Students' Perceptions of Instruction in Co-Teaching Classrooms: A Systematic Literature Review and Thematic Analysis

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Abstract

As more schools adopt inclusive practices, the need for schools to understand how students perceive these practices grows. The current study explores K–12 students' perceptions of co-teaching through a systematic review and thematic analysis of the literature. Through an analysis of quantitative, qualitative, and mixed-methods research from journals and dissertations, this review shows the importance of attending to contextual variables surrounding co-teaching and how these may serve as mediating factors for students' perceptions. Using an open-ended date range for studies and including gray literature allowed for robust findings that synthesize comprehensively how students view co-teaching. Key findings include students' perceived success academically and preference for co-teaching. Additionally, results indicated a pattern of students' negative perceptions of co-teaching when teachers experienced many professional demands. However, the lack of reported socially constructed contextual variables, such as race and gender, limited insights into how students make meaning of co-teaching. On the basis of these findings, we discuss implications for research, policy, and practice.

Keywords

co-teaching, inclusion, student perceptions, thematic analysis, systematic review

The Education for All Handicapped Children Act of 1975, now known as the Individuals With Disabilities Education Act (IDEA), charged states with educating students in the least restrictive environment (LRE). Schools must thereby create an environment where students with disabilities are educated "[t]o the maximum extent appropriate . . . with children who are nondisabled" (IDEA, 2004). The importance of inclusive practices echoed throughout the world in 1992 when representatives of 92 governments formed the World Conference on Special Needs Education in Salamanca, Spain. Policymakers urged countries to hold inclusive practices as the "highest policy and budgetary priority" as a means of fighting discriminatory policies (UNESCO, 1994, p. 4). Because many countries and states see inclusive education as a means of advancing equity, the percentage of students with disabilities educated with general education students continues to increase. In the United States, the percentage of students with disabilities who are educated in the general education classroom increases

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by about a percentage point per year, from 31.7% of students with disabilities educated in the general education classroom more than 80% of the day in 1989 to 63.4% of students with disabilities with the same placement in 2017 (National Center for Education Statistics [NCES], 2019).

Co-Teaching

Over time, some schools have turned to co-teaching to support the increased number of students with disabilities educated in the general education classroom (Murawski & Lee Swanson, 2001). Cook and Friend, early proponents and researchers of co-teaching, defined co-teaching as collaborative instruction between a general education teacher and another professional in a shared space (Friend et al., 2010). Friend (2015) categorized six possible arrangements of teachers and students within a co-teaching model of inclusion: one-teach, one-assist; one-teach, one-observe; stations; alternative; parallel; and team. Teachers may select one of these co-teaching arrangements for use in their classrooms according to the "teacher's comfort level and skills for teaching and co-teaching" (Friend & Cook, 1992, p. 120). Friend and Cook (1992) cautioned that no single model should be used exclusively by a co-teaching team but that teachers respond to learner variability through the models. Although these co-teaching arrangements may not represent all possible arrangements, they have become popular co-teaching practices.

Selecting the appropriate co-teaching model and designing instruction so that all students achieve success requires co-teaching teams to co-plan, co-instruct, and co-assess student learning for their shared students (Murawski & Lochner, 2011). During co-planning, the special educator uses their expertise in how people learn to ensure access to the general education curriculum for students with disabilities (Murawski & Lochner, 2011). The co-teaching team decides how they will (a) co-instruct during class, selecting models, strategies, and routines, and (b) co-assess, designing criteria

that respond to the individualized needs of students (Baeten & Simons, 2014). Co-planning time is essential for designing differentiated instruction and recognized throughout the literature as critical for successful implementation of co-teaching (Friend et al., 2010; Scruggs et al., 2007).

Previous reviews of co-teaching literature synthesized studies around the efficacy of co-teaching as an inclusive practice and teacher perceptions of co-teaching. Results from a meta-analysis reporting the efficacy of co-teaching indicated moderate positive effect ($d = .40$) for students in co-teaching placements as compared with non-co-taught settings (Murawski & Lee Swanson, 2001). Researchers measured outcomes such as grades, behavior, attitudes, and self-concept for students with and without disabilities. Because the analysis included only six studies, researchers cautioned interpreting results.

In an updated meta-analysis that disaggregated students with disabilities from students without disabilities, King-Sears and colleagues (2021) also found moderate positive effect ($d = .47$) for students with disabilities in co-teaching settings compared with placement in special education classrooms. This meta-analysis synthesized data from 26 studies and measured outcomes solely by student academic achievement. Researchers emphasized the complexity of drawing conclusions across settings as heterogenous as those found in co-teaching, expressing a need to distinguish the characteristics of co-teaching versus special education settings and the characteristics of students in these settings.

Scruggs et al. (2007) conducted a qualitative meta-synthesis of teachers' perceptions of co-teaching and found that overall, teachers support co-teaching as a practice, but teachers expressed a need for many supports that are necessary for it to function optimally, including co-planning time, professional development, and teacher compatibility. In addition, the researchers found that special education teachers often play a subordinate role to the general education teacher and do not apply special education–specific techniques to

teaching. Baeten and Simons (2014) and Shin and colleagues (2016) conducted reviews around preservice teacher perceptions of co-teaching. Baeten and Simmons found that co-teaching provided increased support for preservice teachers and decreased workload for teacher mentors and that a lack of compatibility between the teaching pairs proved to be the most challenging aspect of co-teaching. Shin et al. compared the perspectives of general and special education preservice teachers, finding that both groups believed in the efficacy of co-teaching to foster beneficial collaboration and that personality plays a significant role in the success or failure of the co-teaching pair.

Importance of Students' Perceptions

As an increasing number of schools transition to a co-teaching model, further research is necessary to synthesize perspectives of co-teaching from students (Bessette, 2008; Keefe et al., 2006; Strogilos & Avramidis, 2016). Researchers have gathered the perceptions of teachers with overall positive perceptions reported (Hang & Rabren, 2009; Keefe & Moore, 2004). But the perspectives of students have not received much attention. Foucault (1980) categorizes the knowledge and perspectives of students as "disqualified knowledge," or that which is considered lower down on the cultural hierarchy of importance (p. 82). The perspectives of students, who are the consumers and co-constructors of learning in the co-teaching environment (Skrtic et al., 2005; Vygotsky, 1934/2012), are fundamental to understanding the dynamics at play within an educational setting. This review attempts to legitimize the knowledge of students by prioritizing their perceptions (Skrtic, 1995).

Because students are consumers of co-teaching, their perceptions may clarify how settings like co-teaching do or do not actualize special education services as the law intends (Keefe et al., 2006). The implementation of special education policy has been criticized for prioritizing legal compliance at the expense of neglecting substantive special education services (Ong-Dean, 2009). Schools assign professionals to monitor and ensure compliance with the law, but because of limited resources and how procedurally dense the law is, sometimes services are only written on paper and not actually administered to students, resulting in symbolic compliance (Voulgarides, 2018). To gain insight into how special education policies like co-teaching are realized in practice, researchers should gather qualitative measures, like student perceptions, that account for context and provide the perspectives of the students who experience these policies (Kozleski, 2017). Student voice could then be used in gathering a more complete understanding of how policy is realized in practice (Shogren et al., 2015) instead of looking strictly to legal paperwork—which may not always reflect reality—to confirm compliance.

In addition to helping uncover a holistic perspective on policy implementation, students' perceptions provide insights into social perceptions of learning environments (O'Rourke & Houghton, 2006).

Because learning is socially constructed (Vygotsky, 1934/2012), researchers should explore how students make meaning of their environments (Kegan, 1982).

The importance of investigating how learning is socially constructed within various contexts is even more pressing as schools in the United States become increasingly culturally and linguistically diverse (Sinclair et al., 2018). Considering the vast cultural and experiential wealth students bring to the classroom (González et al., 2006), teachers should listen to the experiences of students and how they make meaning of instructional practices like co-teaching. The implementation of interventions like co-teaching may then be adjusted in response to increased knowledge derived from students' perceptions (Nelson et al., 2015).

Attending to individual variation in an age of increasing diversity demands that

researchers study the interactions between socially constructed identity markers, like race, ability, immigrant status, home insecurity, and gender, to uncover how student and teacher identities inform, support, and hinder learning based on cultural histories, expectations, and practice. This requires the use of an intersectional lens.

Crenshaw (1995) conceived of *intersectionality* as a frame through which to examine how inequities based on social markers of difference, such as race or ability, interact and ultimately shape outcomes. These social categories are not distinct entities but amorphous forces that shift and change according to cultural ecologies that are themselves distinct within classrooms, schools, and school districts, affording or restricting access to resources (Waitoller & Lubienski, 2019). An intersectional lens is essential because socially constructed variables moderate the salience of organizational structures and practices and shape students' perspectives (De Felice & Diller, 2019). Without attention to these social variables, our understanding of how to modify practices to respond to student diversity is limited (West et al., 2016).

Only two reviews have attempted to synthesize students' perspectives about learning in an inclusive classroom that apparently involved some degree of co-teaching. Klingner et al. (1998) interviewed 32 students with disabilities from the same school who participated in co-teaching classes for 2 to 3 years. The special education teachers in the study were assigned to three general education teachers each and had 30 min to plan with them weekly. They found that most students with disabilities preferred to receive instruction outside the general education classroom for most of the school day. In another synthesis of student perceptions of inclusion, Klingner and Vaughn (1999) found that students with high-incidence disabilities desire the same standards of grading, work completion, and activities that are used with students without disabilities. Across grade levels, they found that students preferred to work in groups with other students rather than alone or as a whole class. Additionally, they found that all students, regardless of disability status, value teachers who slow down to reteach challenging concepts and use varying instructional techniques to deliver information.

Purpose and Research Questions

The aforementioned reviews focused on the efficacy of co-teaching and teachers' perceptions as well as students' perceptions of learning in an inclusive classroom. To date, no review has focused specifically on students' perceptions of co-teaching. This present review aims to fill that gap through a review of qualitative, quantitative, and mixed-methods literature that focuses on students' perceptions of co-teaching. The present review focuses strictly on studies designed to gather data on students' perceptions of co-teaching, which we define as joint instruction by a general education teacher and a special education teacher.

This systematic review contains three unique elements that expand upon previous reviews around co-teaching. First, this review focuses specifically on students' perceptions of co-teaching, not more broadly on students' perceptions of inclusion. This narrow focus allows for the extraction of targeted data around specific aspects of the co-teaching service model. Second, this review includes literature that has not been peer reviewed, including dissertations, thereby diminishing the influence of publication bias (Ferguson & Heene, 2012). Finally, this review analyzes co-teaching according to critical contextual variables like participant characteristics (race, gender, socioeconomic status, language proficiency) and teacher experience (education, years teaching, years co-teaching, professional development around co-teaching, etc.), thereby allowing for a more holistic understanding of the contexts and social conditions that may inform student perceptions.

This systematic review and thematic analysis aims to provide insight into students' self-reported perceptions of learning within a co-teaching classroom while drawing attention to contextual variables that may provide

insight into successful co-teaching implementation. The research questions guiding this review are as follows: (1) What are characteristics of studies that report students' perceptions of co-teaching? (2) What populations of students and teachers have been targeted by studies designed to capture students' perceptions of co-teaching? (3) What are students' expressed benefits of co-teaching? (4) What are students' expressed barriers to success in co-teaching?

Method

The aim of this systematic literature review was to determine students' perceptions of co-teaching while attending to contextual variables surrounding co-teaching and how these may serve as mediating factors for students' perceptions. The systematic review was conducted in five stages: (1) systematically searching databases, (2) determining relevant literature through the application of inclusion and exclusion criteria at the levels of title or abstract and full text, (3) extracting relevant data through numeric and presence or absence coding, (4) preparing a thematic analysis of qualitative findings, and (5) updating the literature search and repeating the stages with newly incorporated studies.

Search Procedures

We conducted a systematic search of the literature that began in September 2021, searching for the following search terms in the title, abstract, and keywords using the operator NOFT: ("collaborative teaching" OR "collaborative teach" OR "coteaching" OR "coteach*" OR "coteacher*" OR "co-teach*") AND ("perception*" OR "perspective*" OR "belief*" OR "attitude*" OR "viewpoint*") NOT ("higher education" OR "early childhood" OR "preschool" OR "early intervention" OR "TESOL"). We included results from dissertations and peer-reviewed journal studies in the following databases: ERIC, APA PsycInfo, ProQuest Dissertations, and Theses Global. Search terms included terminology related to one's thoughts (i.e., perception, belief, attitude). In November 2022, we updated our search through reference chasing, forward searching, and a hand searching of special education journals cited in review articles on students' perceptions of co-teaching. To find relevant studies, we screened reference lists from review articles, reports, and dissertations. We conducted a 10-year hand search of the following journals that often publish studies on students' perceptions of co-teaching: *Exceptional Children*, *International Journal of Special Education*, *Middle School Journal*, and *Remedial and Special Education*.

We identified studies following PRISMA guidelines (Page et al., 2021); the PRISMA diagram is displayed in supplementary materials. Researchers captured initial search results using Endnote software and compiled the results in an Excel spreadsheet. After we identified, documented, and removed duplicates, we applied inclusion and exclusion criteria to all remaining titles and abstracts. We applied inclusion criteria in the order listed; studies had to meet all criteria to move to the next level of screening and, finally, to inclusion in the review. Once a study failed to satisfy an inclusion criterion, researchers documented the reason for exclusion and removed the study.

Inclusion Criteria. First, researchers applied exclusion criteria to all studies, beginning with the removal of literature reviews. Because we could not access translation services, we also excluded studies published in a language other than English. Considering this review sought to gather students' perceptions of co-teaching in classrooms containing students with disabilities, studies that contained a co-teaching pair made up of a general education teacher and an English-as-a-second-language teacher, a teacher certified only for students with visual impairment, or a paraprofessional were excluded.

Second, we applied inclusion criteria. Studies needed to report empirical data about student perspectives on co-teaching. To look at how co-teaching is perceived among students at varying levels of development, we included studies that took place in a K-through-12 setting. Studies that took place in higher education or early childhood were not included. Neither publication date range

nor the type of research methods employed was restricted so as to capture a comprehensive understanding of the literature. We conducted presence/absence coding for all studies. Due to the methodological heterogeneity of the studies involved, we used thematic analysis to respond to the research questions What are students' expressed benefits of co-teaching? and What are students' expressed barriers to success in co-teaching? Students' perceptions were drawn from direct quotes of student interviews, focus groups, and surveys and author's explanations of student reports. We extracted qualitative data from mixed-method studies if direct reports were provided before data integration.

For purposes of this systematic literature review, *perceptions* was defined as student-reported feedback of meaning made around their experiences in a co-taught classroom. We operationalized *co-teaching* for purposes of this review as a service-delivery mechanism performed by two certified teachers, one in general education and one in special education, who share instructional responsibilities within a shared space.

Screening and Eligibility. The initial database search yielded 1,442 results that researchers recorded using an Excel spreadsheet. Throughout initial search and title-and-abstract screening, members of the research team documented reasons for inclusion and exclusion in a spreadsheet. Endnote software removed 210 duplicates, and researchers removed 71 miscellaneous documents (e.g., books, conference proceedings). Inclusion and exclusion criteria were applied to all titles and abstracts of remaining studies, which resulted in the removal of an additional 237 duplicates found and removed manually and 875 studies that researchers documented and removed for not satisfying inclusion and exclusion criteria.

The remaining 49 studies were eligible for full-text screening. One study ($n = 1$) was requested through the university interlibrary loan but was not retrieved. We removed a total of 18 studies during full-text screening for the following reasons: practitioner article ($n = 2$), co-teaching pair in the study did not include a certified special education teacher ($n = 2$), repeats data already included in synthesis ($n = 1$), master's thesis ($n = 6$), and study did not contain student perceptions of co-teaching ($n = 7$). A total of 30 studies remained for full-text screening.

To ensure we captured a comprehensive view of the literature, we updated the search through hand searching, reference chasing, and a forward search of included studies. We checked reference lists in included studies to identify studies that may not have been indexed by ProQuest, PsycInfo, or ERIC. We conducted a hand search to find articles in review or published after our initial search. After reference chasing and hand searching, we added an additional three studies to the review, resulting in 33 studies eligible for analysis under the proposed research questions.

Coding Procedures

Numerical and Presence/Absence Coding. To explore students' perceptions of co-teaching and the contexts that surround them, we coded relevant contextual information in the following order. First, we extracted the following participant demographic information: number of student participants, number of students with a disability, number of students without a disability, number of students learning English as a second language, and the name of the first-language country of those students reported as learning English as a second language. In addition, we collected the number of student participants of a certain gender, race or ethnicity, and socio-economic status. Second, we recorded data describing teacher participants, including number of teachers, years of teacher education, years of teaching experience, and years of experience co-teaching. Third, we coded the following variables as present or absent: school-provided professional development around co-teaching, time provided for co-planning, subjects the special education teacher was responsible for teaching, and finally, the number of models of co-teaching utilized in the study. We highlighted the number of subjects the special education teacher managed because the special education teacher is the professional responsible for administering special education supports

and these demands require course preparations where supports may be planned. For purposes of this literature review, we defined professional development in co-teaching as training provided for co-planning as reported by the study author. The allowance of time for the purposes of co-planning between the general and special education teacher pair was defined as time provided for planning lessons, grading, and providing student feedback. Fourth, we reported the presence or absence of school setting and community characteristics, such as elementary/secondary, urban/rural/suburban, and region of the United States or country as defined by author. Finally, we recorded content areas involved in the studies, such as math, science, social studies, English, foreign language, and electives. Variables that were not reported were documented. All data analyzed in this review, including tables and figures, are available in the supplementary material on Open Science Framework (https://osf.io/8zkbt/?view_only= 3f4655e4770f4399a71b45b3aebebc4a).

Thematic Analysis. Researchers conducted a variation on thematic analysis of qualitative data within the included studies according to Braun and Clarke (2006). Thematic analysis relies primarily on the use of text to synthesize the most salient patterns across multiple studies in a way that stays grounded in the data. The stages of the thematic analysis included (1) becoming familiar with the data by reading and rereading, (2) generating initial codes, (3) iteratively comparing overlap or inconsistencies of codes between studies, (4) summarizing codes across studies into themes, and (5) defining and refining themes.

After downloading and reading through studies, researchers highlighted significant portions of texts and made notes. To create codes rooted in the data, researchers coded student reports and author explanations of student reports using open coding (Creswell, 2013). Researchers primarily used in vivo codes, or codes created with students' exact words (Saldaña, 2021). Quantitative data and integrated findings of qualitative and quantitative data from mixed-methods studies were not included in the thematic analysis. For

example, Weichel (2001) conducted a mixed-method study that provided quotes from students about how they perceived co-teaching. The quotes from students, such as "We learn more this year because there's more help" (Weichel, 2001, p. 62), were included in the thematic analysis. However, Weichel's conclusions in which the author synthesized the quantitative and qualitative findings were not included. This process captured the data unrestricted by researcher measurement tools.

Researchers compiled initial codes and student reports in a Microsoft Word document. Similar codes were organized together to help researchers recursively compare relationships between categories of codes (Strauss & Corbin, 1990). For example, researchers predicted some categories to be significant after initial readings of all included literature, such as the need for parity among co-teachers. Though the need for a more balanced power dynamic between special and general educators was expressed in studies that employed quantitative measures, student reports in only two studies containing qualitative data mentioned the need for co-teacher parity. The inconsistency between researcher-created measures captured in a reading of the data overall and student reports is a significant issue for researchers to consider; however, the lack of student reports rendered co-teacher parity an issue to consider outside of this data set.

Next, researchers combined codes into patterns to create themes using thematic maps (Braun & Clarke, 2006). Thematic maps are concept maps that create visuals to help researchers iteratively compare connections between themes (Braun & Clarke, 2012). For example, initial codes "get two opinions" and "splitting up into groups is fun" belonged to different themes, one relating to the benefits of varying instructional designs and the other conveying the benefits of having two individuals teaching the same class. However, after iteratively moving between the themes, it became clear that students were not distinguishing between the variability intrinsic of having two different educators teaching and the variability of the instructional design but that they saw these as encompassing co-teaching. As a result, researchers combined these themes into

the theme "students value multiple instructional techniques and perspectives." Some codes, such as "one teacher can take a break," were mentioned only in a single study. Because additional data did not support these codes, they were collected in a miscellaneous category (Braun & Clarke, 2006).

Determining resultant themes was an iterative process as researchers considered a theme's relevance to the research questions and the capacity of the theme to capture the data's most salient analytic conclusions (Clarke & Braun, 2014). This process was not linear but involved moving back and forth between themes. Research team members met to discuss the relevance of themes to the research questions and to the meaning of the data overall. After several meetings, researchers reached a consensus. In addition, the first author sought the feedback of two experts in co-teaching as a means of peer debriefing (Nowell et al., 2017).

Researchers refined themes by considering them in light of the research questions (Braun & Clarke, 2012). For example, some themes, such as "positive perceptions of students with disabilities," did not directly respond to the research questions. This theme spoke to inclusive schoolwide support systems and not co-teaching specifically. Additionally, other themes, though salient, did not capture the essence of the data overall (Braun & Clarke, 2006). For example, the theme "increased sense of belonging" was a common theme throughout the literature as seen in codes such as "more friends" or "more chances to meet people." However, this theme did not overlap across studies as most significant.

Interobserver Agreement. Doctoral students in special education calculated interobserver agreement (IOA) for study screening at title and abstract, full text, and descriptive coding. The first author trained the second author in screening and coding procedures by reviewing relevant definitions and codes with explicit modeling. Reliability of 90% was required using a point-by-point method to achieve IOA (Ledford & Gast, 2018). According to this method, researchers calculated IOA by dividing the total number of agreements by the total possible agreements and disagreements multiplied by 100. Coders reached 92% agreement for title and abstract screening and 94% for full text screening. All studies that met inclusion criteria ($n = 30$) were independently coded by the first author, and 33% ($n = 10$) were coded by the third author. When areas of disagreement arose, researchers discussed until they reached a consensus. Researchers reattempted until they reached overall agreement of 96%. After updating the review in November 2022, researchers conducted IOA for added studies ($n = 3$) following the same procedures and reached 94% agreement. Ultimately, a total of 33 studies are included in the synthesis.

Results

Results are presented following the procedures outlined in the Method while providing relevant findings in response to the proposed research questions. Findings are presented as follows: (a) screening results following PRISMA guidelines, (b) numerical and presence/absence coding results in response to Research Questions 1 and 2, and (c) thematic results in response to Research Questions 3 and 4.

What Are the Characteristics of Studies That Report Student Perceptions of Co-Teaching?

As shown in the supplementary material in Table 1, studies were published between 1999 and 2020. A quarter of studies ($n = 9$) were published before 2009, and the remaining 75% of studies ($n = 25$) were published between 2010 and 2020. Research design consisted of 39% mixed methods ($n = 13$), 33% qualitative ($n = 11$), and 27% quantitative ($n = 9$). Of the 33 studies, 18% did not explicitly state design methods ($n = 6$; Conderman, 2011; Johnson, 2013; King-Sears et al., 2014, 2020; King-Sears & Strogilos, 2020; Wilson & Michaels, 2006). Data collection methods included surveys ($n = 23$), interviews ($n = 16$), observations ($n = 16$), focus groups ($n = 6$; Gerber & Popp, 1999; Johnson, 2013;

Leafstedt et al., 2007; Shogren et al., 2015; Talley, 2017; Williams, 2014), and document analysis ($n = 5$; Alsarawi, 2020; Bessette 2008; Clement, 2011; Hang & Rabren, 2009; Williams, 2014).

All studies took place partially or completely in secondary schools ($n = 33$), with only five (Bessette, 2008; Deering, 2014; Gerber & Popp, 1999; Hang & Rabren, 2009; Shogren et al., 2015) taking place partially in elementary schools. Studies took place in urban ($n = 8$; Clement, 2011; Gerber & Popp, 1999; Johnson, 2013; Keeley, 2015, 2017; McMahon, 2020; Williams, 2014; Xanthopoulou, 2017), rural ($n = 6$; Deering, 2014; Gerber & Popp, 1999; Rosati, 2009; Strogilos & King-Sears, 2019; Talley, 2017; Thompson, 2010), and suburban communities ($n = 6$; Bean, 2006; Chilcoat, 2011; Embury & Kroeger, 2012; Gerber & Popp, 1999; Kelley et al., 2017; Wilson & Michaels, 2006).

Table 2 in the supplementary material shows limited reporting of data around the co-teaching models used, the number of general education partners assigned to each special education teacher, and time provided for co-planning. The most frequently utilized model of instruction was the one-teach, one-assist model ($n = 15$), followed by the one-teach, one-observe model ($n = 10$). The number of general education partners assigned to a single special educator ranged from one co-teaching partner to six partners. Special education teachers required anywhere from two to five course preparations to plan for the various subjects they were expected to teach. Time provided for co-planning was not reported by 23 studies, and nine studies reported that no time was provided for co-planning (Alsarawi, 2020; Bean, 2006; Chilcoat, 2011; Deering, 2014; Johnson, 2013; Keeley, 2015; McMahon, 2020; Weichel, 2001; Xanthopoulou, 2017).

The number of years a school used co-teaching was reported for only 11 studies. Schools used co-teaching for a range of 0 to 7 years. Three studies took place during the inaugural year of co-teaching (Hang & Rabren, 2009; Rosati, 2009; Weichel, 2001), and two studies reported they had utilized co-teaching for a year before beginning the study (Alsarawi, 2020; Embury & Kroeger, 2012).

What Populations of Students and Teachers Have Been Targeted in Studies Designed to Capture Students' Perceptions of Co-Teaching?

Participants across studies consisted of 3,239 students in kindergarten through Grade 12. Of these, gender was reported for individual participants in 15 studies, totaling 1,383 students. All studies reported gender as binary. Gender was almost evenly distributed, with 52% male participants ($n = 717$) and 48% female participants ($n = 666$). Only four studies reported the number of students learning English as a second language (Bessette, 2008; Connolly, 2011; Dozier, 2005; Williams, 2014). Furthermore, no studies reported the country from which the student participants learned their first language. Seventy percent of studies ($n = 23$) did not report participant race or ethnicity. Of the nine studies that did report race or ethnicity, a total of 788 participants were involved. Participants were reported as White ($n = 380$), Black ($n = 195$), American Indian ($n = 0$), Asian ($n = 33$; Bessette, 2008; Connolly, 2011; Dozier, 2005; Leafstedt et al., 2007; Preston-Smith et al., 2020; Williams, 2014), Latino/Latina ($n = 118$; Connolly, 2011; Dozier, 2005; King-Sears & Strogilos, 2020; Leafstedt et al., 2007; Preston-Smith et al., 2020; Rosati, 2009; Strogilos & King-Sears, 2019; Williams, 2014), Native Hawaiian/Pacific Islander ($n = 0$), and multiracial ($n = 62$; Bessette, 2008; Dozier, 2005; Preston-Smith et al., 2020; Williams, 2014). Only one study reported socioeconomic status for individual participants (Strogilos & King-Sears, 2019).

Students with disabilities made up 22% of participants or 666 students ($n = 21$). All studies except Conderman (2011) reported student disability status. Eight studies disaggregated results by students with disabilities and students without disabilities (Alsarawi, 2020; Gerber & Popp, 1999; King-Sears et al., 2020; King-Sears & Strogilos, 2020;

McMahon, 2020; Preston-Smith et al., 2020; Strogilos & King-Sears, 2019; Wilson & Michaels, 2006). Two studies indicated student ability in reference to student interview comments but then grouped thematic outcomes together (Shogren et al., 2015; Thompson, 2010). Eight studies reported only the perceptions of students with disabilities (Clement, 2011; Hang & Rabren, 2009; Johnson, 2013; King-Sears et al., 2014; Leafstedt et al., 2007; Rosati, 2009; Talley, 2017; Xanthopoulou, 2017). Fourteen studies combined the perceptions of students with and without disabilities.

A total of 522 teachers participated in studies that reported students' perceptions of co-teaching. Teacher years of experience was reported by 14 studies—experience ranged from 1 to 30 years. Years of experience co-teaching was reported by 16 studies. Of those studies, nine were made up of teachers with only a year or less of co-teaching experience (Alsarawi, 2020; Bean, 2006; Bessette, 2008; Conderman, 2011; Connolly, 2011; Hang & Rabren, 2009; Keeley, 2015; Rosati, 2009; Weichel, 2001). Years of co-teaching experience for all studies ranged from 0 to 10 years. The highest level of education attained for teachers was reported by nine studies (Alsarawi, 2020; Bean, 2006; Bessette, 2008; Keeley, 2015; Kelley et al., 2017; King-Sears et al., 2014, 2020; King-Sears & Strogilos, 2020; Xanthopoulou, 2017), and of those studies, all reported that some or all teachers possessed master's degrees.

What Are the Benefits of Co-Teaching?

Students' perceptions of co-teaching were overwhelmingly positive. Students indicated they enjoyed the diverse instructional strategies, varying perspectives, and ease afforded by having two teachers and that these benefits helped them succeed academically. The following descriptive themes were identified through inductive coding: "students are supported by increased teacher accessibility," "students value multiple instructional techniques and perspectives," and "students experience greater academic success." Each theme will be discussed in the following sections.

Students Are Supported by Increased Teacher Accessibility. The most frequently reported benefit of co-teaching according to student reports in 14 studies was that students are supported by increased teacher accessibility. Students appreciated how co-teaching helped them to accomplish more (Strogilos & King-Sears, 2019), provided more opportunities to ask questions and receive answers (Gerber & Popp, 1999), and allowed them to ask questions without holding up instruction (Preston-Smith et al., 2020). A student in Alsarawi (2020) noted that "they can devote more time to someone who struggles a little more academically. . . . You don't feel like a burden and others don't feel like that they're not getting paid attention to" (p. 149). All studies that contained students feeling supported by two teachers reported student disability status except Conderman (2011).

Students Value Multiple Instructional Techniques and Perspectives. Students valued that co-teaching allowed for varying instructional techniques and ways of explaining content. In 13 studies, students described how the variation made possible by the co-teaching model met their learning needs. Students favorably noted the presence of less lecture, less whole-group instruction, and more breaking up the class. Some students mentioned that they preferred the classes to be "split up into groups" because they could get more done and learn the same content in different ways (Satterlee & Matuska, 2018). The team-teaching model allows teachers to communicate openly, with one teacher leading and the other interjecting questions or clarifications (Solis et al., 2012). Some students mentioned a preference for the team-teaching model because teachers incorporated humor in their dialogues that made the class more "fun" (Conderman, 2011; Strogilos & King-Sears, 2019). Similarly, students liked that content could be explained in multiple ways and expressed from different perspectives. Having two teachers seemed to have heightened students' interest overall, as they explained how they "don't get tired of the same teacher all the time" (Wilson & Michaels, 2006, p. 215).

Students Experience Greater Academic Success.
Students in 12 studies expressed better understanding or improved grades due to placement in a co-teaching setting. Students often reported improvement in grades with statements like "I went from F to A, and from D to B when collaborative [teaching] started" (Gerber & Popp, 1999, p. 291). They explained how co-teaching helped them understand content more easily (Alsarawi, 2020) and demonstrate an increased desire to learn (Johnson, 2013). Of the studies that reported academic improvement, six reported disability status (Gerber & Popp, 1999; Johnson, 2013; Rosati, 2009; Strogilos & King-Sears, 2019; Wilson & Michaels, 2006; Xanthopoulou, 2017), two reported gender (Rosati, 2009; Wilson & Michaels, 2006), one reported race-ethnicity (Rosati, 2009), and no studies reported the number of students learning English as a second language.

What Are Students' Expressed Barriers to Success in Co-Teaching?

Only two studies (Jurkowski & Müller, 2018; Leafstedt et al., 2007), conveyed largely negative perceptions of co-teaching. Across the qualitative data from mixed-methods and qualitative studies, we identified two disadvantages: confusion from multiple teachers and increased teacher monitoring. Even though these themes may seem insignificant compared with the many benefits of co-teaching, their presence does show that a well-received instructional strategy can inadvertently create confusion and discomfort for students.

Confusion From Multiple Teachers. The most frequently reported drawback of co-teaching was that two teachers can be confusing (Alsarawi, 2020; Conderman, 2011; Dozier, 2005; Gerber & Popp, 1999; Strogilos & King-Sears, 2019; Thompson, 2010; Williams, 2014; Wilson & Michaels, 2006; Xanthopoulou, 2017). Student participants in Dozier (2005) and Thompson (2010) explained that teachers can contradict each other, which contributes to confusion. These conflicts may come in the form of different

grades on the same assignment (Dozier, 2005), different opinions expressed about how to approach the same content (Gerber & Popp, 1999; Thompson, 2010), or two teachers talking at the same time (Strogilos & King-Sears, 2019; Wilson & Michaels, 2006). Of the eight studies that report two teachers as confusing, none reported the co-teaching arrangements utilized in the study. None of the studies reported the years the school had co-teaching as an inclusive practice, teacher years of teaching experience, or time provided for co-planning. Gerber and Popp (1999) did indicate that the teacher involved in the study expressed a wish to not be a part of a co-teaching arrangement.

Increased Teacher Monitoring. Students disliked additional teacher presence in seven studies (Conderman, 2011; Gerber & Popp, 1999; Preston-Smith et al., 2020; Satterlee & Matuska, 2018; Thompson, 2010; Wilson & Michaels, 2006). Some students felt uncomfortable with teachers watching them (Conderman, 2011; Strogilos & King-Sears, 2019; Thompson, 2010), and others described behaviors in which they could not engage because of increased teacher presence. Students in Gerber and Popp (1999) reported, "You are able to talk less" and "You get in more trouble," but when asked if behaviors were improved in a co-taught class, they said no (p. 291). These frustrations were also articulated along with examples of the behaviors in which students were attempting to engage but could not due to monitoring from the teacher. Behaviors included trying to work on homework from another class (Wilson & Michaels, 2006) and throwing paper airplanes (Gerber & Popp, 1999).

Discussion

The purpose of this systematic literature review was to examine students' perceptions of co-teaching while considering important contextual factors that surround the implementation of co-teaching. We described characteristics of studies that reported students' perceptions of co-teaching, including participant

and intervention characteristics. We also synthesized the benefits and drawbacks of co-teaching as reported by students. Significant findings include (a) students' positive perceptions of co-teaching, (b) an absence of reporting in the areas of race and gender, (c) the possible relationship between increased teacher responsibility and students' negative perceptions of co-teaching, and (d) the need for co-teaching practices that cultivate student autonomy.

Positive perceptions of co-teaching presented stronger in the data overall than negative perceptions.

> *Across all placements and contexts, students had much to gain by being in a co-taught classroom.*

Students reported increased access to one-on-one help, interesting instructional arrangements, and greater academic success overall. These results are consistent with Scruggs et al.'s (2007) metasynthesis of teacher perceptions of co-teaching, which reported an increase in attention provided to students and improved grades. Likewise, students' perceptions of success academically because of co-teaching are consistent with findings that indicate co-teaching is an effective intervention for improving student outcomes (King-Sears et al., 2021; Murawski & Lee Swanson, 2001). In the implications that follow, we address some possible reasons for the less prevalent negative student perceptions of co-teaching and their implications for policy, research, and practice.

Implications for Policymakers

The present review indicated that students' negative perceptions of co-teaching may be associated with contexts in which teachers were responsible for working with multiple teachers and sometimes even multiple schools every day. For example, special education teacher participants from Leafstedt et al. (2007) co-taught daily with anywhere from three to six partners. These teachers also rotated among multiple schools. A special education teacher in Xanthopoulou (2017) taught three content areas in three different schools. Effective co-teaching requires time to co-plan and co-assess (Murawski & Lochner, 2011). Teachers may find it challenging to co-plan and analyze student assessment data with six separate partners while also adjusting to the culture of multiple schools. Table 2 in the supplementary material further illustrates the complexity teachers face as their schedules regularly required anywhere from two to five course preparations. Only two studies reported time for co-planning (Connolly, 2011; Weichel, 2001). Other studies either did not report time for co-planning or reported that teachers planned after school or on weekends (Satterlee & Matuska, 2018), which suggests that schools expect teachers to address the complex responsibilities of co-planning and co-assessing in their free time.

Because the aim of co-planning, co-assessing, and co-instructing is to provide access to the general education curriculum for students with disabilities, it seems counterintuitive that so little time is given to co-planning and that researchers did not report this time. Without co-planning, teachers logically may not be co-instructing and co-assessing. Co-teaching would then function in part as a symbolic structure of compliance (Voulgarides, 2018). Students are learning together, but if the demands placed on teachers are too high, students may not be guaranteed substantive services.

> *Complying with the mandate for inclusion but not supplying the resources to accomplish an equitable learning environment could have resulted in some students' increased negative perceptions of co-teaching.*

Implications for Researchers

Our second research question asked what populations of students and teachers participated in studies that measured students' perceptions of co-teaching. We attempted to extract contextual data that spoke to the complex intersections of socially constructed units of meaning, such as race, disability,

and gender, and to explore how these interact with students' perceptions in the co-teaching setting using an intersectional lens. An intersectional lens for conducting analyses is necessary to analyze how oppression compounds across varying scales and identities (Harris & Leonardo, 2018). For example, someone who has been labeled learning disabled and identifies as Black may experience discrimination because of their disability and race due to the way "schools address or fail to address the intersection of these layers of difference" (Waitoller & Kozleski, 2013, p. 36). In contrast, a student labeled learning disabled who identifies as White may experience discrimination based on disability. We therefore underscore the importance of attending to these social designations to analyze the effect they may have on students' perceptions of learning environments.

Performing an intersectional analysis of key demographic variables proved challenging as a lack of reporting in the areas of race and gender made it challenging to contextualize students' perceptions. All researchers reported gender as binary, thereby ignoring the possibility of other gender orientations. Additionally, over half of the studies ($n = 23$) did not report student race. These constructs should not be treated as straightforward variables but as valuable insights into how gender and racial inequality are embedded in traditional social structures and may interact in classroom environments. On the basis of these findings, we recommend researchers investigate the ways educational settings address or do not address the complex forms of exclusion students may experience by reporting multiple social identities of participants (García & Ortiz, 2013).

In addition to the lack of participant demographics, few studies took place in elementary schools. Of the 33 studies involved in this review, only five studies took place in elementary schools (Bessette, 2008; Deering, 2014; Gerber & Popp, 1999; Hang & Rabren, 2009; Shogren et al., 2015), and only one study (Bessette, 2008) compared findings across elementary and secondary settings. The limited number of studies conducted in elementary settings suggests that more research needs to be conducted to adequately capture elementary students' perceptions of co-teaching, particularly research that compares co-teaching practices within the same school across different grades. Understanding the differences between the way co-teaching is conducted in elementary and secondary settings could shed light on effective practices that could be generalized to all grades.

Implications for Practitioners

For practitioners, this study suggests that teachers should employ instructional methods that prioritize student autonomy. All studies in which students reported that they disliked increased oversight from an additional teacher presence took place in secondary settings (Conderman, 2011; Gerber & Popp, 1999; Satterlee & Matuska, 2018; Wilson & Michaels, 2006). The examples of behaviors in which students were attempting to engage and could not because of having two teachers could be interpreted as an appeal for increased autonomy. For example, a student in Satterlee and Matuska (2018) said they liked when they had one teacher in the classroom because they could "sneak out." When the researcher inquired further about the sneaking out, the student responded by saying, "[I] put things in my locker a lot. . . . I get my stuff and run back in so no one notices" (Satterlee & Matuska, 2018, p. 23). Retrieving materials from a locker hardly seems like a task that requires teacher oversight for a secondary student. Considering developmental markers for students in secondary classrooms, practitioners may work on affording students' opportunities to exercise autonomy. As mentioned in Wilson and Michaels (2006), students in secondary settings should be treated as young adults, not children.

Limitations

The following limitations should be noted. First, this study purposefully included studies covering a range of designs. Though the heterogeneity of studies permitted a comprehensive review of the literature and synthesis of qualitative data, it did not permit us to draw

conclusions regarding the effectiveness of co-teaching. Second, despite the rigorous approach we used to systematically search databases and identify articles that met the inclusion criteria, it is possible that there were articles that were missed or not included in the review. Third, the method of qualitative synthesis used in this review, thematic analysis, is not precisely replicable but was necessary to capture students' perceptions unaltered by researcher assessments. Even though measures were taken to be transparent with the coding process, these methods are not replicable, and therefore caution should be taken when interpreting findings.

Conclusion

This review was conducted to capture students' perceptions of co-teaching considered with potential contextual mediating factors. Students are consumers of various educational settings and therefore provide invaluable feedback (Skrtic et al., 2005). The likelihood of positive outcomes increases when students approve of an intervention (Mautone et al., 2009). Consequently, it is critical to consider students' perceptions in the design of research and classroom practices. In addition, researchers and policymakers may use qualitative measures such as students' perceptions to determine how special education policies play out in practice as a means of avoiding symbolic compliance (Voulgarides, 2018).

In conducting this review, we gathered the characteristics of studies that report students' perceptions of co-teaching and determined the populations of students and teachers included in these studies. Next, we synthesized the literature on the benefits and drawbacks of co-teaching according to students. Reports included in this review spanned a wide breadth of contexts and methods. Even with the extensive heterogeneity of studies, findings were incredibly consistent: Students have a positive perception of co-teaching and favor the model for the increased attention, academic success, and dynamic instructional delivery it provides.

In future studies, researchers should make efforts to report vital contextual factors such as the number of course preparations required of special educators or number of content areas in which a special educator must teach regularly to see how these demands on instruction impact students' perceptions. Furthermore, socially constructed markers that dictate power and privilege in society should be reported to contextualize how these interact in a setting that traditionally contains a hierarchal balance of power. Finally, teachers may begin to consider whether their classrooms may be reoriented to provide students' greater levels of autonomy.

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