

Running Head: SUPPORTS IN INCLUSIVE SCHOOLS

Supports Provided to Students with Severe Disabilities in Inclusive Schools: Lessons
Learned from Schools Implementing Inclusive Practices

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Abstract

The purpose of the present study was to investigate practices that support the inclusion of students with severe disabilities in the learning and social activities of inclusive K-8 schools to inform inclusive school reform research and practice. Eighteen K-8 students with severe disabilities in six schools recognized for their implementation of inclusive practices were observed in a variety of school settings and activities. An appreciative inquiry lens was applied to these observations. The observation records were descriptively analyzed and organized around seven themes related to the practices used by the schools to support students with severe disabilities: (a) the teaching arrangement (who was providing instruction); (b) the type of engagement the student demonstrated during the activity; (c) the types of general classroom supports that were available during the observations; (d) the types of student supports that were provided to the student during the observation; (e) the type of work or activity the student was performing; (f) the interactions the student had with others; and (g) the choices provided the student. Findings provide information on the implementation of inclusive education for students with severe disabilities by reflecting contemporary best practices for inclusive education as well as identifying areas of need.

Keywords: inclusion, severe disabilities

**Supporting Students with Severe Disabilities in Inclusive Schools:
A Descriptive Account from Schools Implementing Inclusive Practices**

Historically, students with severe disabilities were educated in segregated settings with little or no social or academic interactions with peers without disabilities (McLeskey, Landers, Williamson, & Hoppey, 2012; Sailor, 2014; Sailor & McCart, 2014). Although some progress has been made, a large percentage of students with severe disabilities are still educated in separate classrooms or settings (Kurth, Morningstar, & Kozleski, 2014). This approach to education occurs despite the substantial body of research on the benefits of inclusive education for students with severe disabilities. Research demonstrates that students with severe disabilities can learn *academic* (Browder, Spooner, Ahlgrim-Dezell, Harris, & Wakeman, 2008; Dessemontet, Bless, & Morin, 2012; Kurth & Mastergeorge, 2012), *communication* (Foreman, Arthur-Kelly, Pascoe, & King, 2004), *social* (Boutot & Bryant, 2005; Carter, 2011; Fisher & Meyer, 2002), and *self-determination* (Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012; Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013) skills in inclusive settings. And, placing students with disabilities in a general education setting can increase learning expectations for all students (Kurth & Mastergeorge, 2010).

Limited systemic change in schools (Ryndak, Jackson & White, 2013) has resulted in little progress toward inclusion for students with severe disabilities in the full range of general education contexts and curricula. The most salient characteristic of current efforts to promote inclusion and access to the general education curriculum is that the focal point has shifted primarily from *where* a student receives his or her educational program, to *what* and *how* the student is taught (Wehmeyer, 2009). Today, the least dangerous assumption (Donnellan, 1984) for teaching students with severe disabilities is to consider their presence in the general education

classroom with emphasis on the quality of learning taking place. Placement in a general education classroom alone will not guarantee improved outcomes for students with severe disabilities—effective supports for learning and participation must also be in place.

A growing body of best practice for supporting students with severe disabilities in general education classrooms exists (e.g., Alquraini & Gut, 2012; Downing & Peckham-Hardin, 2007; Ryndak, Jackson, & Billingsley, 2000). Across this body of work, common features are: accommodations and adaptations, a culture of belonging, professional collaboration, and engagement with peers. Although these are currently considered best practice, further research is needed to understand how they are implemented in inclusive classrooms to support students with severe disabilities.

A small number of observational studies of inclusive classrooms for students with severe disabilities suggest the benefit of including these students in general education, while also indicating a need for more information about how these practices can be implemented. For example, Lee and colleagues (2010) completed an ecobehavioral analysis of inclusive high school classrooms using a time sampling method, finding that curricular adaptations were positively associated with higher academic engagement and on-task behaviors. Similarly, Soukup and colleagues (2007) used a time sampling method to investigate ecobehavioral characteristics of inclusive classrooms and found curricular adaptations were routinely provided to students with severe disabilities. However, McDonnell and colleagues' (2000) ecobehavioral observation of elementary school students with and without disabilities, using time sampling methodology, found that, compared to other students, those with severe disabilities were more likely to receive instruction exclusively directed at them and largely provided by special education staff and peers. In their analysis, general education teachers frequently provided

prompts, praise, and error correction. Finally, Kurth and Mastergeorge (2010) used time sampling methods to investigate student engagement in inclusive and segregated middle school classrooms, finding that students with autism in inclusive settings displayed greater academic engagement compared to similar students in segregated settings. These observational studies suggest the benefits of inclusive settings for students with severe disabilities, as well as some practices for implementing inclusive education (e.g., curricular supports, general education teacher involvement in such activities as prompting and praising), but do not generate rich descriptions of practices employed in inclusive settings that may be obtained from qualitative studies (Brantlinger, Jimenez, Klingner, Pugach, & Richardson; 2005). The present analysis uses such a qualitative approach to describe the nuanced practices of inclusive schools for students with severe disabilities.

As more schools and districts adopt policies to include students with significant support needs in general education settings, a need exists to better understand how these practices are implemented. In 2012, the National Center on Schoolwide Inclusive School Reform, referred to as SWIFT Center, received funding from the U.S. Department of Education, Office of Special Education Programs (Sailor, 2012) to provide technical assistance to K-8th grade schools implementing academic and behavioral supports that make it possible for all students—including students with severe disabilities—to be welcomed and educated in their neighborhood public schools alongside their grade-level peers. Prior to initiating technical assistance, SWIFT began its work with a broad knowledge development study, making appreciative inquiries into the strategies, practices, and capabilities of six inclusive schools from across the nation. Findings from these inquiries were intended to inform the Center's technical assistance work with urban, rural and high need schools as well as the entire field of inclusive school reform. The purpose of

this paper, specifically, is to respond to the research question: What practices support inclusion of students with severe disabilities in the learning and social activities of inclusive schools?

Method

To understand the practices supporting inclusive education for students with severe disabilities, an appreciative inquiry approach guided the design and analysis of this research. Appreciative inquiries are exploratory, looking for practices that are right, useful, and successful, to inform the practices of others (Bushe, 2007; Cooperrider & Whitney, 2005; Shaked, 2014; Whitney & Trosten-Bloom, 2010). This lens was applied to observation data from a purposely selected sample of schools and students, employing a qualitative analysis, open-coding method to interpret the observations (Strauss & Corbin, 1990).

Participants

The present appreciative inquiry into practices that supported 18 students with severe disabilities in general education took place in five elementary and one middle schools that were considered exemplars of one or more of the SWIFT domains and features for schoolwide inclusion (Sailor & McCart, 2014; see Shogren, McCart, Lyon, & Sailor, this issue). These schools are referred to as Knowledge Development Sites, or KDS.

KDS Selection. The six KDS were selected through a systematic nomination and screening process that included surveys, interviews, and site visits. Selection and school characteristics are more fully described in Shogren et al., this issue. School selection, in summary, began with a key informant strategy to nominate study sites. SWIFT Center's National Leadership Consortium, which is comprised of nationally recognized researchers and technical assistance providers who are leaders in inclusive school transformation, nominated 37 potential schools for the study. A brief survey and phone interviews with school administrators

were conducted to gather additional information about the composition of the schools and more in-depth understanding of the ways in which the schools implemented key features of SWIFT. A review of these data and sample design criteria for geographic, urban, and representative of K-8 grades narrowed the pool to 11 schools for further consideration through site visits. Finally, a team consisting of five researchers and technical assistance providers visited these schools to conduct interviews and assess whether practices specific to SWIFT were present in the school. Data were summarized, strengths considered, and ultimately six schools were selected as KDS where further study would take place. Serving as examples of effective inclusive schools, each KDS had evidence of some, but not all, core features in the SWIFT framework. None of these KDS received technical assistance from SWIFT prior to or during this study.

Participating students. At each KDS, school administrators identified four students who the research team might observe in multiple settings using the following criteria: students (a) with severe disabilities, defined for this purpose as a student with extensive support needs who participated in assessment with alternate achievement standards; (b) who had diverse personal characteristics and support needs; (c) who represented the range of inclusive services and supports provided by the school; and (d) who were experiencing success in the general education classroom with the inclusive practices implemented at the school. Each student participant's parent/guardian were required to provide written consent for participation in this part of the KDS study. Due to the public identification of these KDS on the SWIFT Center website, and the need to maintain confidentiality of all participants, further specific details about participants cannot be provided.

Even though the six schools each nominated four students for observations, not all students' families returned consent forms, thus fewer observations were conducted at some

schools. The 18 student participants were in Kindergarten through 8th grade (M age = 9.1 years, $SD = 2.5$), and all but two were male. Students had a range of primary disability labels including autism ($n = 11$), orthopedic impairment ($n = 2$), visual impairment ($n = 1$), intellectual disability ($n = 2$), co-occurring autism and hearing impairment ($n = 1$), and other health impairment ($n = 1$). Teachers and/or researchers provided a general rating of student support needs using a Likert-type scale ranging from 1 = *No supports needed* to 5 = *Full physical prompts needed* for both overall functioning and for learning (Soukup, Wehmeyer, Bashinski, & Bovaird, 2007). The mean rating of support needs for overall functioning was 3.38 (range 2-4), and support needs for learning was 3.41 (range 2-4).

Observation Tool

A data observation tool was developed for this project enabling observers to collect “thick” descriptions of inclusive schools, noting as many details as possible about the activity to allow for open coding in the data analysis phase. A structured observation format developed specifically for this study was used by each observer to make extensive field notes either by hand or using a laptop computer with Microsoft Word software. The first section of each field note contained demographic information about the student (age, gender, grade, disability category, rating of support for overall functioning, rating of support for learning, and class schedule); these data were provided by the student’s teacher prior to the observation. The second section of the field notes consisted of an area to provide information about the physical setting; here, the observer drew a diagram of the setting, including where in that setting the student was situated and noted the general type of activity (e.g., 3rd grade math instruction, lunch). Finally, the third section of the field notes provided a space where the observer wrote rich, descriptive notes depicting the activities in which the student was engaged and the time when he or she began

engaging in activities. This third section contained written prompts for the observer to ensure all observers attended to features of the setting as identified from a review of the literature in inclusive education, including: (a) who was providing instruction (e.g., general education teacher, paraeducator; Giangreco, Halverson, Doyle, & Broer, 2004) (b) how the student was engaged (e.g., listening, writing; Kurth & Mastergeorge, 2012), (c) whether elements of differentiation were present (e.g., visual supports, physical supports; Fidan, Cihan, & Özbey, 2014), (d) whether the instructor or others offered the student choices (Wehmeyer, 1998), (e) whether the student interacted with another person (Snell & Brown, 2010), and (f) what materials were used (e.g., assistive technology, curriculum materials; Kleinert et al., 2015).

Data Collection Procedures

Descriptive observational data were collected for this investigation of practices to support inclusion of students with severe disabilities in general education programs. This methodology was selected due to the exploratory nature of the appreciative inquiry. The data collection plan was approved by the University of Kansas Institutional Review Board.

In the fall semester of 2013, a team of researchers collected multiple forms of data (e.g., focus groups and classroom observations reported in other articles in this Special Issue), including the individual student observations analyzed in the present article. Three members of the team conducted individual student observations across the six schools, with the same team member conducting all individual student observations within a given school. Schools provided the observers with a daily schedule for each participating student. These schedules were used to divide observation time between each of the students, following them for two hours total by a single observer and taking detailed field notes. Participants were thus observed in whichever

setting they were scheduled to participate during that observation window, ranging from classroom, hallway, lunchroom, and recess settings.

As is true with all observational research, a degree of subjectivity and potential for researcher bias exists. To minimize bias, all observers utilized the same observational tool and attended to the same aspects of the prompts within the tool. Data collection consisted of “thick” written field notes. To complete the field notes, the researcher first transferred demographic and schedule information provided by teachers into section 1 of the observation tool. To complete sections 2 and 3 (diagram of setting and written notes, respectively), the researcher stood or sat in an unobtrusive location with full view of the student. At times, the observer would walk around the area for a more thorough understanding of activities and take notes on what occurred in that setting in chronological order (noting the time). Other people in the setting were described (e.g., peers, co-teachers, related services providers), as were interactions with the student, materials used (e.g., technology, worksheets, manipulatives), student activity (e.g., writing, listening), and instructional settings (e.g., whole class, small groups, carpet areas, recess). When relevant, the observer noted exact quotes as well as additional perceptions about demeanor, experiences, and insights into relationships and supports. After observation, staff transcribed handwritten field notes into MS Word documents, and scanned diagrams of settings into digital formats, which were then embedded in the MS Word document for each student.

The emphasis of this exploratory observational study was on developing an overall picture of the supports for learning and participation provided to students with severe disabilities. Therefore, data were not collected on the frequency or duration of implementation of supports and strategies. This approach also meant that multiple forms of supports could be noted during any given observation.

Data Analysis

Qualitative methods were used to analyze the data (Strauss & Corbin, 1990). The field notes were imported to Dedoose (2013), an on-line cloud-based data analysis software program. Two of the authors used Dedoose to complete an open-coding analysis of the field notes (Strauss & Corbin, 1990). The topical prompts provided in section three of the field notes (i.e., teaching arrangement, engagement, differentiation, peer interactions, adult interactions, and choice) provided the starting point for open coding, and any further practices that emerged were added to the codes. Second, each author determined patterns in the field notes, and comparisons were made across notes to classify similar responses or codes for each theme. The two authors collaboratively examined the data to determine the themes, using peer debriefing at each step of data analysis. Further practices that emerged were added to the codes and some categories were combined into one code (Strauss & Corbin, 1994). For example, differentiation was split into three codes: general classroom supports, student supports, and type of work or activity. Peer interactions and adult interactions were combined into the code ‘interactions with others.’ In situations where disagreements about classification emerged, the authors discussed the notes and consensus was reached; as such, multiple rounds of coding were conducted to reach agreement, with themes emerging inductively from this process. To ensure credibility of the coding, both authors reviewed the field notes from all observations to identify possible themes.

Findings

The observed practices for supporting 18 students with severe disabilities in general education across KDS occurred in varied settings and instructional arrangements. Seven broad themes related to the practices used across all KDS to support students with severe disabilities emerged from the analysis of the observational data: (a) the teaching arrangement (who was

providing instruction); (b) the type of engagement demonstrated during the activity; (c) the types of general classroom supports that were available; (d) the types of supports provided to the student; (e) the type of work or activity the student was performing; (f) the interactions the student had with others; and (g) the choices provided to the student. In the following sections, key findings from the descriptive analysis are presented (e.g., Strauss & Corbin, 1990), organized by seven themes, representing the breadth of practices observed.

Teaching Arrangements

Students with severe disabilities received instruction from a variety of adults and peers, and in individual (one-to-one), small group (5 or fewer students), and large group (six or more students) instructional arrangements. Adults observed providing student's instruction were general education teachers, paraeducators, related services providers (e.g., occupational and speech therapists), special education teachers, specials teachers (e.g., art teachers), and student teachers. Co-teaching was employed in nearly half of the observations in KDS, usually consisting of a general education teacher and a special education teacher. Different models of co-teaching were observed including one teach and one assist, station teaching, and team teaching. During the majority of the observations, large group instruction provided by the general education teacher occurred, such as when teachers were lecturing or reading aloud to students. In over half of the observations students were provided instruction from paraeducators and instructional support from peers. For example, paraeducators were observed providing individual supports and instruction to students with severe disabilities in the majority of observations, including providing prompting and coaching, across students. Students were also observed working with peers in small table-groups in a variety of instructional activities throughout the majority of the observations.

Some of the KDS used teaching arrangements that involved moving students to other locations, outside of the general education setting, for specialized services. Typically this pullout involved students leaving or arriving to the general education setting in association with specialized services delivered in such locations as a sensory room or therapy office. These related services were primarily provided by itinerant faculty who traveled to schools around the district delivering special services (e.g., occupational therapy) or to obtain access to specialized equipment. For example, an early elementary school student was observed moving between the general education classroom and a sensory room to engage in sensory activities. Similarly, an upper elementary/middle school student was observed leaving general education to attend speech therapy in a therapy office.

Engagement

Students engaged in activities actively, passively, not engaged, or not possible to be engaged. Active engagement included activities in which the student was writing, drawing, reading, or talking in a manner that was on-task. Passive engagement included listening or watching an activity to be on-task. Not engaged included activities when the student could have engaged but was off-task. Not possible to engage included activities when the student was not able to participate in an activity due to his or her physical or sensory needs (e.g., an activity using hand gestures a student is unable to make).

Examples of active engagement involved students in academic tasks, classroom routines, and free time activities. In one instance, during a large group vocabulary lesson the teacher pointed to a word and the whole class, including the student, said the word aloud. The teacher then asked a question about the meaning and called for an answer from a student with a raised hand. The student was very eager to participate and raised his hand every time, indicating he

was very engaged with little adult support. Some academic engagement involved different but related tasks. For example, during “morning work time” a student and a special educator worked together with a primer level phonics book as the student read aloud. This form of active engagement was typical during this time, as opposed to distracting or stigmatizing, because many students were talking quietly and two other adults were working with students. As an example of engagement during classroom routines, a student visibly enjoyed participating in class transition time, as the teacher called their attention to a new subject matter by asking the class to put their hands up and then slap their desks two times and say “Science!” For another student, active engagement during free time involved walking with two classmates directly to a teeter totter; inviting a third classmate to play with them; followed by play and laughter the entire recess period.

As is typical of many classrooms, passive engagement was observed in the majority of these classrooms observations as well. For example, an early elementary student sat on the carpet surrounded by peers listening to a teacher read a story about the water cycle. Similarly, students were observed in lecture activities, whole group read-aloud activities, and watching other students complete a task. For example, a student was observed watching a peer complete a long-division problem on an overhead projector along with the rest of the students in the class.

Other times, students were not engaged. In some instances, students with disabilities were not engaged in manners that are very similar to students without disabilities. For example, an upper elementary/middle school student was observed in a silent reading activity. This student had an adapted book to read available on the student’s desk, but the book remained closed while the student stared straight ahead or looked around the classroom. Other students in the classroom exhibited a range of on- and off-task behavior as well. Other times, students were

not engaged because it was not possible for them to do so. For example, students in an early elementary classroom were told “if you can hear me, place your hands on your head.” Due to the student’s physical disability, the student was not able to participate in this activity.

Classroom Supports

A range of classroom supports was available to all students, including personnel and systems and procedural supports. Personnel classroom supports included co-teachers, paraeducators, and classroom volunteers who supported all students. Paraeducators supported all students in the classroom in the majority of these observations, as opposed to focusing exclusively on the student with severe disabilities. For example, in an upper grade math classroom, a paraeducator was observed walking around the classroom to assist any student who needed help. Collaboration between instructional staff was evident as well. For example, in an upper grade classroom, special and general education teachers were observed discussing consulting notes. Staff at this school completed these consulting notes on a daily basis to share information and strategies with one another. Finally, co-teachers were present in nearly one third of the observations. These co-teachers were almost always a general educator and a special education educator, who provided assistance to students with and without disabilities individually and in small groups.

Various systems and procedures also facilitated the learning of all students. Elements of universal design for learning (UDL) were observed, including adjustments to the presentation of material. For instance, a co-teacher in a math class was observed rephrasing questions, providing models of written responses, and adding visual examples to a lesson on graphing. Visual supports were observed in well over half of these classrooms, as well. For example, an early elementary classroom had a visual schedule for all workstations. Likewise, an upper grade

classroom teacher referred a child with disabilities to check the posted classroom schedule to determine where the student should go next.

Student Supports

In addition to classroom supports, the schools provided student supports that addressed unique learning or participation needs including behavior, communication, physical and sensory supports. An early elementary student, for example, was observed using a small wooden chair to support sitting on the carpet at approximately the same level as other students during group instruction on the carpet. Another student was observed using a wedge to facilitate writing. Behavior supports were also observed. For example, an early elementary student was observed selecting from a variety of fidget items prior to sitting on the carpet to listen to a story. “First-then” charts were also noted in several observations, as were token economy systems. Communication supports provided in these inclusive classrooms included iPad’s with speech-generating software, picture-symbol communication boards to make requests and comments, as well as a communication notebook that a student would use to circle responses to questions, comments, and requests from adults. Sensory supports were least commonly observed and primarily included closed circuit television (CCTV) to magnify materials for a student with a visual impairment. In one instance, a CCTV was located in a classroom, and the student was free to take any worksheets, artwork, or text to the CCTV to magnify, as needed.

Activities

The students with severe disabilities worked on a variety of tasks in which elements of differentiation were and were not present. At times, the student engaged in the same activity when performing the same task as the rest of the class with no evidence of additional supports for access or meaning. Other times, the student participated in the same task as classmates but

had an alternative means for accessing the materials (e.g., auditory version of a novel). Examples included students reading a book with a magnifying device; taking notes on an iPad, rather than writing on paper; dictating a story to a scribe; and using a label maker to fill in responses on a worksheet. In the area of math, examples included using manipulatives, and identifying dates on iPads.

An activity was considered adapted when the assignment or task was adjusted for the student, including changes to the quality, quantity, or materials. For example, students had books their classmates were reading, but at lower readability levels using large fonts with supporting pictures; reductions in the number of questions to answer; access to word banks; use of speech generating devices to enable students to “read aloud” when called on; and adapted assessments.

An activity was found to be unrelated to the general classroom activity when the student worked on a task that was substantially different from the rest of the class, such as sorting shapes while the rest of the class practiced multiplication. The qualitative notes of student activity were coded as unrelated in these KDS schools in less than 20% of observations, indicating that most students with significant disabilities in these schools were engaging in very similar activities as their peers.

Finally, students were also observed engaged in the same activities as the rest of the class with no evidence of differentiation or supports. Generally, the absence of supports was considered appropriate, inclusive practice. This was deemed appropriate during the observations when the student did not experience any challenges or limitations engaging in the task as a result of having no supports provided. For example, during a phonics lesson, an early elementary student practiced making blends and digraphs with a group of peers.

Interactions

Students interacted with peers and adults in non-instructional manners. At times an adult facilitated these interactions, and other times the interactions were spontaneous. These adult-student non-instructional interactions took a variety of forms, but usually as praise or reinforcement, such as a student who showed a completed worksheet to the general education teacher who responded by saying, “Another one already? No way! I’m so proud of you! Good job, keep going.” Other interactions were purely social. For example, a student was overheard discussing with a paraeducator a costume idea for Halloween.

Students interacted with peers in contexts unrelated to instruction during the observations. The majority of these interactions occurred during free time, such as recess when students played together with little verbal communication. These free time interactions also occurred in unstructured times in the classroom when instruction was not occurring. Social interaction with peers also occurred during academic times. For example, in an upper grade classroom on a carpet area, a peer rubbed the back of the student with disabilities while both listened to the teacher. In another classroom, classmates wrote notes to the student on post-it cards. These notes contained statements such as “Your [sic] my friend.” At the same time, the nature of some interactions were helper-helpee (e.g., peers would get materials for a student with disability, provide instructional supports, and prompt students to stay on task). Even so, interactions with peers usually appeared to be reciprocally enjoyable.

Choice

Opportunities for students with disabilities to make choices were seen throughout the observations, although opportunity for choice making was observed with significantly less frequency than any other theme. Observed choices were related to academics, behavior, objects,

and free time activities. For example, academic activity choice was observed when an early elementary student was asked to select the worksheet she wanted to work on first. Similarly, another student was asked which picture he would like to write about. Free time choice occurred as students made choices about what activity to engage in during unstructured time, usually related to different types of toys or activities. Behavior and object choices were both present in the observations as well. For example, students were allowed to choose reinforcers after completing worksheets, and allowed to choose what modality they wanted to use for writing (e.g., pencil or iPad). Generally, students in these observations experienced the full range of these supports as appropriate to individual needs.

Discussion

Strengths as well as areas needing further research were noted across observations, and provide important information on the implementation of inclusive education in real world settings and classrooms.

Limitations

Before discussing the findings, we must recognize the limitations of the present study. First, the six KDS were selected for their implementation of various inclusive practices, based on nominations by scholars and a vetting process. Each school implemented inclusive practices in different ways, however, resulting in variation in practices across and within sites. Additionally, the KDS included five elementary schools and one middle school; as there are differences in practices and approaches in educating students in elementary and middle school, we must acknowledge elementary schools were over-represented. Further, school staff nominated students to participate in the observations based on their judgments that the students were successfully included, not any objective indicators. It is possible that different results would be

obtained had students not considered “successfully included” participated in this study. Additionally, not all students’ families returned permission forms, so observations were not conducted for some students that schools felt were successful examples of the impact of inclusive supports. Related to the analyses, a lack of information on the frequency and duration of activities and inability to complete observations of similar activities for each participant prevent an analysis the type of codes associated with different grades and activities. Further, the sample of students observed was primarily male, and primarily students with autism spectrum disorders. These populations of students are over-represented in the present study. It is possible that students with different disabilities and support needs, as well as a greater representation of female students, would have demonstrated a different constellation of supports in these inclusive schools. Finally, a much richer description of student supports and inclusive practices would have been possible had students been observed for a greater length of time and across multiple observation days. However, as these KDS sites were located across the United States, it was not possible to visit the schools for multiple days and multiple occasions. Thus, repeated exposure to the classrooms was not possible although such a design would have enhanced the findings. Future studies employing case study designs would be beneficial to provide a richer description of effective inclusive practices.

Practices that support students with severe disabilities in inclusive schools

Findings from the present analysis offer insight into the range of practices employed by inclusive elementary and middle schools. Similar to other observations of inclusive classrooms, the present study found students with disabilities frequently were engaged in large group instruction (Kurth & Mastergeorge, 2012). The observations further indicate that individual instruction still occurs in inclusive settings (e.g., paraeducators frequently provided individual

supports and instruction, including prompting and coaching). As Causton-Theoharis and colleagues (2011) noted, a rationale for self-contained classrooms is that, allegedly, these classrooms are needed to provide specific, individualized teaching. The present observations support previous findings (e.g., McDonnell et al., 2000) that segregation is not needed for this type of individualization; instead, students received needed individualized instruction in general education settings.

High levels of active participation by students with severe disabilities characterized the majority of these observations of inclusive schools. Findings indicate KDS staff creatively used personnel in non-traditional teaching arrangements to support student engagement, including frequent use of co-teaching. These arrangements tended to foster student engagement, self-reliance when possible, and support when needed. A variety of classroom supports were observed in these inclusive schools, facilitating active participation of all students. This finding suggests that a range of supports were usually available for all students in an inclusive classroom. Staff were observed collaborating with one another in formal situations (e.g., sharing consulting notes) and informally (e.g., discussing student engagement and progress in activities during instructional periods). Further, the use of visual aids, personnel, and other supports were readily available in these schools, benefitting students with severe disabilities and all other students in the class.

Broadly speaking, student specific supports were available throughout the observations in general education settings across and within schools. This observation supports the conviction that student needs can be accommodated in inclusive settings, without segregating students or disrupting typical classroom routines (e.g., Lee et al., 2006). The use of student- and classroom-supports further characterized the overall accessible nature of these inclusive classrooms. We

found that, on the whole, curriculum and activities were differentiated and accessible to students with a range of abilities in these classrooms, facilitating participation and membership.

While these findings are positive and demonstrative of inclusive practices, the continued use of special settings, including therapy and sensory rooms, suggests opportunities for improvements. The use of these pullout settings could be interpreted to mean that some student needs could not be met in the general setting, even with classroom and student supports in place. Conversely, the use of these settings may represent a lack of resources, strategies to implement these services inclusively, or necessary role-release to implement services inclusively. Importantly, pullout in the present study was most frequently associated with delivery of related services. Advocates of pullout instruction assume that this type of instruction improves student skills (Bentum, 2003; Brownell, Ross, Colon, & McCallum, 2005), although its use has not been widely validated by research (Rea, McLaughlin, & Walther-Thomas, 2002). Others, however, recommend related services be delivered in inclusive settings (Mackey & McQueen, 1998; Rainforth & York, 1987). In addition to missing instruction, often stigma is associated with leaving the general education classroom to receive services (e.g., Miller, Garriott, & Mershon, 2005). As the schools in this study demonstrated an impressive ability to integrate a wide range of supports in inclusive settings, we do believe these sites can eliminate any remaining segregated settings by creatively distributing materials across general education settings, employing role-release and collaboration to integrate related services, and embedding related services instruction into the ongoing routines of the classroom. For example, equipment from sensory and therapy rooms could be brought to general education settings (e.g., therapy balls), integrating therapy in the context of classroom activities (e.g., pragmatic speech sessions during

free play), or making specialized rooms, such as sensory rooms, available to all students at a school.

Additionally the overall lack of choice-making opportunities, as well as the presence of helper-interactions, were areas for continued growth in these inclusive settings. Experienced practitioners will readily recognize that choice making is frequently limited in U.S. schools when considering all students, including those students with severe disabilities. Yet choice making is an important component of self-determination (Wehmeyer, 1998), and also is known to improve student behavior (e.g., Dunlap et al., 1994; Shogren, Faggella-Luby, Bae, & Wehmeyer, 2004) and motivation (Foster-Johnson, Ferro, & Dunlap, 1994). Opportunities to embed choice making is essential to further development of student self-determination. Similarly, advocates and allies of students with severe disabilities will recognize that such students are frequently engaged in helping-interactions, usually as the recipient of assistance, rather than reciprocal friendships (Snell & Brown, 2010). While we largely observed students in mutually enjoyable friendship activities, the presence of helping relationships warrants continued attention. It will be critical to facilitate friendships with students with severe disabilities, while also enabling these students to act as helpers and advocates for their classmates without disabilities.

Implications for Practice

The schools in the present study demonstrated a range of supports for students with severe disabilities, enabling these students to be successfully included in general education settings and activities. Practitioners will benefit from identifying and using successful supports such as embedding individual supports and services into on-going activities and collaboration. However, as is perhaps typical of many classrooms, students in these observations were engaged in many passive activities in the context of large group instruction. We suggest teachers vary

their instruction by including more active learning strategies, including cooperative learning groups, to create greater engagement for all students.

The use of whole-class supports was an important characteristic of these inclusive schools. Schools aiming to implement inclusive practices will benefit from making key personnel, such as paraeducators, co-teachers, and other personnel widely available to support all students, including those with severe disabilities. Furthermore, incorporating UDL and visuals, as done in these inclusive schools, benefits all students in inclusive classrooms. As a whole, existing research supports that inclusive education is beneficial to students without disabilities (Kalambouka, Farrell, & Dyson, 2007), and the finding that classroom supports are widely available to all students in these settings may contribute towards explaining this finding.

In addition to classroom-wide supports, the extensive integration of individual supports in these classrooms confirms that teachers were able to address individual student needs in inclusive settings. Schools seeking to develop inclusive practices will likewise need to identify supports for individual students. One strategy for enabling students to address a variety of Individualized Education Program (IEP) goals in an inclusive setting is the use of embedded instruction (e.g., McDonnell, Johnson, & McQuivey, 2008). This is an effective method to identify natural and supplemental opportunities to provide instruction of IEP goals and services, enabling practitioners to implement inclusive education. Both choice-making and friendship facilitation can be further embedded by incorporating a range of choices into daily routines, as well as incorporating group- and partner-work in classroom activities.

Finally, collaboration strategies were evident in these observations, and can be built upon to strengthen inclusive practices. For some schools, an important component of including students with severe disabilities in general education is collaboration with itinerant personnel

(e.g., district staff) who provide related services and specialized instruction. Key personnel from an inclusive school might meet with itinerant personnel at the start of the school year to provide information about and rationale for inclusive practices as well as offer specific support strategies (e.g., where to store materials, when to schedule direct instruction in inclusive settings, and how to provide direct and collaborative therapy in inclusive settings).

Implications for Research

The small sample size of the present study, as well as a lack of information on the frequency and duration of supports activities, prevents an analysis the type of supports associated with different grades and activities. This would be a useful type of analysis in future research. Further, the present study did not measure student outcomes as a result of inclusive education; thus, the practices described here cannot be connected with any patterns of results in terms of student outcomes. More research is needed to identify how different configurations of actual practices affect general education content acquisition and social outcomes.

While outcomes of inclusive education are inadequately understood for students with disabilities, even less data describe the outcomes of inclusive education on students without an identified disability. Generally speaking, inclusive education has been found to have a neutral or positive impact on the academic performance of students without disabilities (Cole, Waldron, & Majd, 2004; Ruijs, van der Veen, & Peetsma, 2010; Salend & Duhaney, 1999; Sermier Dessemontet & Bless, 2013; Sharpe, York, & Knight, 1994). Further research is warranted to describe those whole-class supports, such as UDL and co-teaching, which specifically contribute to the academic and social development of all students in inclusive settings.

Previous research on embedded instruction demonstrated that unique student learning needs can be readily and seamlessly taught in inclusive settings (Coyne, McCoach, & Kapp,

2007; McDonnell et al., 2008). Continued research into delivering embedded instruction and other such supports in fully inclusive settings is needed to support such practices. Further research is needed to fully understand the extent to which specific student supports are matched to individual needs in inclusive classrooms, including implementing specific supports from IEPs. The present study indicated that individual needs were broadly accounted for, but the extent to which specific supports correlated with IEPs remains unclear.

Conclusions

The observations of students with severe disabilities included in these general education classrooms demonstrate how numerous contemporary best practices for inclusive education have been employed, as well as areas where more research is needed. Research over the past 40 years has continued to demonstrate that inclusive practices are in fact associated with improved outcomes for students with disabilities, and that self-contained (segregated) settings fail to deliver on their promises of effective practices (Causton-Theoharis et al., 2011). Furthermore, it is important to remember that inclusive education, particularly for students with the most significant needs, continues to be the road less traveled. The schools we visited often were implementing inclusive practices with little support and guidance from others. The practice of including students with severe disabilities in general education continues to be such a relative rarity that these schools have few colleagues to collaborate with and to learn from. Together, these facts remind us that implementing inclusive education is a process that is never finished. Instead, it is a process that must be reflected upon, analyzed, and fine-tuned continuously. By continuing this type of research in inclusive schools, we anticipate that other schools can learn from these KDS about implementing inclusive practices.

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