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# The perspectives of Indonesian teachers toward co-teaching experiences in the inclusive classroom: classroom internal support and instructional goals

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## ABSTRACT

Implementing co-teaching with equal roles and responsibilities between general and special education teachers is one of the keys to establishing successful instruction in inclusive classes. Against the background that the inclusive education system is still developing in Indonesia, we investigated the perspectives of elementary school teachers providing inclusive education who implement co-teaching. We interviewed general education teachers ( $n=10$ ) and special education teachers ( $n=5$ ) about their experiences with co-teaching in inclusive classrooms. The thematic analysis summarises statements on two main themes: classroom internal support and instructional goals. We see that general and special education teachers have yet to become equal partners in inclusive classes. There needs to be more flexibility in roles and responsibilities between co-teachers as equal partners in collaboration by increasing the professional development of teachers so that learning success is achieved for students in inclusive classrooms in Indonesia.

## ARTICLE HISTORY

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## KEYWORDS

Co-teaching; inclusive classroom; general education teacher; special education teacher

## Introduction

Inclusive school is a school model that can accommodate the vast diversity and characteristics of students, which is currently being adopted by many countries and being implemented at various levels of education, including at the elementary school level. However, there are also failures faced by inclusive schools due to various factors, such as the unavailability of teachers who understand inclusive education and the quality of available teachers who have yet to carry out instruction following inclusive education standards. It is necessary to adopt new teaching models to ensure that classes are inclusive and can improve the learning outcomes of all students, including students with disabilities (Katz 2015; Raley, Shogren, and McDonald 2018). Co-teaching is an essential model for changing the teaching system in the current inclusive classroom. Co-teaching is when two or more teachers share roles and responsibilities in teaching students (Holliday 2011). Co-teachers share the roles of planning, implementing, managing classes, and assessing to ensure students achieve instructional goals. For co-teaching to be successful, there must be collaboration between general and special education teachers in order to create a conducive learning environment for all students and achieve learning success (Friend 2008; Friend et al. 2010). General and special education teachers are like a team with an excellent relationship to achieve student success, develop

students' interests and talents, and help overcome student obstacles. For this reason, the responsibilities of general and special education teachers must complement each other as partners who provide quality learning for all students in inclusive classes.

The co-teaching practices by general education teachers and special education teachers should be based on working collaboratively and determining the best method to help students understand the subject matter and deal with behaviour in their class (Murawski and Lochner 2011; Nierengarten 2013; Shin, Lee, and McKenna 2016). With shared roles and responsibilities as a team, the co-teachers must be able to plan collaborations effectively to work in the classroom. Co-teachers must jointly plan learning for all students by conducting discussions, providing ideas and opinions to implement learning, evaluating negative and positive aspects, providing support and advice and respecting each other's colleagues throughout ongoing learning to achieve student success. Through this collaboration, both teachers and students will benefit from a higher quality of learning (Keay, May, and O'Mahony 2014). The implementation of co-teaching in various countries shows that co-teaching is a successful teaching strategy in inclusive classes through sharing instruction. According to Jurkowski, Ulrich, and Müller (2023), in Germany, co-teaching is one way to make inclusive education successful, in addition to school and teacher professional development. In Finland, co-teaching is a way of teaching in inclusive classrooms that provides teaching experience and professional development (Takala and Uusitalo-Malmivaara 2012) and causes major changes for teachers in inclusive classrooms (Rytivaara 2012). Co-teaching is a shared teaching practice that positively impacts teachers and students in inclusive classrooms. Professional development positively impacts co-teaching and can help teachers teach more professionally (Duran et al. 2020; Ruben, Rigelman, and McParker 2016; Scruggs, Mastropieri, and McDuffie 2007). Meanwhile, students can develop social-emotional skills, which will help increase learning outcomes in both cognitive and behavioural aspects of their social skills that will be useful to them (Ricci, Zetlin, and Osipova 2017; Spörer, Henke, and Bosse 2021; Van Mieghem et al. 2020).

In Indonesia, involvement in several conferences, such as the Jomtien Declaration in Thailand in 1991 (UNESCO 1994b), had implications for all conference members to commit to providing adequate and proper education services to all children without exception. Furthermore, the results of the education convention in Salamanca, Spain, in 1994 (UNESCO 1994a), a symbol of the start of the inclusive education program, became the basis for Indonesia to hold a national convention in 2004. This activity resulted in the Bandung Declaration where Indonesia committed to inclusive education (Saputra 2016). Indonesia faces several challenges in implementing inclusive education, including limited teacher resources. These challenges are still being addressed comprehensively. Teacher quality, one of the keys to successful learning in inclusive classrooms, is still Indonesia's most formidable challenge. The different backgrounds of general and special education teachers lead to other roles and responsibilities in handling inclusive classes (Kurniawati et al. 2017; Prasetyo et al. 2021; Sheehy and Budiyanto 2015). For example, the general education teacher has a role and responsibility for all students but deals more dominantly with regular students than students with disabilities. Meanwhile, the special education teacher handles more students with disabilities.

We conducted a study to investigate elementary school teachers' perspectives regarding their experiences of implementing co-teaching in inclusive classrooms. We analysed the experiences and opinions of teachers about co-teaching according to the aspects of co-teaching described in the theory. We also explained the current situation of inclusiveness in Indonesia through semi-structured interviews in qualitative research for information and thoughts on co-teaching experiences in inclusive elementary schools in Indonesia.

### ***Co-teaching and teachers in inclusive classroom***

Collaborative teaching, or co-teaching, is an effective strategy for inclusive education. Co-teaching is a teaching method where two or more teachers are responsible for teaching students. They plan, implement, manage the classroom, and assess students' progress to ensure they meet their learning

objectives. In co-teaching, both teachers are equally responsible and accountable for the classroom's success. Co-teaching in an inclusion classroom has several benefits in that (Ferguson, Desjarlais, and Meyer 2000): (1) students and teachers get more opportunities for one-on-one interaction, leading to stronger relationships; (2) students with disabilities get access to the general education curriculum as required by law, including the classroom community and activities they otherwise would not participate in and become more independent; (3) students still have opportunities for specialised instruction when needed; (4) all students can benefit from the additional support, resources, and diversity in the classroom; (5) teachers can create more robust and creative lessons by sharing the planning process; (6) teachers can support one another by complementing each other's strengths and weaknesses, building camaraderie, and dividing the workload in the classroom.

Various methods can be used to implement co-teaching, typically involving one of six models (Friend et al. 2010): (1) one teach, one observe, (2) one teach, one assist, (3) station teaching, (4) parallel teaching, (5) alternative teaching, and (6) teaming. Co-teaching approaches can be used flexibly by co-teachers depending on the specific needs of their students or educational requirements. Every co-teacher in an inclusive classroom must understand their roles and responsibilities in inclusion within the classroom. General education teachers must create a conducive learning environment that helps all students achieve academic and behavioural goals. Ongoing communication is essential for general education teachers to find the best individuals, services, and materials to support all students.

In addition, some critical planning and teaching strategies can make a significant difference in reaching students of varying abilities and skill bases through monitoring and evaluating each student's progress and maintaining open communication with students and their parents or guardians. Also, it is essential to keep the special education teacher meeting regularly and providing necessary information for modifications and adaptations for students with disabilities.

Apart from the role of general education teachers, special education teachers also have an essential role in inclusive classes of ensuring that students with disabilities or special needs receive a quality education. The involvement of a special education teacher is crucial for a successful blended learning environment, including curriculum design, instruction, assessments, and student advocacy. Most importantly, special education teachers must be encouraging, creative, flexible, motivational, and inspirational (Arvelo-Rosales, Alegre de la Rosa, and Guzmán-Rosquete 2021). To become a special education teacher, the teacher must have at least a bachelor's degree in special education, which often comes with a specialisation to build advanced skills in a particular area, such as primary education, gifted and talented education, or autism spectrum disorder. Specialisations may require additional coursework or work experience, depending on the program.

Special education teachers work with children with various special needs, such as learning difficulties and cognitive, behavioural and physical challenges (Simó-Pinatella et al. 2022; Willemse et al. 2023). These specially trained educators provide support for their students' learning and development. Special education teachers collaborate with classroom and subject teachers, parents, and special educational needs coordinators to develop individualized education programs (IEPs) for each student according to their specific needs (Hurwitz, Garman-McClaine, and Carlock 2022; Kenny 2019; Tran, Patton, and Brohammer 2018).

In several countries, the qualifications and requirements to become a special education teacher have similarities and differences. In the United States (LearnHowToBecome.org Staff 2023), graduates with bachelor's degrees in special education interested in teaching in public schools must apply for state certification or licensure. During certification, candidates must provide documentation demonstrating their bachelor's degree and student teaching experience. Most states also require candidates to pass special exams and background checks. Additionally, in Finland, qualifying as a special education teacher earns a Master's degree in educational sciences (ETCS 300 cr) (Indeed Editorial Team 2023). This degree qualifies a teacher candidate to serve as a special education teacher in a comprehensive school and as a classroom teacher. In Hong Kong, to become a special education teacher at a school, candidates must become registered teachers, possessing

teacher qualifications, such as a local teacher's certificate or a post-graduate certificate in education ("What Qualifications Do You Need to Be a Special Education Teacher?" 2022). The requirements to become a special education teacher are not that different from becoming any other type of teacher, which can be started with a bachelor's degree organised by universities in Hong Kong which includes material such as types and characteristics of special needs, assessment and intervention approaches, context broader environment, language, and social issues, as well as issues related to social inclusion, empowerment, and the quality of life of individuals with special needs.

### ***Inclusive education and co-teaching in Indonesia***

Inclusive education is a form of educational service that accepts all the characteristics of children with weaknesses, strengths, and different learning styles to learn together with other children—students with no disabilities – without discrimination. Inclusive education is education that respects fundamental human rights or their nature as human beings, serves the individual needs of children, accepts and respects differences without discrimination, and gets the same access and facilities as students (Armstrong, Armstrong, and Spandagou 2011; Haug 2017). Based on Regulation of the Minister of National Education No. 70 of 2009 (Ministry of National Education 2009), the definition of inclusive education is an education delivery system that provides opportunities for all students who have disabilities and have potential intelligence and special talents to participate in education or learning in an educational environment together with non-special needs students in general.

In inclusive education in Indonesia, before the start of the inclusive education program, the education services provided to children with special needs were more on service models that adopted segregated education models, such as special institutions or special elementary schools, and integrated education models. In practice, the number of students with disabilities has increased, but education services have not provided justice for every student with disabilities. Thus, changing the quality of education services for students with disabilities is necessary. In line with developments worldwide regarding education for all, Indonesia deems it essential to be involved and participate in providing fair and proper services for all children.

To strengthen the commitment to inclusive education in Indonesia, the government has made various efforts to provide educational services for children with special needs. Besides the involvement in most declarations for inclusive education, in 2005, an international symposium was held in Bukit Tinggi, Indonesia, which got recommendations to continuously develop inclusive education so that children get a proper education (Ardhika and Syaifudin 2023). Even though this inclusive education program was launched in the 1980s, due to a lack of development, with various efforts and policies, since the early 2000s, the government has started implementing inclusive education programs. As a concrete manifestation of implementing inclusive education, in 2009, the Minister of National Education issued Regulation of the Minister of National Education No. 70 (Ministry of National Education 2009) concerning inclusive education for students who have disabilities and have potential intelligence and special talents. The Regional Government then used this regulation to determine policies for implementing inclusive education in their respective work areas, including learning in an inclusive school that emphasises co-teaching.

The implementation of co-teaching in inclusive classes in Indonesia refers to Regulation of the Minister of National Education No. 70 of 2009 (Ministry of National Education 2009) relating to the fulfilment of special education teachers who assist class teachers in handling students with disabilities as well as regulations from the Ministry of Education, Culture, Research, and Technology (2021) (Ministry of Education, Culture, Research and Technology of Republic of Indonesia 2021) on the roles and responsibilities of special education teachers. Even though it is not explicitly explained in government regulations regarding co-teaching in inclusive classes, in practice, general education teachers and special education teachers must collaborate to create effective learning. For this reason, the roles and responsibilities of the general education teachers and special education teachers depend on the roles set by the Ministry following the competence of each teacher. For example,

the criteria must be met to become a special education teacher, including having the competency qualifications for a bachelor's in special education.

Government regulations have also regulated the primary roles of general and special education teachers. Regarding general education teachers as the primary teacher in an inclusive classroom, the main tasks include: (1) identifying the characteristics of each student so that they can design learning according to the needs of students, including students with disabilities; (2) designing joint learning with special education teachers according to the needs, characteristics, and learning styles of students using flexible instructional strategies and approaches for all students; (3) planning, implementing, and evaluating learning in the form of national or integrated lesson plans for all students; (4) designing learning media and using learning methods that are flexible, fun, and learning-friendly for each student; (5) providing feedback to students or evaluate each student competency whether it has been achieved or not in accordance with the predetermined minimum completeness score; (6) providing information to parents about student progress, so that appropriate interventions can be identified for students if there are still subjects or materials that have not been optimally achieved.

Meanwhile, special education teachers support general education teachers in providing special education services and compensatory interventions for students with disabilities. The main tasks of special education teachers include: (1) developing academic and non-academic assessment instruments with class teachers and subject teachers; (2) developing individual learning programs for students with disabilities with class teachers and subject teachers; (3) composing compensatory service programs for students with disabilities; (4) carrying out academic assistance and learning for students with disabilities together with class teachers and subject teachers; (5) providing special service assistance for students with disabilities who experience obstacles in participating in learning activities in general classes, in the form of remedial or enrichment; (6) carrying out special learning in the resource room for students who need it; (7) guiding on an ongoing basis and making special notes concerning students with disabilities while participating in learning activities, which can be understood if there is a change of teacher. Based on each teacher role and responsibility, co-teaching has been conditioned using the model of one teacher as the leader and the others helping. This role is in accordance with the rules that the government of the Republic of Indonesia has issued.

Accordingly, this study attempted to answer the question, what are the perceptions of general and special education teachers regarding the implementation of co-teaching in inclusive classes in elementary schools?

## **Methodology**

This study explored the perceptions of general and special education teachers on implementing co-teaching in inclusive classes in elementary schools. We used case studies to obtain and examine data in a context where the phenomenon will be accepted in depth. This study explored the implementation of co-teaching by teachers in inclusive classroom learning in depth. We collected data through in-depth semi-structured interviews, both face-to-face and online. We explained the initial description of the topic, and we asked and then gave some questions to the teacher. Data analysis was carried out by coding and creating themes from research findings.

## **Participants**

One area in Indonesia that has implemented inclusive education is the province of West Java. For this reason, we chose a research location in one of the areas in West Java, namely Bogor Regency and Bogor City, in 11 elementary schools that held inclusive education (Public school = 8; private school = 3). The inclusive elementary schools in this study were regular schools that accepted students with disabilities and schools designated by the government as inclusive schools. In the

education system in Indonesia, elementary schools providing inclusive education accept students aged 7–12 years. We involved 15 elementary school teachers who were categorised as general education teachers and special education teachers who taught in inclusive classes and have experience in implementing co-teaching and dealing with students with disabilities such as Autism, ADHD, Down syndrome, slow learning, Cerebral Palsy, Dyslexia, and learning difficulties (Table 1).

Both general and special education teachers who have taught in inclusive classes with co-teaching and had different roles and responsibilities in implementing learning were involved in the research. The implementation of learning in inclusive classes in Indonesia followed government regulations from the Ministry of National Education of the Republic of Indonesia (2009); if there were general education teachers and special education teachers in an inclusive class, then class responsibility was entirely controlled by general education teachers, while special education teachers were responsible for only the students with disabilities.

Before selecting the schools and teachers to be interviewed, we mapped out the criteria for the schools and teachers to be interviewed in advance. The specifications of the schools that we chose as research locations consist of several criteria such as: (1) it has collaborated with universities, especially within our department, in carrying out student internships or fieldwork; (2) it has provided inclusive education for at least five years; (3) the school had a special education teacher. The requirements were for general education teachers who have taught inclusive classes for at least ten years and had experience implementing co-teaching. In order to get specific data, teaching experience of at least ten years was significant because the teacher would explain in depth the experience of teaching in inclusive classes, including whether or not it was essential to carry out co-teaching in inclusive classes.

Meanwhile, for special education teachers, there was no criterion for the duration of teaching or accompanying general education teachers due to the limited number of special education teachers in inclusive classes, especially in public schools in Indonesia. All teachers had experience teaching in inclusive classrooms, including all teachers' co-teaching experience, which also varies. The years of co-teaching experience for all teachers ranged from 1 to 10 years. As many as three teachers stated that they had received training on co-teaching, while eight teachers had taught themselves about co-teaching and applied it in inclusive classes. We had the freedom to choose both types of teachers because it is not easy to find that in inclusive schools. There were classes that carried out co-teaching that had limited teachers, especially special education teachers.

### Data collection

We conducted semi-structured interviews with general and special education teachers at different times (December 2022–January 2023). We applied for a permit to the principal of an inclusive elementary school, and interviews could be conducted in class if approved. The principal appointed the teachers to be interviewed, and then we and the teacher scheduled an interview outside the

**Table 1.** Characteristics of the participant.

Criteria	General education teachers (%)	Special education teachers (%)
Gender		
Male	3 (30%)	0
Female	7 (70%)	5 (100%)
Work experiences		
<10 years	0	5 (100%)
10 years	1(10%)	0
11–19 years	2 (20%)	0
>20 years	7 (70%)	0
Level of education		
Master	0	0
Bachelor	10 (100%)	5 (100%)

teacher's teaching hours. After the schedule was determined, the interview was conducted face-to-face at school and outside teacher teaching hours for 45 min – 1 h.

In the data collection process, we provided letters of consent to all respondents. Respondents gave their consent without coercion from anyone. Furthermore, to protect the rights and privacy of respondents, all forms of data obtained remained confidential. We asked some core questions but also expanded on questions—depending on the teacher's answers – such as:

- (1) How do the two of you collaborate in lesson preparation/during class/following lessons?
- (2) What are the benefits and objectives of co-teaching that you have done with your colleagues?
- (3) What roles and responsibilities do you take in the implementation of co-teaching with your colleagues?
- (4) What factors drive the success of co-teaching in inclusive classrooms?

During the interviews, we recorded audio by asking permission from the teacher. The teachers were very enthusiastic in giving their opinions during the interview. After completing the data collection, we made it verbatim to be analysed later to determine this study's main categories and themes.

### ***Data analysis***

The data analysis explored the experiences of general and special education teachers in implementing co-teaching in an inclusive classroom. Interviews were transcribed and analysed using the QSR NVivo 12. We applied the six stages of thematic analysis suggested by Clarke, Braun, and Hayfield (2015), which included familiarising oneself with the data, generating initial code, searching for themes, reviewing themes, defining and naming themes, and writing themes and reports. Statements were identified according to perspective themes, which were then concentrated, summarised, coded and categorised into units of analysis.

## **Results**

The results of the thematic data analysis revealed three categories we grouped into two main themes: classroom internal support and instructional goals.

### ***Classroom internal support***

We identified two sub-themes within this theme: teacher engagement and instruction. The sub-theme of teacher engagement consists of academic and non-academic. The academic sub-themes consist of teacher and student interaction, competence, input and evaluation of learning, and understanding of student characteristics. The academic sub-themes are described in [Table 2](#).

We described the category of teacher and student interaction as learning conditions that provide opportunities for teachers and students to interact with each other. The general and special education teachers have the same role in interacting with students. General education teachers can interact with all students, while special education teachers only interact with students with disabilities. Even though co-teachers already understand their responsibilities in the classroom, teachers can maximise interaction with both types of students – those with no disabilities and students with disabilities–. We found that the interactions general education teachers and special education teachers provide to students can improve students' social, emotional, and cognitive skills of students with disabilities.

Meanwhile, regarding competence, we found that co-teachers have the same perception that they must have and improve competence in co-teaching in inclusive classes. Both general and special education teachers must have continuously improved competencies according to the



**Table 2.** The academic sub-themes.

Subtheme	General education teacher	Special education teacher
Teacher and student interaction	Can interact with all students 'I have a chance more for one-on-one interaction between special students and teachers as well as regular students and teachers'.	Only interact with students with disabilities individually. 'More opportunities for one-on-one interaction between students with disabilities and teachers'
Teacher competence	Full class management must have competencies that can plan, implement and evaluate learning as a whole, including non-academic aspects such as handling the behaviour and motivation of all students, including students with disabilities. 'It is important for teachers to improve self-competence because it will increase interactive learning and can fill roles between teachers'.	Must have special competencies such as making an IEP and handling the behaviour of students with disabilities can be owned so that the needs of students can be met to the fullest. 'Social competence is essential to develop because teachers and co-teachers have a responsibility as teachers and educators so that students can be distracted well and also has a level of maturity with a perfect personality.'
Input and evaluation of learning	The teacher has a partner who can observe the teacher's mistakes in teaching, and correct deficiencies in the delivery of learning, even though the general education teachers are entirely responsible. 'I can know and little by little I also learn how to deal with children with special needs. I can also learn not to discriminate between the two types of students'.	Special education teachers are allowed to provide input in learning'. 'An evaluation of ideas, planning in detail joint learning especially for students with disabilities, as well as implementing problem-solving and being responsible for achieving learning outcomes'
Understanding of student characteristics	Information about students with disabilities, though general background education teachers are not from special education, at least can be together with special education teachers in making IEPs, and reports to schools and parents in informing progress and learning objectives of students with disabilities. 'So that I can know and little by little also learn how to deal with children with special needs and there I can also learn not to discriminate between the two types of students'.	An understanding of the characteristics of students with disabilities must be communicated with general education teachers; even though special education teachers mainly carry out the tasks in learning, general education teachers can understand at least the progress of students with disabilities. 'I identified children with special needs, after that together general education teachers only then can determine the appropriate level of learning for students with disabilities'.

dynamics of learning development in inclusive classes. Co-teaching allows general and special education teachers to design effective and meaningful learning, from lesson planning to implementing learning by adjusting lesson plans, giving motivation and handling student behaviour so that all students, including students with disabilities, can achieve learning objectives.

We also found input and evaluation categories perceived by general education teachers and special education teachers that both before learning, during and after learning, the occurrence of intense communication related to the quality of learning. General and special education teachers have the same role in dealing with students. General and special education teachers have the same obligations related to the development and progress of students with disabilities. The treatment given by general education teachers to students with disabilities must be a mutual agreement between the co-teachers so that they have the same frequency and enthusiasm in implementing learning. Even though the role of special education teachers is more than that of general education teachers in handling students with disabilities, the role centre is still owned by general education teachers because it is the central teacher in this co-teaching. General education teachers and special education teachers can exchange ideas, providing input and experiences in learning, including criticising planning, learning ideas and solving problems experienced by teachers while handling student behaviour, as well as subject matter, so that they can meet goals of learning for all students, especially students with disabilities. For understanding student characteristics, general education teachers and special education teachers have the same responsibility in understanding student characteristics. General education teachers must understand the characteristics of all students, including students with disabilities, even though general education teachers' background is

outside of special education as a central teacher must be able to understand the characteristics of all students. General education teachers obtained information and explanations on the characteristics of students with disabilities from special education teachers to impact learning planning or IEP, which will be applied to learning in inclusive classes.

The non-academic sub-themes are related to discussion, support, collaboration, communication, coordination and teacher experience. We explain each sub-theme in [Table 3](#):

We explored general and special education teachers' perceptions in the discussion category, emphasising exchanging ideas, especially in determining the learning methods that should apply to students with disabilities. In addition, general and special education teachers often discuss handling students with disability behaviour during learning because changes in behaviour and motivation are one of the difficulties co-teachers face. We found that general and special education teachers could maintain good working relationships with partners, including sharing experiences, especially in handling students with disabilities to fulfil maximum student needs following student characteristics. General education teachers will teach special education teachers how to take students with disabilities, and special education teachers will inform them of changes in behaviour and handling that they must do together so that students with disabilities can participate in learning in a conducive manner. Apart from the discussion, we also described that general education teachers and special education teachers can also work together and each other support learning in inclusive classes, especially in handling students with disabilities. Teachers argue that there must be a firm commitment to cooperation between teachers, mainly general and special education teachers. General and special education teachers can fulfil their obligations and roles in handling students with disabilities. However, in several ways, special education teachers have a more significant role in dealing with students with disabilities because special education teachers' background comes from special teacher education.

In contrast, general education teachers do not come from special education. For example, suppose there is a problem with the behaviour of students with disabilities. In this case, general education teachers not only rely on special education teachers to handle but also participate in solving these problems so that the role of general education teachers and special education teachers can be carried out together in learning success, especially for students with disabilities.

The impact of cooperation and support between general education teachers and special education teachers is the best service for students with disabilities. However, collaboration and support will only occur with good communication between general and special education teachers. We found that the prerequisite for collaboration is communication. For this reason, the communication category is an essential aspect for general and special education teachers. The teacher believes that collaboration will be successful if there is communication. General and special education teachers have communicated about students' learning process in class, especially in understanding the characteristics, strengths and weaknesses of students with disabilities. Through communication, general education teachers and special education teachers can express opinions to each other and exchange ideas to understand the development of students with disabilities.

Meanwhile, in the coordination category, general education teachers and special education teachers argue that with co-teaching, they assume the teacher is their partner, especially in handling students with disabilities. General and special education teachers share workloads and tasks in taking students with disabilities, planning to learn and determining the subject matter, monitoring student progress, and managing inclusive classes. The category of experience, according to the teacher, must be able to share experiences in teaching or handling students with disabilities. We found that the difference in education background between general education teachers and special education teachers provided different experiences. General education teachers have experience handling all students, and special education teachers have experience handling students with disabilities. General education teachers' experience states that more handling of students with disabilities is given to special education teachers because, apart from their education background, that role is indeed given to special education teachers. In handling students with disabilities, there are

**Table 3.** The non-academic sub-themes.

Subtheme	General education teachers	Special education teachers
Discussion	Teachers exchange ideas and experiences while teaching to create effective and better learning in the future, especially for students with disabilities. Teachers must discuss with each other whether students can well receive the material to be delivered, take planning steps together, and problem-solving is carried out together.	Teachers can discuss it related to the material delivered to students, compromise with partners to have similarities in teaching, and look for problem-solving office problems, especially in dealing with students with disabilities. 'Maybe my way of collaborating is that I have to discuss with each other whether the material to be delivered can be well received by students with disabilities. If it can't, then there must be a solution, for example, is it necessary that the subject matter must be lowered?'
Support	The need to provide mutual support such as subject matter, enthusiasm, embracing and complementing each other in implementing learning and synergising together in achieving learning goals, especially for students with disabilities. 'Um ... a successful collaboration where educators can learn from each other, complement each other and also complement each other, which ultimately creates synergy in an inclusive classroom.'	Support between teachers in equality and responsibility for achieving learning goals, especially for students with disabilities 'I hope there should always be support between teachers by building equality, mutual support to help students with disabilities'.
Cooperation	Work well together to provide teaching services and exchange information about teaching suitable for students with disabilities so that they can collaborate well and have fun. 'We can work together in dealing with students with disabilities in our own way, without each other we will not be able to do our learning to the fullest'.	There must be a firm commitment first among the co-teachers. Teachers must create excellent and harmonious relationships in the implementation of learning, especially in understanding the characteristics of students with disabilities, being open in dealing with learning problems, and not relying on just one teacher. 'I think that successful collaboration, for example, I am a class teacher and a special teacher can be invited to work together well, not just relying on one person. For example, when we are making a lesson plan or one of our students is having problems or obstacles, we can both solve it together'.
Communication	Successful collaboration is due to good communication between teachers. 'I also communicate with teachers in particular, so I know the development of children so that from there successful collaboration between teachers is achieved'.	Teachers must communicate with each other in the learning process of students in class, especially in understanding the characteristics, strengths and weaknesses of students with disabilities. 'I always communicate with the class teacher, especially the achievements of students with disabilities, both those that have been achieved and those that have not been achieved in learning'.
Coordination	Coordination can be carried out well if co-teachers have a good relationship and cooperation so that teachers can collaborate well in learning in inclusive classes. 'Having a special teacher makes it easier for me to collaborate and continue to coordinate with special teachers for the development of Students with disabilities, so that I can understand student development'.	Coordination with class teachers in every aspect of learning and student progress 'I tried to coordinate with the class teacher to plan lessons, teach, and monitor the progress of students with disabilities'.
Experience	Teachers get experience from SET in learning and can apply it in daily activities in the classroom, including services to students with disabilities and regular students. 'Sharing experiences and knowledge such as, for example, special education teachers understand the needs of students with disabilities from the aspect of subject matter, the media or the method, later he will discuss it with the mother so that the mother can manage everything with the help of her explanation about the students with disabilities'.	Exchange experiences between the two teachers, especially in the progress of Students with disabilities 'I hope that we both learn from experience so that we know together and can provide appropriate teaching for students with disabilities'.

more special education teachers than general education teachers. However, with special education teachers' single role, co-teaching in handling students with disabilities can also be developed by general education teachers so that mutual reliance can be minimised between co-teachers. General education teachers can learn from special education teachers in taking students with disabilities so that general education teachers gain new experience in providing the best possible service to students with disabilities.

Furthermore, we found two sub-themes for instructional themes: instructional implementation and success. According to general and special education teachers, the sub-theme of instructional implementation was carried out before, during the implementation or core activities and at the lesson's closing. We found the instructional implementation sub-themes in [Table 4](#).

We found the implementation of instruction sub-themes related to co-teachers collaborating in learning, especially the implementation of IEP for students with disabilities. General education teachers and special education teachers designed the IEP, though not all design processes are carried out together; at least, it is known by general education teachers and special education teachers when implementing learning for students with disabilities. Meanwhile, for the sub-theme of instructional success, the co-teachers explained that learning success could be achieved if the co-teachers could teach others, work together, and have targets and achievements for students with disabilities, including by creating a positive learning environment for all students. General education teachers are responsible for all students, including students, in implementing learning through interactive learning; providing quality lessons and emotional and social support to students with disabilities will help them achieve their goals. Interactive learning, a positive learning environment and the determination of the same instructional objectives to achieve instructional targets and achievements by general education teachers and special education teachers will increase instructional objectives suitable for all the needs and characteristics of students, including students with disabilities. The progress of students with disabilities is primarily determined by cooperation and coordination between general and special education teachers, which is planned through effective learning strategies, individually and classically, in inclusive classes.

### ***Instructional goals***

We found that the theme of the instructional goal consisted of the sub-themes of student progress, student service, student independence and student social emotionality. We found the instructional goal sub-themes in [Table 5](#).

**Table 4.** The sub-themes of instructional implementation.

Subtheme	General education teachers	Special education teachers
Implementation of learning	Implementation of jointly planned learning, good service delivery, and equal opportunities will facilitate the implementation of learning, resulting in a more creative quality of learning in meeting the needs of students with disabilities. 'With collaboration between teachers in implementing learning, will produce stronger, more creative lessons, because teachers share the planning process with each other'.	Implementation of learning with coordination and collaboration between teachers can achieve the learning goals of students with disabilities that have been set together. 'Before learning, it would be better if there was coordination between teachers so that we know what will be given to students with disabilities, both the material and the learning method so that students with disabilities can achieve the best results.'
Instructional success	There needs to be a shared understanding and goal between general and special education teachers in achieving learning targets by using learning methods and media appropriate to the characteristics of students with disabilities. 'We are also mutually accountable to ensure that all students are provided with appropriate and effective materials that will help them achieve their academic goals'.	The teacher is responsible for delivering quality lessons and providing emotional and social support to students with disabilities that will serve their goals. 'The class teacher and I are trying so that students with disabilities can achieve their success in learning, so we must continue to work together'.

We found that the sub-theme of student progress relates to the importance of co-teacher collaboration to ensure that students with disabilities get good learning and a comprehensive understanding of the material being studied. General and special education teachers must ensure that the instructional process is in line with the needs of students with disabilities so that student achievements and progress follow the instructional objectives. Meanwhile, we found that student progress was related to the service to student's sub-theme. General and special education teachers believe co-teaching is a service to students, especially students with disabilities. Good cooperation between general and special education teachers can be in the form of assistance and guidance to students with disabilities, which can positively impact students' independence and social-emotional development. We attribute general and special education teachers' perceptions of the goals and achievements of students with disabilities related to independence as necessary for becoming general and special education teachers' targets. They can implement instructional activities that allow students with disabilities to explore themselves behind limitations. General and special education teachers can develop the talents and interests of students with disabilities to become more focused and attentive so that they are expected to be useful for students with disabilities when they reach the level of education.

**Table 5.** The sub-themes of instructional goal.

Subtheme	General education teachers and	Special education teachers
Student progress	Teachers can develop the abilities of all students, including students with disabilities, assist students in achieving successful learning outcomes that the teacher has set, and supervise student development together, especially students with disabilities, so that they get experience studying well in class. 'It can help them improve their academic, social and behavioural skills and give them greater opportunities for a better future'.	With co-teaching, teachers can provide opportunities for students with disabilities to develop their skills despite limitations. 'I hope to work with class teachers in helping to improve the skills of Students with disabilities, who have other abilities that can be developed'.
Student services	Teachers learn more from special education teachers, exchanging information on how to handle students with disabilities and program alignment in assisting Students with disabilities so that they can foster interest in students with disabilities simultaneously at each stage of their development. 'Coaching aims to provide better service to students with disabilities so that they are more organised and guided in developing their interests and talents'.	Get positive support in supporting better services for students with disabilities so that they are more organised and guided and can grow their potential. 'With co-teaching, we can maintain, direct and guide so that students grow and develop according to their potential, interests and talents and also grow students' potential'.
Student independence	Co-teaching help assist all students, especially students with disabilities, in developing student independence 'I hope that all students can develop their independence in class so that the impact can be felt later'.	The teacher determines the independence of students with disabilities, especially in their learning, including determining learning activities that students with disabilities can thoroughly carry out and those that the teacher must assist. 'I know which activities must be assisted and which activities must be carried out by students with disabilities, so that student independence can be increased. I communicate this with the class teacher'.
Emotional social	Teachers are responsible for creating a conducive environment so that all students can be socially responsible to each other. 'We are also mutually responsible for creating a conducive and safe environment for all students, ensuring that all students understand and respect the rights and responsibilities of everyone involved in educational activities'.	Teachers must be able to maintain the condition of students with disabilities both from the emotional and social aspects of students, especially when socialising with regular students. 'I have to be able to ensure that students with disabilities can socialise in a class where they are not only, um ... just their students with disabilities friends, but can socialise with regular students so they don't feel isolated'.

## Discussion

In this study, we interviewed general education teachers and special education teachers in elementary schools in West Java, Indonesia, about their experiences implementing co-teaching in inclusive classrooms. We collected teachers' statements and then analysed them based on relevant theories and research findings related to co-teaching. Based on the two main themes from the findings of this research, namely classroom internal support and instructional goals, we found that implementing co-teaching in Indonesia, especially in elementary schools, still needs to follow co-teaching procedures that can improve the quality of learning in inclusive classes.

Co-teaching still requires improvement in all aspects, both in the teacher's perception of shared teaching, planning and maximum support from all school members. The learning problems faced by teachers in inclusive classes to achieve maximum results must be discussed jointly by the two teachers and supported by the principal and the inclusive education unit that deals specifically with inclusive education in schools. Differences in the backgrounds of teachers who have different backgrounds in class when it comes to dealing with students with disabilities are the most significant difficulties for teachers (Sundqvist, Björk-Åman, and Ström 2021; van Hover, Hicks, and Sayeski 2012; Pratt 2014), impacting unequal roles and responsibilities in implementing learning in inclusive classes. We grouped several categories from the data analysis process into the main theme regarding co-teaching implementation carried out by co-teachers directly involved in learning in inclusive classrooms. We organised all the codes and organisations on the thematic map to show the two main themes.

First, internal class support for co-teaching, involving co-teachers with all aspects attached to the roles, duties and responsibilities of fellow teachers and implementing learning that emphasises learning success. The involvement of co-teachers in inclusive classes is a major aspect of successful learning in inclusive classes (Ashton 2016; Rönn-Liljenfeldt, Sundqvist, and Ström 2023). This form of co-teacher involvement can be done by adopting and developing new ways of thinking that have previously used traditional methods, including adapting their learning practices to more modern ones to meet the needs of diverse students better. Co-teachers must be able to carry out their professional development in ways that can change their pedagogical practices (Akyuz and Stephan 2022; Kroeger et al. 2012). This development can be practised in inclusive classroom learning, both academic and non-academic aspects, starting from planning aspects to learning assessment. We found that general and special education teachers have communicated and collaborated to determine learning success, which is part of internal support. For example, determining instructional methods and materials to evaluate learning for students with disabilities, including remedial and enriching learning materials, can be determined together. However, for modifying the behaviour of students with disabilities, the role and responsibilities of special education teachers are more dominant because it is the main task attached to special education teachers when taking on roles in inclusive classes. This condition refers to government regulations which regulate roles, responsibilities and separation of duties.

This separation of duties has led to differences in roles and responsibilities for co-teachers. However, even so, the positive aspect that can be seen from the findings of this research is that the interaction between general and special education teachers is an interaction in meeting the needs of students with disabilities. The interaction between teachers and students is carried out by each teacher quite intensely so that each teacher can monitor the progress of all of each teacher's students (Jihai 2023; Finn et al. 2023). Even though they have different competencies due to educational backgrounds with different educational programs, general education teachers and special education teachers have tried to support each other, work together and coordinate in implementing learning for the success of all students, including students with disabilities. The competency of general and special education teachers influences the quality of collaboration when learning in inclusive classrooms (Feldman et al. 2015; Solis et al. 2012).

For this reason, to increase internal class support in inclusive classes, before the two types of teachers carry out learning practices in inclusive classes, there needs to be professional development so that when carrying out learning practices in inclusive classes, teachers are ready to collaborate in implementing co-teaching. Teacher competencies such as social, academic, personality and professional competencies are essential for developing teacher potential (Blaskova et al. 2015; Dolev and Leshem 2016; König, Jäger-Biela, and Glutsch 2020) in dealing with students in inclusive classes by creating more environmentally friendly classes. Classes should be of high quality, dynamic, interactive and productive to meet the set learning objectives. General and special education teachers try to complement each other according to their roles and responsibilities. However, this is not optimal due to differences in roles and the lack of answers given by the school.

Second, instructional goals can only be made if the co-teachers can jointly carry out learning following their respective roles and responsibilities. The success of learning in an inclusive classroom for all students is critical because of teachers' collaboration, which can be implemented in every lesson (Lapidot-Lefler and Kais 2021; Muñoz Martínez and Porter 2020; Saputra et al. 2022). Teachers must be able to work together so that classes can be entirely successful with collaboration between the general education teachers and special education teachers, starting from lesson planning so that students can plan for success in inclusive classroom settings. We see that student learning achievement for both teachers has the same target. Nevertheless, for general education teachers, successful student achievement must be felt well by all students, regular students and for students with disabilities as a whole. Both teachers should be responsible for the learning success of all students, and special education teachers should not only be responsible for achieving learning success for students with disabilities (Vlachou, Stavroussi, and Didaskalou 2016; Wang and Kuo 2019). Both teachers must be able to achieve student success with indicators that have been set for each student. The value of instructional outcomes, both cognitive and social-emotional aspects of students, can show indicators of student success (Conklin and Jairam 2021; Spörer, Henke, and Bosse 2021). Teacher cooperation and support in profound co-teaching success inclusive classroom learning effectively achieve inclusive goals.

In Indonesia's co-teaching context, the one-teach-one-assist model is commonly used in inclusive classrooms. This method is used due to regulations set by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia in 2021. The regulations determine the duties and responsibilities of general and special education teachers, which impact the co-teachers roles in implementing co-teaching. Although the two teachers are expected to work together as equal partners, the general education teacher has a more dominant role in handling inclusive classes that include all students, including those with disabilities. Meanwhile, the special education teacher's role is only to manage students with disabilities. Despite the general education teacher's dominant role, the stigma of separating students is still prevalent, leading to poor co-teaching implementation in Indonesia.

This condition refers to the roles and responsibilities of the special education teacher as a supporter of the general education teacher in government regulations, which are then implemented in every governor and mayor regulation throughout Indonesia. Various research results state that general and special education teachers are equal partners in implementing learning in inclusive classrooms (Friend et al. 2010; Holliday 2011). However, in Indonesia, this still needs to be achieved fully. Inequality between co-teachers can be seen in the division of tasks in practice. For example, special education teachers only make lesson plans, including IEP, because of the background of teachers with extraordinary educational competence, even though both teachers still discuss the subject matter.

In comparison, general education teachers who do not have a tremendous educational background hand over the responsibility to the special education teacher to handle students with disabilities. In addition, under certain conditions, limitations regarding special education teachers on knowledge of all subject matter, as well as different educational backgrounds must be overcome by the teacher in inclusive classroom learning, and makes it difficult for the special education

teacher to handle all students, thus this condition is an affirmation of the separation of responsibilities between general education teachers and special education teachers. The dependence of the general education teacher on the special education teacher in handling students with disabilities is related to student achievement (Murawski and Swanson 2001), and student behaviour is automatically a special education teacher obligation. The roles and responsibilities of co-teachers cannot be changed – they are not flexible – because there exists the stigma of separating the two roles of the teacher (Stefanidis and Strogilos 2015; Wigle and Wilcox 2003). The challenge of implementing co-teaching in Indonesia in inclusive classes has yet to be developed according to the needs and characteristics of the course. Availability of special education teachers with educational backgrounds should be according to needs in the classroom (Alkhatabi et al. 2020; Bolborici and Bódi 2022). Inclusion is a great difficulty in making learning conducive and equitable for all students, including those with disabilities.

Meanwhile, the role of and not the pretty limited responsibility possessed by the special education teacher – only dealing with students with disabilities – according to government regulations causes the general education teacher to feel heavy carrying out learning because they must handle all students, including in the design of learning, while the special education teacher does not have to be responsible for all students in the class, even in plan learning for all classes. The general education teacher's limited knowledge of the characteristics of students with disabilities causes more and more responsibility for handling students with disabilities to be given to special education teachers (Aldousari and Dunn 2022; Bettini et al. 2022; Graham, Collins, and Ciullo 2023).

On the other hand, general education teachers also have more roles and emphasise themselves so that they ignore the existence and involvement of special education teachers and their impact on students (Pavlidou and Alevriadou 2022; Politou 2022), both in acquiring abilities and in assessing the process and learning outcomes. For this reason, it is necessary to emphasise and add to the roles and responsibilities of the special education teacher as an equal partner to the general education teacher in dealing with all students, not only students with disabilities. This implementation can start from lesson planning to learning evaluation, which can be carried out jointly between co-teachers for all students (Anggraeni et al. 2023). The Indonesian government, in this case, must change regulations to be more flexible in this regard with teacher roles and responsibilities in inclusive classrooms. A general education teacher and a special education teacher must be able to serve as equal partners in both roles and not quite enough class answer, department position and have the same career opportunities, as well as financial gain that can guarantee the welfare of teachers.

The results of this research confirm that there are no equal roles and responsibilities of general and special education teachers in co-teaching in inclusive classes, so it is essential for future research to create a co-teaching model appropriate to the Indonesian context. This research must involve co-teachers so that the aim of implementing co-teaching can help teachers achieve learning goals in inclusive classes.

## Conclusion

The implementation of co-teaching in Indonesia between general education teachers and special education teachers in inclusive classes is carried out with limited roles and responsibilities because of the implementation of government regulations. Although the roles and responsibilities of the general education teacher are more significant in implementing learning for all students, the responsibility for handling students with disabilities is greater given to the special education teacher. General and special education teachers still needed to be more equal partners in inclusive classes. This condition causes an imbalance of responsibilities between co-teachers, impacting learning success in inclusive classrooms in Indonesia. This research has implications for the need for changes in the roles and responsibilities of general education teachers and special education teachers who are equivalent to collaborating following the co-teaching terminology, which can be achieved with changes to government regulations. There is a need for teacher professional



development for both types of teachers to become partner equivalents, significantly increasing the competence of teachers besides pedagogical, including subject matter knowledge. The government needs to encourage the involvement of graduates from elementary school teachers who master inclusive education and also become special education teachers, which has been limited to special education graduates. Thus, co-teaching with equal roles and responsibilities as partners can achieve successful learning in an inclusive classroom.

## Disclosure statement

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