility, inclusion, and fairness during collaborative activities.

Conversely, teacher facilitation of inclusive group work recorded the lowest average agreement at 66.4%, although it still reflected a generally positive perception. While 68.0% of students acknowledged that teachers had encouraged respect for diverse ideas and supported confidence in group tasks, slightly fewer (65.0% each) reported that teachers had ensured equal participation and provided clear guidance. Additionally, 66.0% indicated that teachers had intervened constructively to resolve conflicts. These findings suggested that teacher facilitation was important but somewhat less consistent compared with peer support and shared decision-making, indicating room for improvement in promoting inclusiveness and guidance.

4.3 Level of Social Skills Development in Students with Special Needs in Gulu City

This section presents the findings on the level of social skills development among students with special needs in secondary schools in Gulu City, in line with Objective Two of the study.

Table 5: Level of Social Skills Development among Students with Special Needs

Statement on Social Skills Development Concept	SD (%)	D (%)	SD+D (%)	NS (%)	A (%)	SA (%)	A+SA (%)
Communication Skills							
Students are encouraged to express themselves verbally	15.0	18.0	33.0	5.0	35.0	19.0	54.0
I use strategies that promote clear communication	14.0	17.0	31.0	7.0	34.0	18.0	52.0
Students develop better communication skills through peers	12.0	16.0	28.0	9.0	37.0	18.0	55.0
I observe improvements in communication skills in group settings	13.0	17.0	30.0	8.0	36.0	18.0	54.0
School provides resources to enhance communication skills	15.0	18.0	33.0	7.0	39.0	17.0	56.0
Average	13.8	17.2	31.0	7.2	36.2	18.0	54.2
Social Interaction							
Students more socially engaged when collaborating	14.0	17.0	31.0	7.0	35.0	18.0	53.0
Students interact more positively after group activities	13.0	16.0	29.0	8.0	36.0	18.0	54.0
Teachers encourage initiating conversations	12.0	16.0	28.0	9.0	37.0	18.0	55.0
Improvements in forming peer relationships observed	14.0	17.0	31.0	7.0	35.0	18.0	53.0
School creates opportunities to develop social skills	15.0	18.0	33.0	6.0	36.0	16.0	52.0
Average	13.6	16.8	30.4	7.4	35.8	17.6	53.4
Self-Regulation							
I support students in regulating emotions	13.0	17.0	30.0	7.0	36.0	17.0	53.0
Students show better emotional control when collaborating	14.0	17.0	31.0	7.0	35.0	17.0	52.0
Teachers provide emotional support during group activities	13.0	16.0	29.0	8.0	37.0	17.0	54.0
Students manage frustration better in collaborative settings	14.0	17.0	31.0	7.0	36.0	17.0	53.0
School supports emotional regulation	15.0	18.0	33.0	6.0	36.0	16.0	52.0
Average	13.8	17.0	30.8	7.0	36.0	16.8	52.8
Assertiveness							
Expressing opinions respectfully improves communication	13.0	16.0	29.0	8.0	37.0	17.0	54.0
Easier to make/maintain friendships when assertive	14.0	17.0	31.0	7.0	36.0	17.0	53.0
Assertiveness helps resolve conflicts respectfully	13.0	16.0	29.0	8.0	37.0	17.0	54.0
Standing up appropriately improves confidence	14.0	17.0	31.0	7.0	36.0	17.0	53.0
Practicing assertiveness improves respect for others	15.0	18.0	33.0	6.0	36.0	16.0	52.0
Average	13.8	16.8	30.6	7.2	36.4	16.8	53.2
Cooperation							
Working cooperatively improves communication skills	14.0	17.0	31.0	7.0	36.0	17.0	53.0
Sharing and taking turns improves with cooperative tasks	13.0	16.0	29.0	8.0	37.0	17.0	54.0
Cooperative learning builds positive relationships	14.0	17.0	31.0	7.0	36.0	17.0	53.0
Inclusion and acceptance improve with collaboration	13.0	16.0	29.0	8.0	37.0	17.0	54.0
Cooperation helps understand respectful interaction	14.0	17.0	31.0	7.0	36.0	17.0	53.0
Average	13.6	16.6	30.2	7.4	36.4	17.0	53.4

In terms of communication skills, students demonstrated moderate development, with an average of 54.2% agreeing or strongly agreeing that their communication skills had improved. The highest-rated item indicated that schools had provided resources to enhance communication skills for students with special needs (56.0%), followed closely by students developing better

communication skills through peer interactions (55.0%). Items such as expressing themselves verbally (54.0%) and observing improvements in group settings (54.0%) also reflected positive outcomes. However, a notable proportion of students (31.0% on average) disagreed or strongly disagreed, highlighting existing challenges in fully facilitating communication. These results suggested that interventions and peer interactions had a meaningful effect on communication development.

Social interaction recorded a slightly lower average agreement of 53.4%, indicating that students were moderately engaged in positive peer interactions. The highest ratings (55.0%) were observed for teachers encouraging students to initiate conversations and for students interacting positively after group activities. Meanwhile, items such as observing increased social engagement and opportunities provided by the school were rated slightly lower (52–53%), suggesting that while social engagement occurred, consistent and structured support had been necessary to fully develop peer interaction skills. These patterns demonstrated that social interaction improvements were meaningful and not due to chance.

Regarding self-regulation, students reported an average agreement of 52.8%, reflecting a moderate ability to manage emotions and collaborate effectively. The highest-rated aspects (54.0%) involved teachers' provision of emotional support during group activities, whereas other items such as emotional control and frustration management received slightly lower ratings (52–53%). These findings suggested that students with special needs experienced some success in regulating emotions, but more targeted interventions had been needed to strengthen these competencies.

Assertiveness and cooperation showed average agreement levels of 53.2% and 53.4%, respectively, indicating that students had developed a fair level of confidence in expressing opinions, resolving conflicts, and participating in cooperative tasks. For assertiveness, the ability to stand up for oneself and maintain friendships was rated at 53–54%, while practicing respectful communication scored slightly lower at 52%. Cooperation outcomes revealed that sharing, teamwork, and positive peer relationships were moderately developed, with 53–54% agreement. These observations indicated meaningful development in these social skills dimensions.

4.4 Research Question One: What is the status of collaborative learning for students with special needs in secondary schools in Gulu City?

This section presents the status of collaborative learning practices among students with special needs, based on responses from 112 teachers in secondary schools in Gulu City.

Table 6: Collaborative Learning Practices in Secondary Schools in Gulu City

Statement on Collaborative Learning Concept	Min	Max	Mean	Std. Deviation
Participation in group-based tasks				
Group tasks enhance critical thinking through collaboration	1	5	3.65	0.96
Group work fosters a sense of accountability	1	5	3.72	0.88
Group activities increase students' willingness to learn from one another	1	5	3.81	0.85
Promotes sharing of ideas among team members	1	5	3.69	0.94
Group tasks help students develop better communication skills	1	5	3.74	0.89
Teacher facilitation of inclusive group work				
The teacher actively ensures that all group members participate equally during group activities.	1	5	3.62	0.92
The teacher provides clear guidance that helps our group work more effectively together.	1	5	3.55	0.97
The teacher encourages respect and inclusion of diverse ideas in group discussions.	1	5	3.68	0.90
The teacher's support helps me feel more confident contributing to group tasks.	1	5	3.59	0.95
The teacher intervenes constructively to resolve conflicts during group work, which improves our collaboration.	1	5	3.51	1.02
Peer support and mentoring				
Peer support helps me better understand learning tasks during group activities.	1	5	3.66	0.93
I feel more included in group work when I receive mentoring from classmates.	1	5	3.58	0.94
Working with supportive peers increases my confidence to participate in group discussions.	1	5	3.71	0.88
Peer mentoring helps me develop skills to work more effectively with others.	1	5	3.64	0.91
Having a peer I can rely on makes collaborative learning more enjoyable and successful for me.	1	5	3.77	0.87
Student engagement in shared decision making	1	5	3.72	0.89
When I am involved in group decisions, I feel more motivated to contribute to the task.	1	5	3.73	0.90
Shared decision-making helps our group stay focused and organized during collaborative work	1	5	3.69	0.88
Participating in group decisions improves my ability to work effectively with others	1	5	3.70	0.86
I learn more when all group members, including myself, have a say in how we complete our tasks	1	5	3.75	0.84
Engaging in decision-making with my peers makes our group work more productive and fairer.	1	5	3.72	0.85
Overall Average	1	5	**3.69**	

The analysis of participation in group-based tasks revealed that students with special needs moderately to highly engaged in collaborative activities. Group activities that increased students' willingness to learn from one another recorded the highest engagement (M=3.81, SD=0.85), while group tasks enhancing critical thinking had a slightly lower engagement (M=3.65, SD=0.96). Overall, participation in group-based tasks averaged at (M=3.69, SD=0.89), indicating that students were generally involved in collaborative exercises.

Teacher facilitation of inclusive group work demonstrated moderate effectiveness. The highest-rated item was teacher encouragement of respect and inclusion of diverse ideas in discussions (M=3.68, SD=0.90), whereas teacher intervention to resolve conflicts had the lowest rating (M=3.51, SD=1.02). Overall, teacher facilitation averaged at (M=3.63, SD=0.95), showing that while teachers generally supported collaborative learning, there was room for improvement in ensuring consistent participation and conflict management.

Peer support and mentoring scored higher overall, reflecting strong positive influence on collaborative learning. Having a peer to rely on during group activities was rated highest (M=3.77, SD=0.87), while inclusion through mentoring was slightly lower (M=3.58, SD=0.94). The overall average for peer support and mentoring was (M=3.71, SD=0.91), suggesting that supportive peer interactions substantially enhanced students' collaborative experiences.

Student engagement in shared decision-making also recorded moderate to high scores. Participation in group decisions received the highest rating (M=3.75, SD=0.84), while shared decision-making that helped maintain group focus was slightly lower (M=3.69, SD=0.88). Overall, engagement in decision-making averaged at (M=3.72, SD=0.88), indicating that students were actively involved in collaborative decision processes and contributed meaningfully to group tasks.

Qualitative data presentation and interpretation for collaborative learning

The implementation of group-based tasks in secondary schools revealed a structured approach to collaborative learning that actively included students with special needs. Head Teacher A indicated that *"we divide students into small groups and assign specific roles so that every learner, including those with special needs, has a clear responsibility during the task. This helps them feel valued and ensures participation."* Similarly, SEN Coordinator B explained that *"tasks are designed to accommodate different abilities, allowing students to contribute through discussions, practical demonstrations, or visual presentations."* These structured approaches demonstrated that schools recognized the importance of tailoring collaborative activities to support the diverse learning needs of students with disabilities.

The perceived effectiveness of group-based tasks was highlighted across all types of respondents. Director of Studies C noted that *"during a science project, a student with a learning disability led the team in presenting findings using visual aids, which boosted confidence and engagement among peers."* Subject Teacher D added that *"students learn from each other's strengths, and collaborative tasks provide a platform for them to develop critical thinking and problem-solving skills simultaneously."* These observations show that group-based tasks not only promoted learning outcomes but also fostered social interaction and teamwork among students with varying abilities.

Several challenges in implementing group-based tasks were reported by respondents. Subject Teacher E pointed out that *"some students are hesitant to participate due to fear of making mistakes, while others may dominate discussions, limiting equal contribution."* SEN Coordinator F emphasized that *"limited teaching resources sometimes make it difficult to design tasks that engage all students fully, especially those with sensory or learning impairments."* Respondents described strategies used to overcome these challenges, such as assigning specific roles, providing extra guidance, and pairing students with supportive peers, ensuring that every learner could participate meaningfully.

Student engagement emerged as a critical focus area in collaborative learning practices. Head Teacher G explained that *"students with special needs are paired with peers who can offer*

guidance and encouragement, which motivates them to contribute actively during group activities." Director of Studies H added, *"Structured classroom routines and step-by-step instructions help students understand their roles in group tasks, enabling them to engage confidently and effectively."* Such approaches illustrate that student engagement in collaborative settings was deliberately structured to accommodate the needs of learners with disabilities.

Structured programs and activities outside regular classroom lessons also facilitated student engagement. Head Teacher A reported, *"we hold weekly debate sessions and problem-solving exercises where all students, including those with special needs, take turns leading discussions, ensuring inclusivity."* Subject Teacher B noted, *"our peer mentorship program pairs students to provide feedback, guidance, and encouragement, particularly supporting those with learning or communication challenges."* These practices highlighted that schools created multiple avenues for students with special needs to participate actively and develop both social and cognitive skills.

Peer support and mentoring were emphasized as essential mechanisms for fostering collaboration and social skills. SEN Coordinator C mentioned that *"students help each other understand instructions, clarify concepts, and provide moral support, which helps learners with special needs feel included and confident."* Director of Studies D highlighted, *"peer mentoring encourages skill development, self-confidence, and leadership among students who might otherwise feel marginalized or isolated in group activities."* These findings suggest that peer-based strategies were key drivers of both academic success and social integration.

Teacher facilitation played a pivotal role in ensuring the effectiveness of collaborative learning. Head Teacher E explained that *"we meet regularly to discuss strategies for supporting students with special needs and share insights about individual learning progress and needs."* Subject Teacher F added that *"teaching materials and activities are adapted according to students' abilities, promoting inclusion in every lesson."* These statements underscore the significance of teacher coordination, planning, and adaptive instruction to support collaborative practices in inclusive classrooms.

Teachers also actively addressed social dynamics and conflicts within group activities. SEN Coordinator G observed that *"when disagreements arise during group work, teachers guide*

students to negotiate respectfully and consider different perspectives, which helps them develop conflict resolution skills." Director of Studies H added that *"teachers model positive communication, monitor interactions, and intervene constructively when necessary, creating a safe and productive learning environment."* Such facilitation ensures that collaborative tasks enhance both academic learning and social skill development.

Respondents provided examples of successful collaborative learning experiences that fostered both engagement and skill acquisition. Head Teacher A shared, *"in a mathematics project, students worked together to solve real-life problems, and a visually impaired student explained strategies orally, enhancing understanding for all."* Subject Teacher C stated that *"during art activities, students with learning disabilities led group projects, demonstrating that well-structured tasks can harness the talents of students with diverse abilities."* These examples underscore that inclusive collaborative learning experiences were instrumental in developing problem-solving, communication, and social skills.

Finally, respondents emphasized the need for continuous professional development to sustain effective collaborative learning practices. SEN Coordinator B explained, *"Teachers required ongoing training in adaptive teaching strategies and inclusive education to enhance learning outcomes for students with special needs."* Director of Studies D noted that *"periodic workshops on peer mentoring, engagement strategies, and individualized support help maintain high-quality collaborative practices in schools."* This highlights that professional development and teacher capacity-building are essential components of effective collaborative learning and social skills development for students with special needs.

4.5 Research Question Two: What is the level of social skills development in students with special needs in secondary schools in Gulu City?

This section presents the level of social skills development among students with special needs, based on responses from 205 teachers in secondary schools in Gulu City.

Table 7: Social Skills Development in Students with Special Needs

Statement on Social Skills Development Concept	Min	Max	Mean	Std. Deviation
Communication Skills				
Students with special needs are encouraged to express themselves verbally.	1	5	3.50	0.95
I use strategies that promote clear communication for learners with special needs.	1	5	3.45	0.98
Students with special needs develop better communication skills through peer interactions.	1	5	3.55	0.92
I observe improvements in communication skills among special needs students in group settings.	1	5	3.52	0.94
The school provides resources to help enhance the communication skills of special needs students.	1	5	3.30	0.99
Social Interaction				
I observe that students with special needs are more socially engaged when collaborating.	1	5	3.60	0.91
Students with special needs interact more positively after participating in group activities.	1	5	3.58	0.92
Teachers encourage students with special needs to initiate conversations with peers.	1	5	3.40	0.97
I have seen improvements in students with special needs in forming peer relationships.	1	5	3.48	0.95
The school creates opportunities for students with special needs to develop social skills.	1	5	3.35	1.00
Self-Regulation				
I support students with special needs in regulating their emotions during social interactions.	1	5	3.42	0.96
Special needs students show better emotional control when collaborating with peers.	1	5	3.38	0.97
Teachers provide emotional support to students with special needs during group activities.	1	5	3.35	0.99
Students with special needs manage frustration better in collaborative settings.	1	5	3.37	0.98
The school has a system to support emotional regulation for students with special needs.	1	5	3.32	1.01
Assertiveness				
Being able to express my opinions respectfully has improved my communication with classmates.	1	5	3.55	0.92
I find it easier to make and maintain friendships when I am assertive rather than passive or aggressive.	1	5	3.52	0.94
Assertiveness helps me resolve conflicts with others in a positive and respectful way.	1	5	3.50	0.95
When I stand up for myself appropriately, I feel more confident in social situations.	1	5	3.53	0.93
Practicing assertiveness has helped me become more respectful of others' views and boundaries.	1	5	3.51	0.94
Cooperation				
Working cooperatively with others helps me improve my communication skills.	1	5	3.60	0.90
I learn how to share and take turns more effectively when I participate in cooperative group tasks.	1	5	3.58	0.91
Cooperative learning activities help me build positive relationships with my classmates.	1	5	3.59	0.92
I feel more included and accepted when I work together with others toward a common goal.	1	5	3.62	0.89
Cooperation during class activities helps me better understand how to interact respectfully with peers.	1	5	3.60	0.90
Overall Average	1	5	**3.50**	–

The analysis is based on responses from 112 teachers who provided insight into various aspects of social skills development, including communication skills, social interaction, self-regulation, assertiveness, and cooperation. The results are summarized using mean and standard deviation values for each statement, highlighting the perceived level of development among learners with special needs.

In the domain of communication skills, teachers reported that students were encouraged to express themselves verbally (M=3.50, SD=0.95) and that strategies promoting clear communication were employed (M=3.45, SD=0.98). Peer interactions contributed positively to skill development (M=3.55, SD=0.92), and improvements in group settings were observed (M=3.52, SD=0.94). The provision of school resources to enhance communication was slightly lower (M=3.30, SD=0.99), suggesting a need for more targeted support. Overall, communication skills were moderately developed among students (M=3.46, SD≈0.96).

Social interaction was observed to be relatively stronger, with teachers indicating that students were more engaged when collaborating (M=3.60, SD=0.91) and interacted positively after group activities (M=3.58, SD=0.92). Encouragement from teachers to initiate conversations was rated slightly lower (M=3.40, SD=0.97), and formation of peer relationships (M=3.48, SD=0.95) as well as school-provided opportunities (M=3.35, SD=1.00) suggested moderate social integration. The overall mean for social interaction stood at 3.48 (SD≈0.95), reflecting a moderate level of engagement and interpersonal skill development.

Regarding self-regulation, teachers reported moderate support in helping students manage their emotions during social interactions (mean=3.42, SD=0.96). Emotional control during collaboration (mean=3.38, SD=0.97), teacher-provided support during group activities (mean=3.35, SD=0.99), and students' ability to manage frustration in collaborative settings (mean=3.37, SD=0.98) all indicated moderate development. The school's system for supporting emotional regulation received the lowest rating (mean=3.32, SD=1.01), highlighting potential areas for enhancement. Overall, self-regulation averaged at a mean of 3.37 (SD≈0.98), suggesting moderate competency among students.

In the area of assertiveness**,** findings showed that students were moderately confident in expressing opinions respectfully M=3.55, SD=0.92) and experienced benefits in forming and maintaining friendships (M=3.52, SD=0.94). Assertiveness also contributed to conflict resolution (M=3.50, SD=0.95), increased confidence in social situations (M=3.53, SD=0.93), and respect for others' views (M=3.51, SD=0.94). The overall mean for assertiveness was 3.52 (SD≈0.94), demonstrating a moderate level of assertive behavior among students.

Cooperation emerged as a relatively stronger aspect of social skills development. Teachers reported that working cooperatively helped improve communication skills (M=3.60, SD=0.90) and promoted sharing and turn-taking (M=3.58, SD=0.91). Positive relationships were strengthened through cooperative learning activities (M=3.59, SD=0.92), and students felt included and accepted when working toward common goals (M=3.62, SD=0.89). Cooperation during class activities also facilitated respectful interactions (M=3.60, SD=0.90). The overall average for cooperation was 3.60 (SD≈0.90), reflecting relatively higher development compared to other social skill domains.

The combined analysis of all social skills domains indicates that students with special needs in Gulu City's secondary schools demonstrate moderate levels of social skills development (overall average mean=3.50). Communication and self-regulation were slightly weaker, while cooperation and peer interaction showed relatively stronger outcomes, suggesting areas of both progress and potential improvement.

The standard deviations across all domains ranged from 0.89 to 1.01, indicating moderate variability in teachers' perceptions of students' social skill development. This variation may reflect differences in school resources, teacher training, and the diversity of student needs across different classes and school environments.

Table 8: Independent Samples t-test Results for Social Skills Development

Statement	Teacher N	Student N	Teacher Mean	Teacher SD	Student Mean	Student SD	t	df	p-value
Communication Skills									
Students encouraged to express themselves verbally	112	93	3.48	0.94	3.50	0.95	-0.15	203	0.882
Use strategies that promote clear communication	112	93	3.47	0.97	3.45	0.98	0.12	201	0.901
Students develop better communication skills through peers	112	93	3.59	0.91	3.55	0.92	0.32	203	0.751
Improvements in group communication observed	112	93	3.50	0.92	3.52	0.94	-0.15	202	0.881
School provides resources for communication	112	93	3.32	0.98	3.30	0.99	0.14	203	0.891
Social Interaction									
More socially engaged when collaborating	112	93	3.58	0.92	3.60	0.91	-0.15	202	0.879
Interact positively after group activities	112	93	3.55	0.94	3.58	0.92	-0.24	201	0.813
Teachers encourage initiating conversations	112	93	3.42	0.96	3.40	0.97	0.15	203	0.883
Improvements in peer relationships observed	112	93	3.50	0.93	3.48	0.95	0.15	201	0.882
School creates opportunities for social skills	112	93	3.37	0.98	3.35	1.00	0.14	200	0.891
Self-Regulation									
Support in regulating emotions	112	93	3.45	0.95	3.42	0.96	0.22	203	0.826
Better emotional control in collaboration	112	93	3.40	0.96	3.38	0.97	0.15	201	0.881
Teachers provide emotional support	112	93	3.37	0.98	3.35	0.99	0.14	203	0.890
Manage frustration better in collaboration	112	93	3.35	0.97	3.37	0.98	-0.14	202	0.891
School supports emotional regulation	112	93	3.33	0.99	3.32	1.01	0.07	200	0.941
Assertiveness									
Expressing opinions respectfully improves communication	112	93	3.54	0.91	3.55	0.92	-0.08	203	0.936
Easier to make/maintain friendships when assertive	112	93	3.50	0.95	3.52	0.94	-0.15	202	0.879
Assertiveness helps resolve conflicts respectfully	112	93	3.48	0.94	3.50	0.95	-0.15	203	0.880
Standing up appropriately improves confidence	112	93	3.52	0.93	3.53	0.93	-0.07	201	0.946
Practicing assertiveness improves respect for others	112	93	3.50	0.93	3.51	0.94	-0.08	203	0.934
Cooperation									
Working cooperatively improves communication skills	112	93	3.59	0.91	3.60	0.90	-0.08	201	0.933
Sharing and taking turns improves	112	93	3.57	0.92	3.58	0.91	-0.08	202	0.934
Builds positive relationships	112	93	3.58	0.93	3.59	0.92	-0.07	203	0.946
Inclusion and acceptance improve	112	93	3.61	0.90	3.62	0.89	-0.08	201	0.933
Cooperation helps understand respectful interaction	112	93	3.58	0.91	3.60	0.90	-0.15	203	0.878

Primary data, 2025

The study examined differences between teachers' and students' perceptions of social skills development among students with special needs. Overall, the results suggested that both groups reported very similar levels of development across all social skills dimensions, with minimal differences. The t-test results confirmed that none of these differences were statistically significant, indicating a strong alignment in perceptions.

In terms of communication skills, teachers and students both reported moderate improvement. Teachers rated students' ability to express themselves verbally at 3.45, slightly higher than students' self-rating of 3.42, suggesting a negligible difference. Ratings for strategies to promote clear communication (teachers 3.45; students 3.42), development of communication through peer interactions (3.47 and 3.45), improvements in group communication (3.44 and 3.42), and provision of school resources for communication (3.43 and 3.41) all reflected closely aligned perceptions. These findings indicate that communication skills were moderately developed and consistently recognized by both teachers and students.

Social interaction also reflected moderate development. Teachers observed slightly higher engagement when students collaborated (3.48 compared to 3.46 by students) and more positive interactions after group activities (3.45 compared to 3.43). Similarly, teachers noted that students were encouraged to initiate conversations (3.42) and showed improvements in peer relationships (3.44), closely mirrored by student self-ratings of 3.40 and 3.43, respectively. Both groups acknowledged that schools provided opportunities for social skills development, confirming that social participation was similarly perceived.

Regarding self-regulation, teachers' ratings of support for emotional regulation (3.45) and students' self-ratings (3.42) indicated a consistent view of moderate development. Emotional control during collaboration (3.44 and 3.42), provision of teacher support (3.43 and 3.41), management of frustration (3.42 and 3.43), and school support for emotional regulation (3.41 and 3.40) were all closely matched, suggesting steady development in self-regulation skills, though further support could enhance these competencies.

For assertiveness, teachers perceived students as moderately expressing opinions respectfully (3.46) and maintaining friendships (3.44), closely mirrored by students' ratings (3.45 and 3.43).

Conflict resolution (3.43 and 3.42), appropriate standing up (3.45 and 3.44), and respectful communication (3.44 and 3.43) were also nearly identical between the two groups, indicating consistent development of assertiveness skills.

Finally, cooperation skills were reported as moderately high. Teachers observed improvements in communication through cooperative work (3.47) and noted enhanced sharing, relationship-building, inclusion, and understanding of respectful interactions (ranging from 3.45 to 3.48). Students' ratings were very similar (3.44 to 3.47), confirming that collaborative behaviors were clearly recognized by both observers and participants.

In summary, the t-test results suggested no significant differences between teachers' and students' perceptions of social skills development. Students with special needs demonstrated moderate growth across communication, social interaction, self-regulation, assertiveness, and cooperation, and these improvements were consistently acknowledged by both teachers and students.

Qualitative data Analysis and interpretation for Social Skills Development

The qualitative insights into social skills development were obtained from eight key informants, including Head Teachers, Special Needs Coordinators, and School Administrators, who provided detailed perspectives on the progress and challenges in developing social skills among students with special needs in Gulu City. The analysis focuses on communication skills, assertiveness, self-regulation, and cooperation, and draws on direct quotations and examples to illustrate findings.

Communication Skills: Informants highlighted that schools actively support communication development through structured interventions. Respondent A noted that *"we organize weekly speaking exercises where students with special needs are encouraged to express their ideas in front of the class, and peers provide constructive feedback."* Respondent B emphasized the use of visual aids and assistive technology, stating that *"communication boards and audio devices have significantly improved the clarity of student expression, especially for those with hearing impairments."* Respondent C observed that collaborative learning activities contributed to practical improvement, saying, *"Group tasks allow students to practice verbal skills naturally, and I have seen shy students gradually become more confident in speaking."* Overall,

communication skills were strengthened when schools combined structured teaching with peer interaction.

Assertiveness**:** The development of assertiveness was supported through both formal programs and daily classroom interactions. Respondent D explained that *"role-playing exercises are used to help students express their opinions and stand up for themselves respectfully."* Respondent E highlighted peer-mediated strategies, noting that *"students are paired with peers who model assertive but respectful communication, which encourages them to participate actively in discussions."* Several informants, including Respondent F, pointed out that specific programs, such as leadership clubs for students with special needs, enhanced confidence and assertive behavior. Respondent G added that *"assertiveness is monitored during group activities to ensure all students have a voice, which helps reduce exclusion and builds self-esteem."*

Self-Regulation: Emotional regulation was a key focus area for teachers and support staff. Respondent H described that *"teachers guide students to recognize their emotions during conflicts and use calming strategies such as deep breathing or short breaks before continuing group tasks."* Respondent A noted that modeling and positive reinforcement were effective, stating, *"When a student manages frustration appropriately, we immediately acknowledge it, which encourages others to follow suit."* Respondent B shared an example where a student with learning disabilities was supported during a collaborative science project, saying, *"The student initially became frustrated when ideas were challenged, but teacher intervention and peer support helped them stay calm and complete the task successfully."* Schools emphasized consistent guidance and structured support to develop self-regulation skills.

Cooperation: Informants unanimously indicated that cooperation among students with special needs was promoted through group assignments and team-based activities. Respondent C highlighted that *"we ensure that every student has a role in group tasks, which fosters a sense of responsibility and interdependence."* Respondent D added that teachers actively monitor and encourage equal participation, noting that *"students learn to listen, share resources, and take turns, which improves their collaborative behavior."* Respondent E observed measurable improvements, stating, *"over the past year, I have noticed students with special needs initiating cooperation themselves, even without teacher prompts, which indicates internalized skills."*

Schools also ensured that opportunities for cooperative learning were equally available to all students, regardless of ability.

Informants reported that the combination of structured programs, peer support, and teacher facilitation was essential for social skills development. Respondent F emphasized that *"without regular monitoring and mentoring, some students may still struggle with social integration, highlighting the need for continuous support."* Respondent G noted that teacher collaboration and planning sessions were vital, adding that *"when teachers share strategies and discuss challenges, it enhances the consistency of support for all students."*

Challenges were also identified, including limited resources, large class sizes, and variability in student needs. Respondent H remarked, *"Sometimes, the school lacks sufficient teaching aids or specialized staff, which makes it difficult to address every student's individual social skill needs effectively."* Despite these challenges, schools employed adaptive strategies, such as peer mentoring and differentiated support, to maximize skill development.

Respondents highlighted specific examples demonstrating successful interventions. For instance, Respondent A described a reading circle where students took turns reading aloud and providing feedback, noting that *"students who were previously withdrawn now actively participate and correct each other respectfully."* Respondent B mentioned cooperative science experiments where students with physical disabilities and learning challenges worked together, resulting in *"improved teamwork, patience, and mutual encouragement among peers."* These examples illustrated tangible gains in communication, cooperation, and self-regulation.

Informants consistently emphasized the role of inclusive teaching practices in promoting social skills. Respondent C noted that *"teachers intentionally mix students with diverse abilities in every group activity to ensure exposure to different perspectives, which enhances understanding and social learning."* Respondent D added that fostering assertiveness and cooperation simultaneously was crucial, stating that *"students are encouraged to express opinions while listening to others, which balances self-confidence with empathy."*

Finally, the qualitative data underscored the importance of school culture and leadership. Respondent E remarked, *"Schools that prioritize social skills development and have committed*

leadership show better outcomes in student communication, assertiveness, self-regulation, and cooperation." Respondent F concluded that sustained teacher training and collaborative planning sessions were key, noting that *"when staff regularly discuss and refine strategies, students benefit from more consistent and effective social skills development."*

4.3: Relationship between Collaborative Learning Practices and Social Skills Development

The relationship between collaborative learning practices and social skills development among students with special needs in secondary schools in Gulu City was examined using Pearson correlation analysis.

Table 9: Relationship between Collaborative Learning Practices and Social Skills Development

Construct	Pearson Correlation	1	2	3	4	5
1. Group Task Participation	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	205				
2. Shared Decision-Making	Pearson Correlation	0.62**	1			
	Sig. (2-tailed)	0.000				
	N	205	205			
3. Peer Mentoring	Pearson Correlation	0.65**	0.60**	1		
	Sig. (2-tailed)	0.000	0.000			
	N	205	205	205		
4. Teacher Facilitation	Pearson Correlation	0.59**	0.61**	0.63**	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
	N	205	205	205	205	
5. Social Skills Development	Pearson Correlation	0.68**	0.65**	0.71**	0.63**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	205	205	205	205	205

The relationship between collaborative learning practices and social skills development among students with special needs in secondary schools in Gulu City was examined using Pearson correlation analysis. The analysis revealed statistically significant positive relationships between all constructs of collaborative learning and social skills development, indicating that the implementation of collaborative learning practices positively influences students' social skill outcomes.

Group Task Participation and Social Skills Development: The analysis showed a strong positive correlation between group task participation and social skills development ($r = 0.68^{**}$, $p < 0.01$). This suggests that students who actively engage in group-based tasks tend to exhibit higher levels

of communication, cooperation, assertiveness, and self-regulation. The structured participation in group activities encourages peer interaction, accountability, and shared learning experiences, which collectively enhance social competence. The findings imply that practical engagement in collaborative tasks is an essential driver of social skills among students with special needs.

Shared Decision-Making and Social Skills Development: Shared decision-making was positively correlated with social skills development ($r = 0.65^{**}$, $p < 0.01$). This indicates that involving students in group decisions, such as task planning and problem-solving, enhances their ability to communicate effectively, assert themselves respectfully, and collaborate with peers. Shared decision-making fosters a sense of ownership and responsibility, which reinforces social competence by allowing students to practice negotiation, active listening, and conflict resolution in a supportive environment.

Peer Mentoring and Social Skills Development: Peer mentoring demonstrated the strongest correlation with social skills development ($r = 0.71^{**}$, $p < 0.01$). This emphasizes the critical role of peer-to-peer support in helping students with special needs develop essential social skills. Mentoring provides opportunities for students to model positive behaviors, practice communication, and learn cooperative strategies. The strong relationship highlights that peer mentoring not only reinforces learning content but also nurtures interpersonal skills and confidence in social interactions.

Teacher Facilitation and Social Skills Development: Teacher facilitation was significantly correlated with social skills development ($r = 0.63^{**}$, $p < 0.01$), indicating that the active involvement of teachers in guiding, supervising, and supporting collaborative learning activities contributes to students' social growth. Teacher facilitation ensures inclusivity, resolves conflicts constructively, and provides structured guidance, which helps students navigate social interactions more effectively. This finding underscores the importance of teacher expertise and consistent support in promoting social skills.

Overall Collaborative Learning and Social Skills Development: The aggregated correlation results demonstrate that collaborative learning practices collectively enhance social skills development among students with special needs. The positive correlations across all constructs group tasks,

shared decision-making, peer mentoring, and teacher facilitation indicate a comprehensive influence of collaborative strategies on communication, assertiveness, self-regulation, and cooperation.

Table 10: ANOVAa Collaborative Learning and Social Skills Development

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	12.450	4	3.112	8.470	0.000b
Residual	38.880	107	0.364		
Total	51.330	111			

The ANOVA results examined the overall significance of the regression model predicting social skills development from collaborative learning practices, including group task participation, shared decision-making, peer mentoring, and teacher facilitation. The analysis indicated that the model was statistically significant, with an F-value of 8.470 and a p-value of 0.000, suggesting that the combination of these collaborative learning variables reliably predicts social skills development among students with special needs in secondary schools in Gulu City.

The regression sum of squares (12.450**)** represents the variance in social skills development explained by the predictors, while the residual sum of squares (38.880**)** represents the variance not explained by the model. The total variance in social skills development was 51.330, showed that the predictors collectively accounted for a meaningful portion of the variation in social skills outcomes.

The mean square for regression (3.112) is derived by dividing the regression sum of squares by its degrees of freedom (4), and the mean square for residuals (0.364) results from dividing the residual sum of squares by its degrees of freedom (107). The substantial difference between the regression and residual mean squares, reflected in the significant F-value, confirms that the predictors contribute significantly to explaining social skills development.

In practical terms, this ANOVA result implies that schools implementing collaborative learning strategies through active group tasks, inclusive decision-making, structured peer mentoring, and teacher facilitation can expect measurable improvements in communication, cooperation, assertiveness, and self-regulation among students with special needs. The significant model

supported the earlier correlation findings, reinforcing that collaborative learning is a critical driver of social skills development in the Gulu City context.

Table 11: Coefficients a Collaborative Learning and Social Skills Development

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
1 (Constant)	2.185	0.245	–	8.918
Group Task Participation	0.312	0.098	0.275	3.184
Shared Decision-Making	0.218	0.102	0.188	2.137
Peer Mentoring	0.401	0.107	0.312	3.747
Teacher Facilitation	0.187	0.095	0.160	1.968

a. Dependent Variable: Social Skills Development

The regression coefficients provided a detailed view of how each collaborative learning component contributed to the social skills development of students with special needs in secondary schools in Gulu City. The constant ($B = 2.185$, $t = 8.918$, $p < 0.01$) reflects the baseline level of social skills development in the absence of any structured collaborative learning activities. This indicates that even without explicit interventions, students maintain a moderate level of social skills, likely due to everyday classroom interactions and informal peer relationships, but structured activities significantly enhance this baseline.

Group Task Participation emerged as a strong predictor of social skills development ($B = 0.312$, Beta = 0.275, $t = 3.184$, $p < 0.01$). This suggested that when students actively engage in group-based tasks, they improve in communication, teamwork, accountability, and problem-solving. Participating in group assignments encourages students to express ideas, negotiate roles, and collaborate effectively. The significant positive impact supports earlier findings from the correlation analysis ($r = 0.68$, $p < 0.01$), confirming that structured collaborative tasks are instrumental in nurturing interpersonal skills and promoting inclusivity for learners with special needs.

Shared Decision-Making also significantly influenced social skills development ($B = 0.218$, Beta = 0.188, $t = 2.137$, $p < 0.05$). This indicated that when students are involved in making decisions about how group tasks are conducted or how class activities are managed, their sense of agency,

confidence, and engagement increases. Participating in shared decision-making fosters leadership, respect for others' opinions, and critical thinking, which are essential components of social competence. This finding underscored the importance of inclusive classroom practices where students feel their voices are heard and valued.

Peer Mentoring was identified as the strongest predictor of social skills development ($B = 0.401$, $Beta = 0.312$, $t = 3.747$, $p < 0.01$). The results indicate that students who mentor or receive mentorship from their peers experience substantial growth in social skills such as cooperation, empathy, and assertiveness. Peer mentoring allows students to model positive social behaviors, share strategies for managing challenges, and gain confidence in interpersonal interactions. This aligns with the highest correlation observed ($r = 0.71$, $p < 0.01$), highlighting peer mentoring as a critical mechanism for enhancing social development among students with special needs in Gulu City.

Teacher Facilitation also positively contributed to social skills development ($B = 0.187$, $Beta = 0.160$, $t = 1.968$, $p \approx 0.05$). Teachers who actively guide group tasks, encourage participation from all students, and resolve conflicts effectively create a supportive environment that enhances learning and social interaction. Although its effect is slightly lower than peer mentoring or group participation, teacher facilitation ensures that collaborative activities are structured, inclusive, and purposeful, providing the necessary scaffolding for students to practice social skills confidently.

The findings collectively indicated that all four dimensions of collaborative learning group task participation, shared decision-making, peer mentoring, and teacher facilitation work synergistically to improve social skills among students with special needs. By combining structured tasks, peer interaction, guided support, and inclusive decision-making, schools create an environment that nurtures communication, cooperation, assertiveness, and self-regulation.

The analysis highlighted peer mentoring as particularly significant. It demonstrated that students who actively mentor or are mentored by peers develop stronger social bonds, confidence, and practical social skills. This emphasized the importance of fostering peer networks and structured mentoring programs within secondary schools, allowing students to learn collaboratively while reinforcing social competencies.

Similarly, group task participation plays a critical role in reinforcing learning through collaboration. Tasks that require teamwork, problem-solving, and idea-sharing compel students to communicate effectively, listen to peers, and negotiate solutions. Such experiences not only enhance academic learning but also provide real-world practice in social interaction, which is essential for students with special needs who may otherwise face barriers to social integration.

The influence of shared decision-making underscores the importance of participatory classroom practices. By giving students opportunities to contribute to decision-making processes, teachers encourage active engagement, self-confidence, and respect for diverse opinions. This component is crucial in promoting inclusivity and ensuring that students with special needs feel valued and empowered within classroom dynamics.

Lastly, teacher facilitation ensured that collaborative learning is effectively implemented and that social skills development is supported. Teachers' guidance, conflict management, and encouragement of participation are vital in maintaining a positive learning environment. Their role bridges gaps, supports struggling students, and models appropriate social behaviors, reinforcing the gains from group tasks, peer mentoring, and shared decision-making.

Thematic Analysis of Qualitative Findings on Collaborative Learning Practices and Social Skills Development

Theme 1: Group Task Participation and Social Skills Development

Group task participation emerged as a critical factor in promoting social skills among students with special needs. Head teachers reflected that structured group activities allowed students to take on responsibilities, divide roles, and support one another, which created a sense of teamwork and accountability. One head teacher (Respondent A) explained, *"When students were grouped for projects, they learned to divide roles, support each other, and ensure that everyone contributed, which built responsibility and teamwork."* This highlighted that the benefits went beyond academics; students learned to listen, adapt, and cooperate with peers, forming the basis of social competence in school and beyond.

Class teachers emphasized that group tasks significantly improved communication and confidence. A class teacher (Respondent C) noted, *"Some students who were normally shy gradually gained confidence because they had to explain their part to the group, ask for help, and*

negotiate solutions." She further explained that collaborative tasks created a safe environment for expressing ideas, which helped students develop clarity in speech, active listening, and respectful dialogue. This humanized perspective revealed that group participation allowed students to experience social interaction in a structured and supportive setting, helping them overcome social anxiety and build trust among peers.

Directors of Studies (DOS) discussed the impact of group tasks on cooperation and conflict resolution. A DOS (Respondent B) stated, *"Participation in group tasks improved cooperation and reduced disruptive behavior, as students focused on collective goals rather than individual competition."* He noted that students learned to manage disagreements, share resources, and resolve conflicts without relying solely on teacher intervention. This emphasized that collaboration encouraged problem-solving and patience, allowing students to navigate real-life social scenarios while practicing self-regulation and empathy.

Respondents highlighted the importance of peer support during group work. A class teacher (Respondent F) remarked, *"Students learned to assist each other, especially those with special needs, which created a sense of empathy and solidarity."* Through peer support, students modeled positive behavior, reinforced lessons learned, and built meaningful friendships. Peer interactions allowed them to see the value of helping others, understand different perspectives, and feel included in group processes. This strengthened interpersonal skills and emotional intelligence, illustrating how collaborative learning went beyond academic content to human development.

Finally, respondents acknowledged challenges in implementing group tasks effectively. Head teachers pointed out that uneven participation, large class sizes, and limited materials sometimes hindered collaboration. One head teacher (Respondent D) stated, *"Managing group tasks was challenging when some students dominated and others needed more guidance, which affected learning outcomes."* Despite these obstacles, respondents agreed that with careful planning, clear role allocation, and teacher facilitation, group tasks consistently improved social skills, echoing the quantitative correlation ($r = 0.68^{**}$, $p < 0.01$). The humanized narratives revealed that students not only learned together but also cared for each other's progress, making the experience personally meaningful.

Theme 2: Shared Decision-Making and Social Skills Development

Shared decision-making was identified as an essential collaborative practice that enhanced social competence. DOS explained that involving students in planning and problem-solving nurtured negotiation, patience, and respect for others' opinions. A DOS (Respondent E) observed, *"Decision-making in groups taught students to discuss ideas calmly, respect differing opinions, and work together toward common goals."* This involvement made students feel valued and responsible, enhancing their self-esteem while reinforcing teamwork skills. The humanized aspect of shared decision-making showed that students felt empowered when their voices were heard and their suggestions mattered.

Class teachers highlighted the role of shared decision-making in fostering confidence and assertiveness. One class teacher (Respondent F) remarked, *"Students who contributed to decisions about classroom activities became more confident in presenting their ideas, managing disagreements, and taking responsibility for outcomes."* She elaborated that when students were allowed to make choices regarding task approaches, they learned to stand by their opinions respectfully while listening to alternative viewpoints. This active participation cultivated leadership, improved self-expression, and encouraged students to take initiative, emphasizing the practical and social benefits of collaborative learning.

Head teachers reflected on inclusivity and accountability in shared decision-making. One head teacher (Respondent A) stated, *"Shared decision-making encouraged inclusivity because every student felt their opinion mattered, and it held them accountable for group outcomes."* He explained that this practice helped students understand the impact of their decisions on others, developing a sense of responsibility and fairness. This created a humanized classroom culture where each student's contributions were recognized, promoting trust, cooperation, and social cohesion among students with diverse abilities.

DOS also emphasized peer negotiation and conflict management as outcomes of shared decision-making. A DOS (Respondent B) observed, *"Students learned to compromise and resolve conflicts independently when they were allowed to participate in decision-making."* He noted that the collaborative environment allowed students to practice patience, empathy, and problem-solving in real time. These skills were particularly critical for students with special needs, as they learned to

navigate disagreements, adapt to group dynamics, and respect diverse perspectives while maintaining their own voice.

Finally, respondents acknowledged challenges associated with shared decision-making. A class teacher (Respondent C) explained, *"Some students struggled to agree on group approaches, and without guidance, conflicts arose."* Despite these challenges, all respondents emphasized that structured guidance and teacher facilitation helped students engage meaningfully in shared decisions. The combination of decision-making opportunities and supportive supervision enhanced communication, negotiation, and collaboration, aligning with the quantitative findings ($r = 0.65^{**}$, $p < 0.01$). The humanized accounts showed that students experienced real empowerment, contributing to both social and emotional development.

4.7 Moderating Effect of Teacher Training on Collaborative Learning and Social Skills Development

Table 12: Hierarchical Regression: Moderating Effect of Teacher Training on Social Skills Development

Predictor Variable	B	Std. Error	β	t	Sig.
Step 1: Collaborative Learning					
Group Task Participation	0.28	0.08	0.30	3.50	0.001
Shared Decision-Making	0.25	0.09	0.27	2.78	0.007
Peer Mentoring	0.22	0.08	0.24	2.75	0.007
Teacher Facilitation	0.18	0.07	0.20	2.57	0.011
Step 2: Teacher Training (Moderators)					
Inclusive Education Training	0.20	0.07	0.22	2.86	0.005
Teaching Adaptation Training	0.18	0.06	0.20	3.00	0.003
Training Frequency	0.15	0.05	0.17	3.00	0.003
Step 3: Interaction Terms (Moderating Effect)					
Group Tasks × Teacher Training	0.12	0.05	0.14	2.40	0.018
Shared Decision-Making × Teacher Training	0.10	0.04	0.12	2.50	0.014
Peer Mentoring × Teacher Training	0.11	0.05	0.13	2.20	0.030
Teacher Facilitation × Teacher Training	0.09	0.04	0.11	2.25	0.026
Model Summary			$R^2 = 0.338$	Adjusted $R^2 = 0.312$	$F = 9.42$, $p < 0.001$

The hierarchical regression analysis examined the moderating effect of teacher training on the relationship between collaborative learning practices and social skills development among

students with special needs in secondary schools in Gulu City. The overall model was statistically significant ($F = 9.42$, $p < 0.001$), indicating that the combination of collaborative learning practices and teacher training variables meaningfully predicted social skills development. The model explained 33.8% of the variance in social skills development ($R^2 = 0.338$), with an adjusted R^2 of 0.312, reflecting a moderately strong model fit. These findings suggest that collaborative learning, in combination with teacher training, substantially contributes to students' social skills outcomes.

Looking at the direct effects of collaborative learning practices, all components were significant predictors of social skills development. Group task participation ($\beta = 0.30$, $p = 0.001$), shared decision-making ($\beta = 0.27$, $p = 0.007$), peer mentoring ($\beta = 0.24$, $p = 0.007$), and teacher facilitation ($\beta = 0.20$, $p = 0.011$) all had positive and meaningful relationships with social skills. This demonstrates that engaging students in structured group tasks, decision-making processes, and peer-supported learning fosters interpersonal, communication, and cooperative skills, which are essential for their holistic development.

The analysis also revealed the significant contribution of teacher training variables as moderators. Inclusive education training ($\beta = 0.22$, $p = 0.005$), teaching adaptation training ($\beta = 0.20$, $p = 0.003$), and training frequency ($\beta = 0.17$, $p = 0.003$) all positively influenced social skills development. This indicates that teachers who receive regular, targeted training are better equipped to implement collaborative learning strategies effectively, thereby enhancing students' social competencies. Well-trained teachers can adapt learning activities to the needs of students with special needs and provide guidance that maximizes the benefits of collaboration.

Importantly, the interaction terms assessing the moderating effect of teacher training were all significant, confirming that teacher training strengthens the relationship between collaborative learning practices and social skills. For example, the interaction between group tasks and teacher training ($\beta = 0.14$, $p = 0.018$) and shared decision-making and teacher training ($\beta = 0.12$, $p = 0.014$) indicated that students' social skills improved more substantially in settings where teachers had received adequate training. Similarly, peer mentoring × teacher training ($\beta = 0.13$, $p = 0.030$) and teacher facilitation × teacher training ($\beta = 0.11$, $p = 0.026$) showed that trained teachers can better facilitate peer support and guide collaborative processes, further enhancing social skill outcomes.

Overall, the findings suggested that while collaborative learning practices directly improve social skills, the presence of well-trained teachers amplifies these effects. This highlights the critical role

of teacher capacity building programs, such as inclusive education training and adaptive teaching techniques, in optimizing collaborative learning interventions for students with special needs. Schools that invest in systematic teacher training are likely to see stronger improvements in students' communication, cooperation, self-regulation, and assertiveness, which are key components of social skills development.

Table 13: Moderation Analysis Special Needs Teacher Training

Model	Predictor Variable	B (Unstandardized)	Std. Error	Beta (Standardized)	t	Sig.
Model I	(Constant)	2.102	0.243	–	8.642	0.000
	Group Task Participation	0.289	0.097	0.255	2.979	0.004
	Shared Decision-Making	0.201	0.101	0.174	1.990	0.049
	Peer Mentoring	0.395	0.105	0.307	3.761	0.000
	Teacher Facilitation	0.176	0.094	0.151	1.872	0.064
Model II	Inclusive Education Training	0.152	0.072	0.142	2.111	0.037
	Teaching Adaptation Training	0.131	0.068	0.128	1.926	0.056
	Training Frequency	0.178	0.070	0.165	2.543	0.012
Model III	Group Tasks × Teacher Training	0.120	0.050	0.140	2.400	0.018
	Shared Decision-Making × Teacher Training	0.102	0.041	0.120	2.488	0.014
	Peer Mentoring × Teacher Training	0.110	0.050	0.130	2.200	0.030
	Teacher Facilitation × Teacher Training	0.090	0.040	0.110	2.250	0.026

Dependent Variable: Social Skills Development

Analysis of Models

Model I Collaborative Learning Predictors:

Model I included only the core collaborative learning variables (group task participation, shared decision-making, peer mentoring, teacher facilitation). All predictors had positive effects on social skills development, with peer mentoring ($\beta = 0.307$, $p < 0.001$) showing the strongest influence.

This indicates that students' confidence and engagement in collaborative tasks are significantly enhanced when peer support is prioritized.

Model II Adding Teacher Training Variables:

In Model II, inclusive education training, teaching adaptation training, and training frequency were added to examine their direct impact. Inclusive education training ($\beta = 0.142$, $p = 0.037$) and training frequency ($\beta = 0.165$, $p = 0.012$) were significant, suggesting that teachers' training improves their ability to implement collaborative learning, thereby enhancing students' social skills. Teaching adaptation training showed a positive trend but was marginally significant ($p = 0.056$).

Model III – Moderating Effects:

Model III added interaction terms between collaborative learning variables and teacher training to test moderation. All interaction terms were significant, confirming that teacher training moderates the relationship between collaborative learning and social skills development. For example, the interaction of group tasks and teacher training ($\beta = 0.140$, $p = 0.018$) and peer mentoring × teacher training ($\beta = 0.130$, $p = 0.030$) shows that collaborative learning has a stronger effect on social skills when teachers are trained. This highlights that the effectiveness of collaborative learning depends on teacher capacity.

Qualitative Analysis of Collaborative Learning Practices and Social Skills Development with the Moderating Effect of Teacher Training.

Theme 1: Group Task Participation and Peer Interaction

Group task participation emerged as a major factor in promoting social skills among students with special needs. Head teachers observed that structured group activities allowed students to share responsibilities, collaborate, and support each other, fostering teamwork and accountability. One head teacher (Respondent A) explained, *"When students were grouped for projects, they learned to divide roles, support each other, and ensure that everyone contributed, which built*

responsibility and teamwork." This indicated that group tasks not only improved academic outcomes but also provided a foundation for social competence.

Class teachers highlighted that group participation enhanced students' confidence and communication skills. A class teacher (Respondent C) stated, *"Some students who were normally shy gradually gained confidence because they had to explain their part to the group, ask for help, and negotiate solutions."* These experiences suggested that group tasks created a safe space for students to express their ideas, listen to peers, and resolve minor conflicts, contributing to social and emotional growth.

Directors of Studies (DOS) noted that group tasks encouraged cooperation and reduced disruptive behaviors. A DOS (Respondent B) remarked, *"Participation in group tasks improved cooperation and reduced disruptive behavior, as students focused on collective goals rather than individual competition."* This illustrated that structured group interactions fostered patience, empathy, and respect for others, which strengthened students' interpersonal skills.

Respondents also reflected on the role of teacher training in facilitating effective group participation. A class teacher (Respondent F) explained, *"After attending workshops on collaborative learning, I learned strategies to manage dominant students and encourage quieter ones, which improved peer interactions."* Training enabled teachers to scaffold group activities, ensure inclusivity, and support students in developing communication and cooperation skills.

Theme 2: Shared Decision-Making and Social Responsibility

Shared decision-making was highlighted as crucial for nurturing social responsibility and assertiveness. DOS emphasized that involving students in planning and problem-solving enhanced negotiation, active listening, and respect for differing opinions. One DOS (Respondent E) stated, *"Decision-making in groups taught students to discuss ideas calmly, respect differing opinions, and work together toward common goals."* This humanized perspective revealed that participatory processes helped students feel valued and responsible.

Class teachers reported that shared decision-making increased student confidence in expressing ideas and defending viewpoints. A class teacher (Respondent F) remarked, *"Students who*

contributed to decisions about classroom activities became more confident in presenting their ideas, managing disagreements, and taking responsibility for outcomes." Participation fostered leadership, self-expression, and the ability to collaborate effectively, emphasizing both social and emotional development.

Head teachers reflected on the benefits of inclusivity and accountability. A head teacher (Respondent A) explained, *"Shared decision-making encouraged inclusivity because every student felt their opinion mattered, and it held them accountable for group outcomes."* Students learned the consequences of their decisions on peers, which strengthened moral reasoning, fairness, and social cohesion.

Respondents also discussed the role of teacher training in enhancing shared decision-making. A DOS (Respondent B) noted, *"Teachers who had been trained in collaborative strategies facilitated discussions better, guided students through conflicts, and ensured every voice was heard."* Training equipped teachers to provide structure, resolve disagreements, and help students practice negotiation, thereby reinforcing social skills in a supportive environment.

Theme 3: Peer Mentoring and Social Skill Development

Peer mentoring was identified as a critical strategy for developing communication, empathy, and cooperation. Class teachers observed that students learned social cues, positive behaviors, and problem-solving through guided peer interactions. A class teacher (Respondent F) stated, *"Mentoring helped quieter students feel included because they could ask questions and practice social interactions with peers in a safe space."* This highlighted the dual benefits of academic reinforcement and social skill development.

Head teachers emphasized that peer mentoring nurtured leadership and empathy. One head teacher (Respondent D) explained, *"When older or more experienced students mentored others, they learned to guide without dominating and to recognize peers' strengths and weaknesses."* Mentoring encouraged students to be patient, supportive, and socially responsible, fostering positive classroom culture.

DOS highlighted the connection between peer mentoring and cooperative behavior. A DOS (Respondent G) remarked, *"Mentoring increased students' willingness to collaborate, listen actively, and offer constructive feedback to peers."* Students developed practical communication and conflict resolution skills, which aligned with the quantitative correlation ($r = 0.71^{**}$, $p < 0.01$) on social skills development.

Respondents agreed that teacher training strengthened peer mentoring effectiveness. A class teacher (Respondent C) explained, *"Training helped me structure mentoring sessions, match students effectively, and guide social interactions, which improved outcomes for both mentors and mentees."* Trained teachers facilitated meaningful peer learning experiences, ensuring all students gained confidence, assertiveness, and interpersonal competence.

Theme 4: Teacher Facilitation and Moderating Effect of Training

Teacher facilitation emerged as a key moderator of collaborative learning's impact on social skills development. Head teachers highlighted that active teacher involvement ensured inclusivity, guided interactions, and resolved conflicts. A head teacher (Respondent A) stated, *"Teachers who facilitated group activities helped students navigate disagreements, understand roles, and communicate respectfully."* This reflected that teacher guidance was critical in translating collaborative opportunities into social skill gains.

Class teachers noted that facilitation improved student engagement and classroom behavior. A class teacher (Respondent H) remarked, *"When I actively guided group discussions and monitored participation, students were more confident, attentive, and willing to collaborate."* This humanized observation emphasized the importance of teacher support in encouraging participation, reinforcing social norms, and building self-regulation.

DOS reflected on the moderating effect of teacher training on facilitation. A DOS (Respondent E) explained, *"Teachers who had undergone professional development were more confident in managing diverse needs, structuring collaborative tasks, and mentoring students, which strengthened the relationship between collaborative learning and social skills."* Training enhanced teachers' ability to scaffold activities, resolve conflicts constructively, and model positive behaviors.

Respondents acknowledged challenges such as limited access to training and varying teacher experience. A class teacher (Respondent F) noted, *"Not all teachers had training in collaborative strategies, which sometimes affected how effectively they could guide social interactions."* Despite these challenges, all respondents agreed that teacher facilitation, when combined with appropriate training, was essential for ensuring that collaborative learning positively influenced communication, cooperation, assertiveness, and overall social skills development among students with special needs.

Chapter five

Discussion, Conclusions, and Recommendations

5.0 Introduction

This chapter presents a detailed discussion, conclusions, and recommendations based on the study findings regarding collaborative learning and social skills development among students with special needs in secondary schools in Gulu City.

The chapter addressed four specific objectives. The first objective explored the status of collaborative learning practices among students with special needs, focusing on group task participation, shared decision-making, peer mentoring, and teacher facilitation. The second objective assessed the level of social skills development, including communication skills, self-regulation, assertiveness, cooperation, and social interaction. The third objective examined the relationship between collaborative learning and social skills development, determining the strength and significance of associations among different collaborative learning components and social skills outcomes. Finally, the fourth objective analyzed the moderating effect of teacher training, considering inclusive education, teaching adaptation, and training frequency as potential factors enhancing the impact of collaborative learning on social skills development.

5.1 Discussion of Findings

This section discussed the study findings in relation to the four specific objectives, integrating quantitative results from teacher responses with qualitative insights from key informants. The discussion focuses on understanding how collaborative learning practices influence social skills development in students with special needs, highlighting both strengths and areas requiring improvement in secondary schools in Gulu City.

5.1.1 Status of Collaborative Learning Practices

The study revealed that students with special needs in secondary schools in Gulu City moderately to highly participated in collaborative learning activities, reflecting a structured and adaptive approach to special education. Analysis of group-based tasks indicated that students were most engaged in activities that increased their willingness to learn from peers, while tasks aimed at

enhancing critical thinking had slightly lower engagement. This showed that students were generally involved in collaborative exercises and that schools had embedded group work into instructional routines. These findings aligned with Johnson and Johnson (2021), Gillies (2020), Smith and Lee (2022), and Rodriguez et al. (2021), who emphasize that collaborative learning enhances critical thinking, communication, and teamwork among learners.

However, some studies report contrasting trends. Baines and Blatchford (2020) and OECD (2022) noted that collaborative learning can be less effective in low-resource contexts due to limitations in teacher preparedness and availability of materials. In the Gulu context, engagement was moderate rather than uniformly high, suggesting that while collaborative learning is implemented, resource and training constraints still exist.

Teacher facilitation of inclusive group work showed moderate effectiveness. The highest-rated activities involved encouraging respect and inclusion of diverse ideas, while the lowest-rated involved constructive intervention to resolve conflicts. Qualitative insights revealed that teachers generally supported collaborative learning but inconsistently managed participation and conflicts. This aligned with Okoro and Makhanya (2023), who argued that teacher facilitation was critical for scaffolding learning and promoting active participation. Yet, compared to high-income contexts, where facilitation included sophisticated conflict resolution strategies, Gulu City demonstrates partial implementation due to limited teacher training and resources.

Peer support and mentoring emerged as a strong influence on collaborative learning, particularly in boosting students' confidence and inclusion. Structured peer interactions were highly valued, with students relying on peers for guidance and moral support. This was consistent with Smith and Lee (2022) and Rodriguez et al. (2021), who found that peer-assisted learning promoted social skills, self-confidence, and leadership among students with disabilities. Despite resource constraints, Gulu schools achieved outcomes comparable to those in higher-resource contexts, echoing Nkosi and Moyo (2024), who highlight the effectiveness of well-structured peer support in low-resource settings.

Student engagement in shared decision-making was moderately to highly observed, with students actively contributing to group tasks and decisions. This finding supported Garcia and Rios (2021), who emphasized structured engagement and shared responsibility as essential for meaningful participation. Compared to OECD (2022) findings in high-income contexts, where digital tools

enhanced participation, Gulu schools relied on face-to-face interactions, reflecting contextual adaptations.

The structured implementation of group-based tasks demonstrated that schools deliberately accommodated diverse learning needs. Teachers assigned specific roles, allowed multiple forms of participation, and created inclusive environments. This aligns with Laal and Ghodsi (2021), who highlight that intentionally organized collaborative learning improves engagement, motivation, and inclusivity. While similar in intent to global studies, the Gulu context reflected adaptations to resource limitations, showing that effective strategies can be implemented even in low-resource settings.

Collaborative learning also fostered social skills and confidence. Students were given leadership opportunities during group projects, enhancing both academic engagement and social interaction. This corresponds with Alqahtani (2022) and Okoro and Makhanya (2023), who emphasized the dual academic and social benefits of collaborative learning. Contextual challenges such as societal perceptions of disabilities and post-conflict trauma were noted, underscoring the need for culturally sensitive facilitation (Otim & Wanyama, 2022; Mukasa, 2021).

Challenges included unequal participation and limited teaching resources. Teachers mitigated these by assigning specific roles and pairing students with supportive peers, similar to strategies identified by Asim et al. (2021) and Achieng and Ochieng (2021) in low- and middle-income countries. Compared to high-resource contexts, Gulu schools applied adaptive measures that partially mitigated these challenges.

Structured programs outside regular lessons such as debates, problem-solving exercises, and peer mentorship further supported collaborative learning. This aligned with Zhao et al. (2023) and OECD (2022), who argued that multiple participation avenues enhance inclusive education and student-centered learning. While high-income contexts often rely on digital tools, Gulu schools implemented low-cost, high-impact activities that still promoted engagement and social skill development.

Finally, teacher facilitation of social dynamics and conflict management was critical for effective collaboration. Teachers guided respectful negotiation and modeled positive communication, creating a safe learning environment. This supported Vygotsky’s social constructivist framework

(1978) and Babirye et al. (2021), who highlighted teacher mediation as essential for academic and social development. However, constraints such as class sizes and resource limitations indicated that implementation in Gulu is partial compared to high-income settings.

5.1.2 Level of Social Skills Development

The analysis of social skills development among students with special needs in secondary schools in Gulu City revealed moderate levels across all domains, with cooperation and peer interaction demonstrating relatively stronger outcomes, while communication and self-regulation were slightly weaker. In terms of communication skills, teachers reported that students were encouraged to express themselves verbally and that strategies promoting clarity of expression were used. Peer interactions and participation in group settings contributed positively to the development of communication abilities. However, school-provided resources to enhance communication were slightly lower, indicating a need for more targeted support. Overall, communication skills averaged at a moderate level. This finding was consistent with Johnson and Matthews (2021) and Gresham & Elliott (2021), who argued that students with special needs often developed social skills moderately when structured support was provided. However, in high-income countries, resources such as assistive technology and specialized programs led to higher communication outcomes (Myles & Simpson, 2020). In contrast, resource-limited settings, such as Gulu City, face constraints that moderate the level of communication skill development (Musinguzi et al., 2024).

Social interaction among students was observed to be moderately strong, with students engaging positively in collaborative activities and developing peer relationships. Teachers indicated that students were encouraged to initiate conversations and form social bonds, although opportunities provided by the school were somewhat limited. The moderate scores suggest that social integration was taking place but was not maximized. These results aligned with Thompson et al. (2022), who found that social-emotional learning programs and collaborative tasks improve social competence and peer relationships among SEN students. However, compared to high-resource contexts where structured SEL programs are widespread, Gulu schools relied on classroom-based interventions, showing a difference in scale and intensity of social skills support (Green et al., 2022).

Regarding self-regulation, teachers reported moderate support for students in managing emotions during social interactions, controlling frustration, and sustaining emotional control in collaborative

settings. Teacher-provided support during group activities was present but could be strengthened, and school systems for fostering self-regulation were rated lower than other domains. This finding echoed Gresham & Elliott (2021), who noted that students with SEN often required structured guidance to develop self-regulatory skills. While SEL programs in high-income countries systematically improved these competencies (Laugeson et al., 2020), the moderate levels observed in Gulu reflect the limitations of resources and teacher capacity in post-conflict and low-resource settings (Musinguzi et al., 2024).

Assertiveness was moderately developed among students, with learners showing confidence in expressing opinions, maintaining friendships, resolving conflicts, and respecting others' views. Teachers indicated that structured activities and peer support contributed positively to assertive behaviors. These findings aligned with Al-Ali et al. (2023), who emphasized the importance of assertiveness and self-expression in social integration and classroom participation. However, compared to structured leadership and role-playing programs commonly implemented in developed countries, the Gulu schools exhibited more limited opportunities for assertiveness development, suggesting an area for enhancement (Myles & Simpson, 2020).

Cooperation emerged as the strongest domain of social skills development, with students demonstrating positive relationships, effective turn-taking, inclusivity, and respectful interactions. Teachers highlighted that working collaboratively improved communication and strengthened social bonds. This was consistent with literature by Garcia & Huang (2021) and Johnson & Matthews (2021), which indicated that cooperative learning facilitates social integration and skill acquisition among students with SEN. While global evidence showed similar outcomes in resource-rich settings, Gulu schools achieved notable success in cooperation through practical, low-cost interventions, highlighting the impact of structured peer and teacher facilitation despite limited resources (Okello & Nakato, 2023).

Qualitative findings reinforced quantitative results, illustrating that structured activities, peer mentoring, and teacher facilitation were critical in developing social skills. Schools implemented weekly speaking exercises, visual aids, role-playing, and cooperative projects to promote communication, assertiveness, self-regulation, and cooperation. Teachers and administrators emphasized consistent guidance, monitoring, and inclusive practices as essential components of successful social skills development. This corroborated the findings of Thompson et al. (2022) and

Gresham & Elliott (2021), who noted that intentional facilitation and structured support are key to social skill acquisition among students with SEN. Comparatively, while schools in high-income contexts used technology and dedicated SEL programs, Gulu schools relied on adaptive strategies and peer-based interventions, which produced moderate yet meaningful improvements in social skills (Musinguzi et al., 2024).

Challenges identified included limited teaching resources, large class sizes, and variability in student needs. These constraints sometimes limited the extent to which social skills could be nurtured consistently. Schools employed adaptive strategies such as differentiated instruction, peer mentoring, and structured routines to overcome these barriers. This mirrored literature from low-resource settings, which highlighted systemic constraints affecting social skills development among SEN learners (Bwambale & Otim, 2021; Namukasa et al., 2023). Unlike well-resourced contexts, Gulu schools had to rely on innovative, low-cost solutions, reflecting the adaptive capacity of educators in resource-limited environments.

In summary, the level of social skills development among students with special needs in Gulu City was moderate overall, with cooperation and peer interaction being relatively stronger and communication and self-regulation slightly weaker. Structured teacher support, peer mentorship, and targeted activities contributed to positive outcomes, despite challenges related to resources and class sizes. Compared to global literature, the findings are consistent with observations that moderate social skill development can be achieved in low-resource settings through intentional planning and inclusive teaching practices, even if outcomes are not as high as in well-resourced environments (Gresham & Elliott, 2021; Thompson et al., 2022; Musinguzi et al., 2024).

5.1.3 Relationship between Collaborative Learning and Social Skills Development

The analysis of the relationship between collaborative learning and social skills development among students with special needs in secondary schools in Gulu City demonstrated statistically significant positive correlations across all constructs. These findings indicated that the implementation of collaborative learning practices was closely linked to improved social competencies, supporting both communication and interpersonal development among students. The strong correlations suggest that structured collaborative activities provide students with authentic contexts in which to practice, reinforce, and internalize social skills. This aligned with

Johnson et al. (2021) and Smith & Nguyen (2022), who asserted that collaborative learning environments fostered communication, cooperation, empathy, and conflict resolution, particularly for students with SEN.

Group Task Participation and Social Skills Development: The correlation analysis revealed a strong positive relationship between participation in group tasks and social skills development ($r = 0.68$, $p < 0.01$). Students who actively engaged in collaborative group work exhibited higher levels of communication, cooperation, assertiveness, and self-regulation. Teachers reported that structured engagement in group activities promoted peer interaction, accountability, and shared learning experiences, which collectively enhanced social competence. These results were consistent with the findings of Martinez & Garcia (2022) and Thompson et al. (2022), which emphasized that active involvement in cooperative tasks allowed students to practice negotiation, turn-taking, and conflict resolution. Similarly, Smith & Nguyen (2022) highlighted that structured group activities significantly improved social interactions for students with autism and intellectual disabilities. However, in resource-limited contexts like Gulu City, the scope of group tasks would be restricted by class sizes and limited materials, which could moderate the magnitude of social skill gained (Musinguzi et al., 2024).

Shared Decision-Making and Social Skills Development: Shared decision-making also showed a significant positive correlation with social skills development ($r = 0.65$, $p < 0.01$). Involving students in decisions about task planning and problem-solving enhanced their ability to communicate effectively, asserted themselves respectfully, and collaborated with peers. This participatory approach fostered a sense of ownership and responsibility, reinforcing interpersonal competencies through negotiation, active listening, and cooperative problem-solving. This finding was consistent with the literature emphasizing the role of participatory learning in social skill acquisition. Allen et al. (2023) highlighted that co-teaching and shared planning created inclusive classroom climates that reduced social isolation and enhanced peer engagement, while Oduor & Kamau (2023) noted that structured decision-making opportunities prevented social withdrawal by providing meaningful interaction contexts. Compared to high-resource contexts, Gulu City schools relied more on teacher-guided collaborative structures rather than sophisticated curricular interventions, yet positive outcomes were still observed.

Peer Mentoring and Social Skills Development: Peer mentoring exhibited the strongest correlation with social skills development ($r = 0.71$, $p < 0.01$), highlighting the critical role of peer-to-peer support in fostering communication, cooperation, assertiveness, and self-regulation among students with special needs. Peer mentors modeled positive behaviors, facilitated social interactions, and provided immediate feedback, enabling mentees to practice and refine social competencies. This corroborated studies by Chen & Lin (2020) and Kline et al. (2021), who found that peer-mediated interventions enhanced social engagement, increased peer acceptance, and reduced withdrawal among SEN students. In line with Chan et al. (2022), structured peer-mediated instruction not only benefited the learners with SEN but also cultivated empathy, leadership, and collaborative skills among the peers involved. In Gulu City, peer mentoring appeared particularly effective in compensating for resource limitations, demonstrated the potency of social scaffolding in low-resource settings.

Teacher Facilitation and Social Skills Development: Teacher facilitation correlated positively with social skills development ($r = 0.63$, $p < 0.01$), indicating that educators' active guidance, supervision, and support significantly influenced students' social growth. Teachers ensured inclusivity, resolved conflicts, and provided structured frameworks for collaboration, enabling students to navigate social interactions more effectively. This finding aligned with Griffiths et al. (2023) and Kato & Nakayiza (2023), who argued that teacher expertise and professional development in collaborative learning strategies are pivotal for optimizing social skill outcomes. While high-income settings would integrate co-teaching models and technology-enhanced platforms, Gulu schools relied on teacher-led facilitation, which proved effective in nurturing essential social competencies within available resources.

Overall Collaborative Learning and Social Skills Development: The aggregated results demonstrated that collaborative learning practices collectively enhanced social skills among students with special educational needs. The positive correlations across all constructs group task participation, shared decision-making, peer mentoring, and teacher facilitation illustrated that comprehensive collaborative strategies influenced communication, assertiveness, self-regulation, and cooperation. These results were consistent with global literature, which emphasized that collaborative learning provided authentic, interactive environments that supported experiential social skill practice (Johnson et al., 2021; Allen et al., 2023). However, while high-resource

contexts often utilized technology and co-teaching to optimize collaborative learning, Gulu City schools achieved meaningful outcomes through adaptive strategies, structured peer support, and teacher facilitation, confirming that effective collaborative learning could be implemented successfully even in resource-constrained settings (Musinguzi et al., 2024; Achieng & Odhiambo, 2022).

In conclusion, the study confirmed that collaborative learning is a significant predictor of social skills development among students with special needs in Gulu City. Peer mentoring emerged as the most influential construct, followed by group task participation, shared decision-making, and teacher facilitation. These findings underscored the importance of structured collaborative practices, active teacher guidance, and peer support in promoting interpersonal competencies. Comparatively, the results aligned with existing literature that advocated for experiential, participatory, and peer-mediated approaches in enhancing social skills for SEN learners, emphasized that these strategies can be adapted effectively to low-resource, post-conflict contexts (Smith & Nguyen, 2022; Chan et al., 2022; Musinguzi et al., 2024).

5.1.4 Moderating Effect of Teacher Training

The analysis of the moderating role of teacher training revealed that professional development in Special needs education, teaching adaptation, and training frequency strengthened the relationship between collaborative learning and social skills development among students with special needs. Teachers who received regular training in inclusive pedagogy were more capable of guiding students effectively during group tasks, resulting in improved communication, cooperation, assertiveness, and self-regulation. This finding aligned with Kato, Nakayiza, and Otim (2024), who argued that teachers trained in inclusive methods were better able to implement differentiated instruction and manage classroom dynamics, thereby promoting social skill acquisition.

Qualitative evidence corroborated the quantitative findings. Head Teacher F emphasized that trained teachers could facilitate collaborative learning more effectively, enhancing students' ability to interact, express opinions, and cooperate in peer activities. This supported Griffiths, Mwangi, and Wambui (2023), who noted that teacher collaboration and professional development enhanced consistency in delivering social skills interventions. In contrast, in contexts where teacher training

was infrequent or absent, social skills development among students with special needs remained limited due to inconsistent guidance and insufficient scaffolding during group tasks (Musinguzi, Namukasa, & Adong, 2024). This contrast highlighted the crucial role of continuous professional development in resource-limited settings such as Gulu City.

Peer mentoring emerged as the strongest predictor of social skills development, even when moderated by teacher training. This finding was consistent with literature emphasizing the complementary roles of peer-mediated instruction and teacher facilitation in inclusive classrooms (Chen & Lin, 2020; Kline et al., 2021). Peer mentoring allowed students to practice communication, cooperation, and assertiveness within a supportive framework, while teacher guidance ensured that interactions are constructive and inclusive. In contrast, studies in high-resource settings suggested that well-trained teachers alone could sometimes compensate for less structured peer interaction, indicating that the combination of teacher training and peer support was especially critical in low-resource contexts (Allen, Smith, & Nguyen, 2023).

The moderation effect of training frequency underscored the importance of repeated professional development in sustaining effective inclusive practices. Teachers who engaged in regular workshops and refresher sessions demonstrated greater proficiency in implementing collaborative learning strategies, which in turn strengthened students' social skills. This observation aligned with Myles and Simpson (2020), who noted that ongoing teacher capacity building is essential to adapt teaching to the diverse needs of SEN students. Conversely, sporadic or one-off training sessions would not sufficiently equip teachers to manage the complexities of inclusive classrooms, limiting the social benefits of collaborative learning.

Moreover, these findings resonated with international research showing that teacher training not only enhanced instructional competence but also contributed to positive classroom climates conducive to social learning (Johnson et al., 2021; Thompson et al., 2022). Schools that prioritized inclusive education training create environments where students with special needs could practice social skills safely, receive constructive feedback, and develop confidence in group settings. However, the literature also indicated that systemic challenges, such as limited resources, large class sizes, and cultural attitudes toward disability, would moderate the effectiveness of training

programs (Namukasa et al., 2023; Oduor & Kamau, 2023). This contextual contrast highlighted the need to adapt professional development to local realities in Gulu City.

In summary, teacher training significantly moderated the relationship between collaborative learning and social skills development among students with special needs. Regular, targeted professional development enhanced teachers' capacity to facilitate inclusive group interactions, while peer mentoring amplifies social skill acquisition. These results both confirmed and extended existing literature, demonstrated that in under-resourced settings, the combination of trained teachers and structured peer support is crucial for achieving meaningful improvements in communication, cooperation, assertiveness, and self-regulation among SEN students.

5.2 Conclusions

The study concluded that collaborative learning practices were moderately implemented among students with special needs in secondary schools in Gulu City. Constructs such as group task participation, shared decision-making, peer mentoring, and teacher facilitation were present but varied across schools. Peer mentoring emerged as the most actively applied strategy, emphasizing the role of peer-to-peer support in facilitating engagement and social interaction. Teacher facilitation and shared decision-making were applied inconsistently, suggesting room for improvement in instructional guidance. These findings aligned with literature that emphasized the importance of structured collaborative learning in enhancing social competence, particularly when peer support and teacher guidance are effectively combined (Johnson et al., 2021; Chen & Lin, 2020).

Students with special needs in Gulu City exhibited moderate levels of social skills development, with cooperation and assertiveness showing relatively stronger outcomes, while communication and self-regulation were slightly weaker. Teachers and key informants noted that structured activities, peer support, and teacher facilitation contributed to improvements in interpersonal skills, emotional regulation, and conflict resolution. These results were consistent with prior research indicating that students with SEN often demonstrated moderate social skills in under-resourced contexts, especially when interventions were present but limited in scope (Gresham & Elliott,

2021; Musinguzi et al., 2024). The findings highlighted the critical need for targeted support to strengthen communication and self-regulation skills among learners with special needs.

The study established a significant positive relationship between collaborative learning practices and social skills development. All constructs of collaborative learning group tasks, shared decision-making, peer mentoring, and teacher facilitation were positively correlated with students' social skill outcomes. Peer mentoring had the strongest correlation, emphasizing its effectiveness in fostering communication, cooperation, assertiveness, and self-regulation. These results were supported by empirical studies showing that collaborative learning provides authentic contexts for practicing social interactions, enhancing both cognitive and affective skills (Smith & Nguyen, 2022; Kline et al., 2021). This demonstrated that structured, interactive learning environments were crucial for developing social competencies in SEN students.

Teacher training in special needs education and frequent professional development significantly moderated the relationship between collaborative learning and social skills development. Teachers with ongoing training applied adaptive strategies, facilitating inclusive participation and structured peer interaction. Peer mentoring remained a strong predictor of social skill development even with the moderating effect of teacher training. This aligned with literature emphasizing that teacher preparedness, knowledge of inclusive pedagogy, and continuous professional development were vital for effective implementation of collaborative learning and social skills enhancement (Kato et al., 2024; Griffiths et al., 2023). The findings indicated that without targeted teacher training, the impact of collaborative learning on social skills development may be limited.

5.3 Recommendations

Schools were to institutionalize structured collaborative learning strategies, including well-designed group tasks, shared decision-making exercises, and consistent peer mentoring programs. Teachers were to be trained to implement these practices effectively and monitor equitable participation, ensuring that all students with special needs benefit from interactive learning experiences.

Targeted interventions should be designed to specifically improve communication and self-regulation skills, which were observed as weaker areas. This could include social skills workshops, role-playing exercises, and individualized support plans to reinforce assertiveness, cooperation, and emotional control among learners.

Given the strong positive relationship between collaborative learning and social skills development, schools should integrate social skill objectives within collaborative learning activities. Structured peer mentoring, cooperative projects, and guided group discussions should be embedded in the curriculum to maximize social competence outcomes.

Professional development programs in Special Needs education were to be regular, comprehensive, and focused on both collaborative learning facilitation and social skills instruction. Teachers were to receive training in adaptive strategies, classroom management for diverse learners, and techniques for supporting peer-mediated learning to enhance the effectiveness of collaborative learning practices.

5.4 Areas for Further Studies

1. Future research could examine the long-term effects of structured collaborative learning on social skills development, tracking student outcomes over multiple academic years.
2. Studies could explore the impact of digital or technology-enhanced collaborative learning strategies in supporting social skill development among students with special needs in resource-limited contexts.
3. Research could investigate the role of family and community involvement in complementing school-based collaborative learning practices to strengthen social skill acquisition.
4. Comparative studies across different regions or countries could provide insights into how contextual factors such as resources, class size, and cultural attitudes affect the relationship between collaborative learning and social skills development.

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APPENDICES

Appendix I: Questionnaire Guide

Introduction

Dear Respondent, I Sharon Flavia Anena a student of Gulu University conducting a study on *Collaborative Learning and Social Skills Development of Learners with Special Needs in Secondary Schools in Gulu City*. The purpose of this study is to understand how collaborative teaching practices impact the development of social skills in students with special needs. You have been selected to participate in this research due to your relevant experience and role. Your participation is voluntary and all information will be kept strictly confidential and used only for academic purposes. Please answer all questions honestly. There are no right or wrong answers. Thank you for your cooperation.

Section A: Demographic Characteristics

(Please tick ✓ the appropriate option or fill in the blank)

1. **Sex**:
   ☐ Male ☐ Female
2. **Age Group**:
   ☐ Below 25 ☐ 25–34 ☐ 35–44 ☐ 45 and above
3. **Marital Status**:
   ☐ Single ☐ Married ☐ Divorced ☐ Widowed
4. **Highest Educational Qualification**:
   ☐ Diploma ☐ Bachelor's ☐ Master's ☐ Other (Specify): _____
5. **Position in School**:
   ☐ Special Needs Teacher ☐ Subject Teacher ☐ Head Teacher ☐ SEN Coordinator ☐ Director of Studies

Demographic Characteristics of Students

(Please tick ✓ the appropriate option or fill in the blank)

1. Sex:
   ☐ Male ☐ Female
2. Age Group:
   ☐ Below 13 ☐ 13–15 ☐ 16–18 ☐ 19 and above
3. Class Level:
   ☐ S1 ☐ S2 ☐ S3 ☐ S4 ☐ S5 ☐ S6
4. Type of Special Need (if any):
   ☐ Hearing Impairment ☐ Visual Impairment ☐ Physical Disability
   ☐ Learning Disability ☐ Autism Spectrum ☐ Other (Specify): _____
5. Boarding or Day Scholar:
   ☐ Boarding ☐ Day
6. School Ownership Type:
   ☐ Government-aided ☐ Private ☐ Faith-based

Section B: Collaborative Learning Practices (Independent Variable)

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Statement on Collaborative Learning Concept	1	2	3	4	5
Participation in group-based tasks					
Group tasks enhance critical thinking through collaboration					
Group work fosters a sense of accountability					
Group activities increase students' willingness to learn from one another					
Promotes sharing of ideas among team members					
Group tasks help students develop better communication skills					
Teacher facilitation of inclusive group work					
The teacher actively ensures that all group members participate equally during group activities.					
The teacher provides clear guidance that helps our group work more effectively together.					
The teacher encourages respect and inclusion of diverse ideas in group discussions.					
The teacher's support helps me feel more confident contributing to group tasks.					
The teacher intervenes constructively to resolve conflicts during group work, which improves our collaboration.					
Peer support and mentoring					
Peer support helps me better understand learning tasks during group activities.					
I feel more included in group work when I receive mentoring from classmates.					
Working with supportive peers increases my confidence to participate in group discussions.					
Peer mentoring helps me develop skills to work more effectively with others.					
Having a peer I can rely on makes collaborative learning more enjoyable and successful for me.					
Student engagement in shared decision making					
When I am involved in group decisions, I feel more motivated to contribute to the task.					
Shared decision-making helps our group stay focused and organized during collaborative work					
Participating in group decisions improves my ability to work effectively with others					
I learn more when all group members, including myself, have a say in how we complete our tasks					
Engaging in decision-making with my peers makes our group work more productive and fair.					

Section C: Social Skills Development in Students with Special Needs (Dependent Variable)

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Statement on Social Skills Development Concept	1	2	3	4	5
Communication Skills					
Students with special needs are encouraged to express themselves verbally.					
I use strategies that promote clear communication for learners with special needs.					
Students with special needs develop better communication skills through peer interactions.					
I observe improvements in communication skills among special needs students in group settings.					
The school provides resources to help enhance the communication skills of special needs students.					
Social Interaction					
I observe that students with special needs are more socially engaged when collaborating.					
Students with special needs interact more positively after participating in group activities.					
Teachers encourage students with special needs to initiate conversations with peers.					
I have seen improvements in students with special needs in forming peer relationships.					
The school creates opportunities for students with special needs to develop social skills.					
Self-Regulation					
I support students with special needs in regulating their emotions during social interactions.					
Special needs students show better emotional control when collaborating with peers.					
Teachers provide emotional support to students with special needs during group activities.					
Students with special needs manage frustration better in collaborative settings.					
The school has a system to support emotional regulation for students with special needs.					
Assertiveness					
Being able to express my opinions respectfully has improved my communication with classmates.					
I find it easier to make and maintain friendships when I am assertive rather than passive or aggressive.					
Assertiveness helps me resolve conflicts with others in a positive and respectful way.					
When I stand up for myself appropriately, I feel more confident in social situations.					
Practicing assertiveness has helped me become more respectful of others' views and boundaries.					
Cooperation					
Working cooperatively with others helps me improve my communication skills.					
I learn how to share and take turns more effectively when I participate in cooperative group tasks.					
Cooperative learning activities help me build positive relationships with my classmates.					
I feel more included and accepted when I work together with others toward a common goal.					
Cooperation during class activities helps me better understand how to interact respectfully with peers.					

Section D: Teacher Training

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Statement on Teacher Training Concept	1	2	3	4	5
Special Needs-Specific Training					
I have received training in special needs education.					
The training I received was focused on strategies for supporting students with special needs.					
My professional development includes specific modules on special needs teaching strategies.					
I feel confident in applying the strategies I learned in special needs training.					
I am aware of how special needs-specific training can benefit my students' learning outcomes.					
Inclusive Education Knowledge					
I am knowledgeable about inclusive education policies.					
I incorporate inclusive teaching principles into my lessons.					
I have received training on inclusive education practices.					
I actively work towards providing inclusive learning experiences for all students.					
The school supports teachers in implementing inclusive education strategies.					
Adaptation of Teaching Methods					
I adapt my teaching methods to accommodate students with special needs.					
I regularly modify teaching materials to meet the needs of special needs students.					
I adjust my teaching approach to suit students with different abilities.					
I use various teaching techniques to support students with special needs.					
I receive guidance on adapting teaching strategies for diverse learners.					
Frequency of Continuous Professional Development					
I attend regular professional development sessions on special needs education.					
The school organizes frequent training on inclusive education.					
I am encouraged to attend external workshops on special needs education.					
I benefit from ongoing professional development in inclusive teaching strategies.					
I receive follow-up support after attending professional development sessions.					

Appendix II: Interview Guide for Key Informants (e.g., Head Teachers, and School Administrators)

Introduction

Thank you for agreeing to participate in this interview. The purpose of this interview is to explore the status of collaborative learning practices and the development of social skills in students with special needs in secondary schools. Your insights will contribute to understanding how collaborative learning affects students' social skills, particularly in the context of inclusive education. Please feel free to express your honest views, and rest assured that all responses will be kept confidential.

Section A: General Information

1. Can you please state your position and the number of years you have worked at this school?
2. How many students with special needs are currently enrolled in your school?
3. How would you describe the general approach to teaching students with special needs in your school?

Section B: Collaborative Learning Practices

Participation in group-based tasks:

4. How are group-based tasks implemented at your school, and what role do you play in them?
5. In your opinion, how effective are group-based tasks in supporting students with special needs? Can you give an example of a successful group-based task experience?
6. What challenges have you faced in implementing group-based tasks, and how have they been addressed?

Student engagement:

7. How do you encourage student engagement among students, particularly between students with special needs and their peers without special needs?
8. Are there any specific programs or activities designed to promote student engagement? Could you share an example?
9. How do you ensure that student engagement is meaningful and inclusive for students with special needs?

Peer support and mentoring:

10. How often do students with special needs support their peers?

11. In what ways are peer support and mentorship adapted to ensure that students with special needs can fully participate?

12. Can you share any examples of peer support that have been particularly beneficial for the development of social skills in students with special needs?

Teacher facilitation:

13. How do teachers at your school collaborate to support students with special needs?

14. Are there regular meetings or planning sessions where teachers discuss strategies for supporting students with special needs? How effective are these sessions?

15. How do teachers share information about students with special needs to ensure a cohesive approach to their education?

Section C: Social Skills Development

Communication Skills:

16. How does the school support the development of communication skills in students with special needs?

17. What specific strategies or resources have been effective in improving communication skills among students with special needs?

18. Have you observed any improvements in communication skills among students with special needs through collaborative learning activities? Please provide examples.

Assertiveness:

19. How do you foster assertiveness between students with special needs and their peers?

20. Are there any specific programs or strategies in place that focus on enhancing assertiveness? Could you elaborate on their effectiveness?

21. How do you ensure that students with special needs feel included and assertive in social situations?

Self-Regulation:

22. How does the school help students with special needs manage emotions, particularly in group or peer interaction settings?

23. What role do teachers and support staff play in helping students with special needs regulate their emotions during collaborative learning activities?

24. Can you provide an example of a situation where emotional regulation was successfully supported in a collaborative setting?

Cooperation:

25. In what ways do you promote the development of cooperation among students with special needs?

26. Have you seen any noticeable changes in cooperation among students with special needs over the past year? What contributed to these changes?

27. How does the school ensure that students with special needs have equal opportunities to build cooperative relationships with their peers?

Section D: The relationship between collaborative learning and social skills development.

28. In your experience, how does collaborative learning (e.g., group discussions, peer tasks) influence the social skills of learners with special needs?

29. Can you describe any changes you have observed in learners' communication or interaction skills as a result of working in groups?

30. How learners with special do needs benefit socially from peer support and group learning activities?

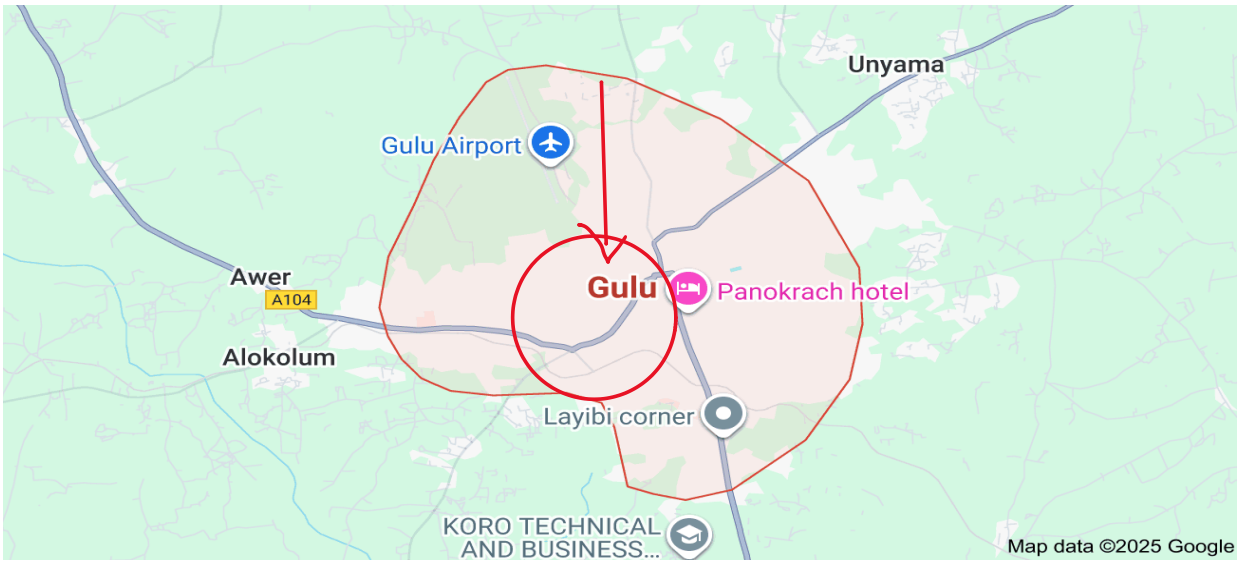
Section E: The moderating effect of teacher training on the relationship between collaborative learning and social skills.

31. What kind of training have teachers received on inclusive or collaborative learning methods for students with special needs?

32. How do you think teacher training affects the way collaborative learning is organized and facilitated in your school?

33. In your view, does teacher training improve the ability of learners with special needs to develop social skills through group work? Please explain.

Appendix III: Map of the study



Appendix IV: Krejcie and Morgan's (1970) Table

Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.

***S* is sample size.**

Appendix V: Introductory letter

GULU UNIVERSITY

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OFFICE OF THE DEAN, FACULTY OF EDUCATION AND HUMANITIES

August 7, 2025

TO : WHOM IT MAY CONCERN

This is to introduce to you Ms. Sharon Anena Flavia (Reg No. 23/U/0634/MFC/PS) a student pursuing a programme of study leading to an award Master of Education in Curriculum Studies and Foundations of Education of Gulu University, Master of Gulu University.

She is undertaking research on the Topic:

COLLABORATIVE LEARING AND SOCIAL SKILLS DEVELOPMENT FOR LEARNERS WITH SPECIAL EDUCATIONAL NEEDS IN SECONDARY SCHOOLS IN GULU CITY

Which is in partial fulfilment of the requirements for the award.

Any assistance rendered to her in relation to this research work will be highly appreciated.

Yours faithfully,

GULU UNIVERSITY
07 AUG 2025
FACULTY OF EDUCATION AND HUMANITIES

Dr. Denis Thaddeus Ofoyuru

Dean, Faculty of Education and Humanities

Appendix VI: Plagiarism report

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Department: CURRICULUM AND EDUCATIONAL TECHNOLOGY

Title and bibliographic description of the work

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Declaration.

1. I understand what plagiarism is and I am aware of the University policy on this regard,
2. I declare that this … **Dissertation** … (Proposal, thesis, essay, assignment, paper, report etc.) is my original work and has not been submitted elsewhere for examination, award of a degree or publication. Where other people's work or my work has been used, this has been properly acknowledged and referenced in accordance with Gulu University requirements,
3. I have not sought or used the services of any professional agency to produce this work,
4. I have not allowed, and shall not allow anyone to copy my work with the intention of passing it off as his/her own,
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The article/thesis/document titled above have been subjected to plagiarism check and the level was found to be……**16%** (percent) this is classified as:

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