*Review*

# Using peer support arrangements in general education classrooms to improve social and academic outcomes for students with intellectual disabilities: A review of the legislative, classroom and developmental impacts

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Full participation of students with intellectual disabilities in the general education classroom is the primary and clear message of legislative, policy, and research initiatives. Unfortunately, peer interaction is not as prominent a feature in the lives of students with intellectual disabilities. Peer support arrangements are being used to address peer interaction goals for students with intellectual disabilities. Peer support arrangements involve typically developing peers providing academic and social supports to students with intellectual disabilities in general education classrooms. A systematic literature review of studies published since the enactment of the Individuals with Disabilities Education Act of 1997 through 2016 was conducted to determine the optimal composite and characteristics of peer support arrangements and associated training methods. From this review of six studies, peer support arrangements are found to promote social interactions. Evidence for increased academic engagement of students with intellectual disabilities is mixed; however, evidence for social outcomes is promising. Students with intellectual disabilities experienced increases in social interaction, expressive language, and diversity of social skills alongside decreases in disruptive behaviors. Increased academic engagement for peers who provide support was observed. A conclusion drawn from this growing body of evidence is that peer support arrangements are an effective intervention capable of socially integrating students with intellectual disabilities into the peer culture of the general education classroom. Lastly, a multi-dimensional analysis is conducted on legislative, classroom and developmental impact.

**Keywords:** peer support arrangement; general education; special education; social interaction; intellectual disabilities; autism spectrum disorder; academic outcomes; social outcomes

## INTRODUCTION

The continuous central theme over the past two decades of legislative, policy, and research initiatives (e.g., Individuals with Disabilities Education Act, 1997, 2004, 2006; Lipsky and Gartner, 1997; No Child Left Behind Act, 2001; President's Commission on Excellence in Special Education, 2002) is to increase opportunities and meaningful access to the general education curriculum for students with intellectual disabilities.

Full participation of students with intellectual disabilities in the general education classroom is the primary and

clear message of these initiatives (Carter and Kennedy, 2006). Indeed, this has meant increased opportunities for social interaction among students with intellectual disabilities and their general education peers.

Social interaction has a multitude of positive lifelong benefits for adolescents with and without disabilities. Research indicates that peer interaction contributes to lifelong social and emotional development, promotes academic success, and enhances overall quality of life (Gifford-Smith and Brownell, 2003; Rubin et al., 2009;Ryan, 2000). During adolescence especially social interaction, peer acceptance, peer validation, and building/maintaining peer relationships take a more prominent role in students' lives. Unfortunately, peer interaction is not as prominent a feature in the lives of students with intellectual disabilities, even though the benefits are much the same. As Carter and Kennedy (2006) argue, "It is clear that without well-designed support strategies, students with severe disabilities may be physically integrated but not socially integrated among their peers without disabilities" (p. 284). For these reasons, evidence-based peer-focused interventions are necessary to integrate students with intellectual disabilities into the peer culture of the general education classroom setting.

As a result of the standards-based reform movement, service delivery of individualized educational programming has shifted away from segregated or less inclusive settings and into the general education classroom. Students with disabilities are entitled to individualized education programs (IEP) with individually determined goals; in fact, these goals are implemented in the preferred inclusive setting of the general education classroom. Under those circumstances, peer interaction goals are frequently included in IEPs of students with intellectual disabilities (Gelzheiser et al., 1998). Peer support arrangements are being used to address peer interaction goals for students with intellectual disabilities. It is therefore important to survey the current research literature on peer support arrangements to apprize the multiple educational stakeholders (e.g., general and special educators, general and special education students, parents, administrators, paraprofessionals, related service providers) of an evidence-based practice that focus on improving social and academic outcomes for students with intellectual disabilities.

Paraprofessionals are individually assigned to students with intellectual disabilities to support participation in the general education classroom. This widespread adult-delivered support-focused practice presently lacks empirical evidence (Giangreco, 2013; Giangreco et al., 2014). Empirically validated strategies are essential to support full and meaningful participation in the general education classroom. Peer-delivered interventions provide alternatives to the overreliance on one-on-one,

adult-delivered practices; specifically, peer support arrangements are a recommended alternative to this prevalently used support approach (Giangreeo et al., 2004).Recognizing that students are an underutilized natural support this specific intervention involves arranging for one or more student(s) without disabilities to provide ongoing social and academic support to a student with disabilities while receiving supervision, assistance and ongoing feedback from adults (Carter andKennedy,2006). This intervention was originally developed to promote social integration and skill development of students with severe disabilities (Gaylord-Ross and Pitts-Conway, 1984). Participants with disabilities engaging in peer support arrangements benefit from direct social interaction and peer modeling; concurrently, participants without disabilities receive increased attention and supervision from adults (Cushing and Kennedy, 1997).

## METHODS

In the following section, five studies that use peer support arrangements to increase social and academic outcomes for students with intellectual disabilities are discussed.

### Search Strategy

All studies were published in English in peer-reviewed print or online journals between January 1997 and August 2016. A search for studies published in available print or online journals was conducted using five electronic databases (e.g., EBSCOhost, ERIC, Google Scholar, PsycArticles, PsycINFO). Various combinations of keywords describing the student population (e.g., Asperger syndrome, autism, developmental disability, intellectual disabilities, mental retardation, pervasive developmental disorder), outcomes(e.g., initiation, interaction, peer networks, social interaction, social networks, social relationships), and settings (e.g., general education, inclusion, integration) were used. Additional keywords were incorporated into the search process as new articles were identified.

### Limitations of this Study

Search and analysis decisions placed limitations on the conclusions that may be drawn from this literature review. This review focused on studies after 1997 since IDEA was enacted that same year. The focus of this review was also narrowed to studies implemented in grade school, excluding studies involving non-school aged children. This review was restricted to peer support arrangements targeting social interaction in the general education.

## RESULTS

Table 1 presents the research design of five journal articles containing six studies retrieved from the search strategy aimed to uncover studies examining peer support arrangements to increase social and academic outcomes for students with intellectual disabilities. Majority of the studies selected employed parametric analysis techniques.  Research designs varied across studies; notations were given when advanced design techniques were used. Longitudinal and cross sectional designs were not used in the selected studies.  The overall sample size across studies ($N$ = 23) was small and ethnic demographics were not routinely collected. Researchers did not discuss cultural and ethnic differences; consequently, with the lack of information and discussion no ethnic bias can be determined. Standard ethical safeguards in working with student and IDD populations were employed in all studies. Preliminary results are promising and further investigation is warranted.

Table 2 summarizes the demographic characteristics of the 23 students assessed in the studies selected, as provided by the authors of each study.  Six studies included 10 students at the elementary level (e.g., Grades K-6), 9 students at the middle school level (e.g., Grades 6-8), and 4 students at the high school level (e.g., Grades 9-12).  One study (e.g., Carter et al., 2005) involved students from multiple grade levels.  Three studies (e.g., Carter et al., 2007; Shukla et al., 1998; 1999) directly compared peer-delivered and adult-delivered interventions.

**Table 1**: List of Studies Investigating Peer Support Arrangements for Students with IDD

| Study | Participants (Age Range) | Research Design |
|---|---|---|
| Carter et al. (2005) | $n$=3 (12-17y) | ABAB & BABA |
| Carter et al. (2007) | $n$=4 (15-18y) | delayed multiple baseline across participants[1] |
| Garrison-Harrell et al. (1997) | $n$=3 (6-7y) | multiple baseline probe across settings nested within a multiple baseline across target participants |
| Sasso et al.(1998) | $n$=7 (12-15y) | multiple baseline probe across settings nested within a multiple baseline across target participants |
| Shukla et al. (1998) | $n$=3 (12-15y) | ABACABC & ACABACAB component withdrawal[2] |
| Shukla et al. (1999) | $n$=3 (12-15y) | ABAB, ABABAB, & BABAB |

Note. [1](Cooper et al., 2007), [2](Wacker et al., 1990).

**Table 2:** Demographics of Study Participants with Intellectual Disabilities

| | (N = 23) $n$ (%) |
|---|---|
| **Gender** | |
| Female | 10 (43.5) |
| Male | 13 (56.5) |
| **Race/Ethnicity** | |
| African American | 1 (4.3) |

**Table 2 cont'd**

| | |
|---|---|
| Asian American/Pacific Islander | 2 (8.7) |
| European American | 7 (30.4) |
| Hispanic/Latino | 0 (0) |
| Not specified | 13 (56.5) |
| **Disability** | |
| ASD | 3 (13.0) |
| ASD & ID | 5 (21.7) |
| ID | 13 (56.5) |
| ID & physical disability | 2 (8.7) |
| **Reported Severity** | |
| Mild | 0 (0) |
| Moderate | 13 (56.5) |
| Severe | 5 (21.7) |
| Profound | 5 (21.7) |
| **Primary Communication** | |
| Verbal | 16 (69.6) |
| Non-verbal | 7 (30.4) |
| **Challenging behaviors** | |
| Described as having challenging behaviors | 7 (30.4) |
| Described as not having challenging behaviors | 16 (69.6) |

**Analysis of Results**

There are mixed research findings on the topic of optimal group size of peer support arrangements. The commonly found group size is 3-student groups. One study (Garrison-Harrell et al., 1997) advocates for small groups of five peers without disabilities supporting one student with intellectual disabilities. One observation (Carter et al., 2005) identified that 3-student groups compared to 2-student groups produced higher levels of social interaction and maintained alignment with the general education curriculum. Another observation (Sasso et al., 1998) suggests 2-student groups were optimal compared to 3-student groups. The research revealed that 3-student groups were dominated by social interactions between the general education peers; as a consequence, creating an exclusionary setting limiting social initiation and interaction for students with intellectual disabilities.

The research literature consistently exhibits similar training methods for peer support arrangements. All of the studies surveyed used trained special educators to provide social skills training sessions for general education peers prior to placement with students with intellectual disabilities. Furthermore, adult supervision, feedback and reinforcement for appropriate behaviors and interactions were routinely provided. However, there were variations in length and number of training sessions throughout the literature. Peer groups of one study (Garrison-Harrell et al., 1997) underwent eight 30-minute social skills training sessions and two training sessions together with students with autism. Peer groups of another study (Sasso et al, 1998) underwent a single 1-

hour training session.  Yet all variations in social skills training resulted in positive social and academic outcomes for students with intellectual disabilities.

Three of the studies (e.g., Carter et al., 2007; Shukla et al., 1998; 1999) selected directly compared peer-delivered and adult-delivered interventions.  All concluded that students with intellectual disabilities had substantially higher social interactions with more frequency and duration when supported by peers as compared to support from adults.  Investigators of one study (Shukla et al., 1999) proposed the principal reason behind the effectiveness of peer support arrangements producing higher frequency, duration, and diversity of social interaction and supports was that adults serve a secondary role rather than a primary support role in service delivery.  Peer support arrangements, however, did not diminish academic engagement and, perhaps more importantly, did not require substantial changes to the typical instructional format found in general education classrooms (Carter et al., 2007).

Accumulating evidence highlights that students without disabilities also benefit from peer group arrangements.  One such study (Shukla et al., 1998) reported increased academic performance of students described by teachers to perform at or below "C" grade-level who volunteered to provide peer support.  Observations of higher levels of social interaction and active engagement between students with intellectual disabilities and their peers without disabilities were indicated in a similar study (Shukla et al., 1999).  One survey (Carter et al., 2005)found no change in social interactions between students with intellectual disabilities and other classmates with the introduction of peer support arrangements.  It is surmised that this may be a result of non-class-related conversations being discouraged by educators at the middle and high school grade level (Carter et al., 2005).  There is emerging evidence that peer status may influence social interaction between peer group arrangements and other peers in the general education classroom.  Reports indicate that (a) social initiations by students with intellectual disabilities with other peers increased when paired with two high-status peers, (b) a slightly higher number of social initiations were directed at low-status peers in high- and low-status peer arrangements, and (c) two low-status peer arrangements produced a higher proportion of social initiations from other peers as seen in the two high-status peer arrangements (Sasso et al, 1998).  A conclusion drawn from this growing body of evidence is that peer support arrangements are an effective intervention capable of socially integrating students with intellectual disabilities into the peer culture of the general education classroom.

The findings of the previous six studies provide positive evidence for the use of peer-focused intervention in comparison to one-on-one, adult-delivered, support-focused intervention by a paraprofessional for students with intellectual disabilities.  Students with intellectual disabilities experienced increases in social interaction (Carter et al., 2005, 2007; Garrison-Harrell et al., 1997; Sasso et al. 1998; Shukla et al., 1998, 1999), expressive language (Garrison-Harrell et al., 1997), and diversity of social skills (Shukla et al., 1999) alongside decreases in disruptive behaviors (Garrison-Harrell et al., 1997).  This review, which focused on peer interventions in the general education classroom, found that most (85.7%) of the studies described intervention practices that were implemented in general education classrooms.  However, one study involved interventions conducted in a segregated classroom.

## CONCLUSION

### Multi-dimensional Impact

Investigation from this review supports peer support arrangements used to improve social and academic outcomes as evidenced-based in the application of general classroom settings for students with intellectual disabilities.  Additionally, this modality appears to have an impact on multiple dimensions (e.g., legislative, classroom, and developmental) that were made apparent in this study.

**Legislative impact.** Over the past 20 years legislative, policy, and research initiatives have aimed to increase opportunities and meaningful access to the general education curriculum for students with intellectual disabilities.  With the shift of providing instruction for students with intellectual disabilities in the preferred setting of the general education classroom there has been an increased in opportunities for social interaction; however, just opportunities are not enough. Without structured well-designed evidenced-based peer-focused strategies in place, social integration among peers with and without disabilities often does not occur.

**Classroom impact.** When peer support arrangements were implemented in the general education classroom students with intellectual disabilities experienced immediate and fairly pronounced increases in social interaction with their general education peers. Observations prior to the implementation of peer-focused intervention found a near absence of social interaction between students with and without disabilities even when students with intellectual disabilities were previously enrolled in general education classrooms. With the implementation of peer support arrangements, peer interaction increased and addressed both social and academic outcomes as students worked with their groups under the guidance of paraprofessionals.  Furthermore, the aforementioned studies provide not only insight into the benefits of peer support arrangements for both students with and without intellectual disabilities, but also

valuable suggestions on peer group configuration and the implications for educators.  Although the common group size is three, various group sizes produced positive results.   Lower-status student partnerships aid in the social integration of their peer with intellectual disabilities and produces positive academic outcomes for the general education peer.   Lastly, these results were produced with little modification to the instructional format.

**Developmental impact.** Social interaction has a multitude of positive lifelong benefits for adolescents with and without disabilities.  Research supports that peer interaction contributes to lifelong social and emotional development, promotes academic success, and enhances overall quality of life. This study adds to this knowledge base.  During adolescence especially social interaction, peer acceptance, peer validation, and building/maintaining peer relationships take a more prominent role in students' lives.  Unfortunately, since peer interaction is not as prominent a feature in the lives of students with intellectual disabilities this modality serves as a structured well-designed evidenced-based peer-focused strategy aimed at increasing social interaction.

## Suggestions for Future Research

With respect to future research, search criteria should be expanded to include a variety of peer-focused interventions to ascertain if other interventions provide more favorable usage and outcomes.  Additionally, future research may target specific grade school levels, especially considering few research targets social interaction of students with intellectual disabilities at the high school grade level.  It is hoped that this review will apprize the multiple educational stakeholders to the fact that peer support arrangements is an evidence-based practice to improve social and academic outcomes for students with intellectual disabilities.

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