Preliminary Lessons About Supporting Participation and Learning in Inclusive Classrooms

Mary E. Morningstar1, Karrie A. Shogren1, Hyunjoo Lee1, and Kiara Born1

Abstract
This descriptive study examined observational data collected in inclusive classrooms from six schools that were operating schoolwide inclusive policies and practices. Illustrative evidence of classroom practices supporting learning and participation of all students, including students with significant disabilities, adds to an understanding of structural methods supporting inclusion, as well as insights into instructional strategies and approaches used to support inclusive practices. Supports for participation were observed in several domains: (a) instructional staffing arrangements and roles, (b) methods of instructional groupings, (c) peer-supported learning, and (d) access to core academic curriculum. Supports for learning were also observed, including (a) universal design for learning, (b) behavioral interventions, and (c) accommodations and modifications. The results are discussed in relation to implementation of essential components of inclusive classrooms and the issues the field is facing with regard to effective practices leading to student learning and inclusion within classrooms and throughout schools.

Keywords
inclusion, classroom practices

Observations and Preliminary Lessons About Supporting Participation and Learning in Inclusive Classrooms

Providing supports and services for students with disabilities in inclusive settings is not a new concept, with early reform efforts emphasizing placement (Artiles, Kozleski, & Gonzalez, 2011). After more than 30 years of research supporting the benefits of inclusive placements for both students with and without disabilities (Jackson, Ryndak, & Wehmeyer, 2008), the questions to be answered have shifted from where to what and how to teach students with the full range of support needs in general education. Supporting students with disabilities in inclusive settings presumes that all students are competent and capable of learning in general education classrooms (Jorgensen, McSheehan, & Sonnenmeier, 2007). Given such assumptions, the classroom is the proving ground for the use of evidence-based strategies to enable all students to learn and participate (Turnbull, Turnbull, Wehmeyer, & Shogren, 2013). Long-standing support for access to general education exists among parents, researchers, school professionals, and advocates (Salend & Duhaney, 2011). However, in practice, the ways that students with disabilities are supported remains a contentious issue (McLeskey, 2007; Sailor & Roger, 2005; Zigmond, Kloo, & Volonino, 2009). Some

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observers have argued that access to the general education curriculum is not synonymous with location (Browder & Spooner, 2006), and fully including some students occurs at the expense of quality instruction for others (Kauffman, Landrum, Mock, Sayeski, & Sayeski, 2005). Advocates have been adamant that not only the content, but also the context of general education is essential for learning (Ryndak et al., 2014).

In addition, both special education and general education teachers may struggle to provide supports that promote student access and progress in the curriculum (Lee, Wehmeyer, Soukup, & Palmer, 2010; Soukup, Wehmeyer, Bashinski, & Bovaird, 2007). Salend and Duhaney (2011) emphasized that inclusive education benefits students with and without disabilities, but only when teachers use high-quality and differentiated instruction, and assessment and progress monitoring, in addition to curricular and instructional accommodations.

Researchers emphasize that students with disabilities are most likely to learn grade-level academic content when in general education classrooms that incorporate instruction and supports for all students (Wehmeyer, Lattin, & Agran, 2001). Effective inclusive practices occur when general educators and other education team members collaboratively design, implement, and evaluate the outcomes of instruction (Fuchs, Fuchs, & Stecker, 2010). Indeed, Schalock et al. (2012) argued that inclusion “works best when educational teams develop plans that incorporate the supports needed to complement students’ desired life experiences, goals, and activities” (p. 30). They highlighted the importance of two forms of support: (a) supports for participation to promote student access by creating opportunities for staff to collaborate and plan, use diverse teaching methods and staffing patterns, and implement peer support programs; and (b) supports for learning, including individualized accommodations, modifications, and adaptations as well as universal design for learning, co-teaching, and positive behavioral supports.

Research has demonstrated better academic outcomes for a wide range of students in inclusive classrooms (Cosier, Causton-Theoharis, & Theoharis, 2013), including those students with learning disabilities (Salend & Duhaney, 2007) and autism (Kurth & Mastergeorge, 2012), as well as students with more significant support needs (Hudson, Browder, & Wood, 2013). In addition, students with disabilities who are included experience a range of positive outcomes such as: (a) higher quality individualized education programs (Hunt, Goetz, & Anderson, 1986; Kurth & Mastergeorge, 2010); (b) more time engaged in general curricular content (Wehmeyer, Lattin, Lapp-Rinker, & Agran, 2003); and (c) better academic, communication, and social outcomes (Fisher & Meyer, 2002; Snell & Brown, 2011).

Access to general education also benefits students with disabilities long after they have exited high school. Emerging research supports the contention that opportunities to fully participate in secondary school curricula and environments result in more positive adult outcomes (Carter, Austin, & Trainor, 2012). Evidence points to access to and inclusion in the general curriculum as clear predictors of postschool success, including postsecondary education and employment outcomes (Test et al., 2009). Rojewski, Lee, and Gregg (2013) identified significant causal effects of inclusion in general education on postsecondary education outcomes for adolescents with learning and emotional-behavioral disabilities.

Although research is limited on how schools implement inclusive classroom practices, many schools continue—with and without intervention by researchers—to implement inclusive practices. Recently, the National Center on Schoolwide Inclusive School Reform, (SWIFT Center) conducted a multi-faceted knowledge development study with six inclusive schools for the purpose of informing subsequent technical assistance work of the Center. This article presents some findings from this larger study, specifically for the purpose of identifying inclusive classroom practices supporting participation and learning in general education for all students, including those with the most extensive support needs.

**Method**

**Participants**

The present study analyzed data from 65 classroom observations conducted in inclusive classrooms across six knowledge development sites (KDS) that were identified by the SWIFT Center as exemplars of inclusive school practices (see Shogren et al., 2015). An important feature of data analyses is our commitment to protect confidentiality of schools, staff, and students and their families. To honor this commitment, we
adhere to our Institutional Review Board (IRB) protocols by refraining from using school names, or presenting data for each school, but rather only are allowed to share aggregated data across all schools with de-identified examples of practices and perspectives to give context. Because the focus of this study was on classroom practices supporting all students, the point of analysis was classroom practices within each of the six schools. Prevalence of students with disabilities in the six KDS ranged from 8% to 27% of all students. Schools enrolled a range of students who were economically disadvantaged (12%-54%); and 2% to 15% of all students were English learners. The schools varied with respect to race and ethnicity with 27% to 90% of students categorized as White, 4% to 24% Black or African American, 4% to 24% Hispanic or Latino, 0.4% to 10% Asian, less than 1% Native Hawaiian or Pacific Islander, and less than 1% American Indian or Alaska Native, and 6% to 11% reporting two or more races/ethnicities. More specific demographic information can be found in Shogren et al. (2015).

**KDS selection procedures.** The six KDS schools were selected through a systematic nomination and vetting process that included surveys, interviews, and site visits. Thirty-seven elementary and middle schools were initially nominated by scholars in inclusive school reform for their implementation of one or more features of the SWIFT framework. Initial nomination criteria were: (a) no segregated classrooms/programs for students with disabilities; (b) inclusion of students with significant needs; (c) natural proportions of students with disabilities within the school; (d) Multi-Tiered Systems of Support (MTSS)/Response to Intervention (RtI) with Positive Behavior Interventions and Supports (PBIS) applied in all tiers; (e) distributed leadership among staff; and (f) strong family and community engagement. These criteria stem from Sailor and McCart’s research and technical assistance (Sailor, & McCart, 2014; Sailor & Roger, 2005) which SWIFT now summarizes as (a) administrative leadership, (b) multi-tiered systems of support, (c) integrated educational framework, (d) family and community engagement, and (e) inclusive policy structure and practice. These domains and their identification and operationalization are described in greater detail in Shogren et al. (2015), as well as in other sources (McCart, Sailor, Bezdek, & Satter, 2014).

Next, to narrow the pool of schools, SWIFT staff screened for two additional criteria associated with exemplary status: (a) achievement or growth rates among students with disabilities on state assessments that were significantly higher than the state average achievement or growth rate, and (b) proportion of students with disabilities was at least equal to the proportion of students with disabilities in the state. Thirty of these schools expressed interest in participating in the study.

The pool was narrowed to 11 schools on the basis of a brief survey of the basic composition of the schools, their service models for students with disabilities, their state achievement data, and structured telephone interviews that probed for more in-depth information about the ways in which the school implemented key features of SWIFT as described above. Staff next conducted on-site, guided interviews and informally administered several assessments to identify the degree to which the school implemented practices associated with SWIFT features. Finally, SWIFT directors applied selection criteria designed to capture varied perspectives for geographic diversity; urban diversity; and age diversity (elementary and middle schools). From this pool, 6 schools were selected to serve as knowledge development sites.

**Instrument**

Classroom observations were conducted using a semi-structured protocol developed specifically for the present study (Inclusive Classroom Observation Tool, Morningstar & Shogren, 2013). The Inclusive Classroom Observation Tool (ICOT) was designed to provide sufficient structure for collecting pertinent information during short classroom visits (i.e., 20-30 min). The instrument included multiple indicators identified in the field as indicative of effective classroom inclusive practices. To develop the tool, we first conducted a review of currently available assessments and measures of quality inclusive practices, analyzed unique features of available instruments, and modified and combined items into a semi-structured observation protocol. In reviewing available assessments and research, we focused on classroom-level interactions and arrangements (Pianta, La Paro, & Hamre, 2008; Plank & Condliffe, 2013), and domains such as classroom organization and instructional support aligned with more intensive classroom observation instruments.
Measures of quality of inclusive practices for students with significant disabilities were also reviewed (cf. Florida Department of Education, 2008; Jorgensen, McSheehan, & Sonnenmeier, 2009; Maryland Coalition for Inclusive Education, 2006). The resulting tool merged critical theoretical constructs and guided observers to specifically examine indicators within classrooms for participation and learning of all students, including those with significant disabilities (see Figure 1 for ICOT).

The instrument was developed and field-tested during the first round of KDS visits with feedback from observers occurring immediately following each use and with each revision. During the iterative development phase, it was not possible to establish reliability estimates. We did, however, calculate Cronbach’s alpha for items rated on a Likert-type scale to evaluate the reliability of the tool as it was used in this study. The .76 coefficient alpha value indicated moderate to high overall reliability (Green & Salkind, 2008). The final version of ICOT included specific items that required pre-observation data gathering (total number of students in a class, numbers of students with disabilities and English learners; number and type of teachers/adults in the room; and instructional content and access to core standards of focus during observations) as well as items rated on a Likert-type scale during the classroom observation, and field note domains to contextualize the observations. For most items rated on a Likert-type scale, observers noted the frequency or quality of a specific indicator of classroom participation and learning (e.g., instructional format rated from 4 = highly effective to 0 = not effective). Furthermore, at the end of the observation, observers provided overall ratings of social and classroom climate. Field notes allowed observers to diagram the classroom environment, describe classroom activities in detail, and note issues or comments not sufficiently captured from the observation scales.

Observer training occurred prior to each field visit, with the team of three observers meeting initially over several meetings to identify and develop the actual observation protocol. Team members developed and reviewed descriptions of expected observations for each item. Descriptive criteria were discussed for differentiating the Likert-type-scaled item levels (e.g., effectiveness, frequency, participation) to anchor and score these items consistently. The requirement of only allowing one observer in a classroom restricted the opportunity to collect inter-rater reliability. This limitation was offset through observer meetings following each school visit to discuss and confirm data, respond to any questions, and describe situations that arose during observations.

Classroom Observations Procedures

Research staff visited the 6 KDS sites two times over a 1-year period to collect specific data related to the SWIFT framework for the purpose of developing a bank of field-based knowledge and examples. Classroom observations occurred during these visits. Each visit lasted 3 or 4 days; and included a team of 4 to 5 researchers (e.g., faculty and advanced graduate students affiliated with SWIFT), as well as SWIFT technical assistance providers (i.e., staff who would be providing technical assistance to other schools implementing the SWIFT model). Prior to each visit, SWIFT staff coordinated with the school staff to prepare for data collection activities. This included requesting that specific classrooms be identified in which observations would take place for the pre-observation data to be collected. The guidance for classroom selection was broad, with requests for visiting a range of grade levels (for elementary school) and subjects (for middle school). Given an anticipated time frame of 1 day of observations, we requested that they have identified approximately 6 classrooms. As part of the pre-observation communication, we requested that schools complete the pre-observation section on the ICOT. Unfortunately, few if any of the schools identified specific classrooms nor completed the pre-observation forms prior to our visits. Most schools instead chose to allow the observers free access to visit any classroom in the building. Observers identified the range of classroom types (based on grade and subject) when on site.

The ICOT team consisted of three primary members with two supporting members, each of whom were involved in the initial development and testing of the tool. Prior to the visits, the observation team met to review the final instrument, reach consensus on definitions and characteristics for each observational item, and review and confirm final protocols for observations. In addition, the team held follow-up meetings after each consecutive visit to review and confirm use of the instrument prior to subsequent observations.
Inclusive Classroom Observation

1. PRE-OBSERVATION DATA (to be collected prior to visiting the school):

Teacher:
Elem  Middle  # of Students:
Classroom:  □ Gen Ed  □ Resource  □ SPED  □ Other:  # of Students with IEPs:
Grade:  # of ELL students
Type of Supports/Services:  □ Gen Ed (no add'l supports)  □ Co-teaching  □ Para support  □ Other:
Adults in room:  □ Gen Ed  □ SPED  □ Para: (how many?)  □ Related Services  □ Other:

Description of Lesson (subject, topic, general instructional plans)

1. Instructional Content /Access to Core Standards – Before or after the observation, if it is not too intrusive, ask the teacher or support personnel about this last element. If it is not possible, follow up as best you can during the visit.

- Peers are working on learning activities targeting grade level standards
- Peers are working on learning activities that target any standard (off grade standard)
- Students with disabilities are working on learning activities targeting grade level standards
- Students with disabilities are working on learning activities targeting any standard (off grade)
- Students with disabilities are working on learning activities associated with IEP objectives
- Students with disabilities are working on learning activities associated with topic/lesson/unit as rest of class
- Students with disabilities are working on learning activities not associated with topic/lesson/unit that align with rest of class

Adapted from ACCESS CISSAR

Time start:  Time End:

II. IN CLASSROOM OBSERVATION DATA

INSTRUCTIONS: When observing in the classroom or other settings, complete field notes on the following indicators of inclusive classrooms. There are some questions that you can mark as yes/no or indicate the level using the scale. You may not see all of these elements during your observation, but please note if you do not (NotOb).
Provide field notes in the space provide (and on back).

2. Class Diagram
Consider room organization, desk arrangements, centers, etc. Look for the groupings of students and teachers within these groups.
### 3. Instructional Format

Mark all examples of how students and adults participated in instruction and score the formats you observe.

<table>
<thead>
<tr>
<th>Format</th>
<th>Effective Use of Instructional Format to Promote Learning:</th>
<th>Observation Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>At the board</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>Small groups:</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>□ teacher-selected □ student-selected □ ability grouping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pairs</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>□ teacher-selected □ student-selected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centers (describe):</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>Pull out</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
<tr>
<td>□ related services □ Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>4 Highly Effective 2 1 0</td>
<td>Not Effective</td>
</tr>
</tbody>
</table>

### 4. Individualized Goals

Students working on individualized goals/activities separate from peers in class?

- [ ] Yes
- [ ] No
- [ ] Not Obsv.

Observation Notes:

### 5. Classroom Presence

Does the physical environment indicate that all students are full members of the classroom?

All students participating in classroom routines (enters and leaves classroom at same time as others, Pledge of Allegiance, lunch count, class jobs, eating in cafeteria, etc.)

<table>
<thead>
<tr>
<th>Observation Notes:</th>
<th>All Participating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 3 2 1 0</td>
<td>Some excluded</td>
</tr>
</tbody>
</table>

### 6. Instructional Staffing

Consider how classroom personnel are working with all students vs. working only with specific groups of students (e.g., students with disabilities, students with ELL, students who are struggling with learning content)

<table>
<thead>
<tr>
<th>General education teacher is attending to all students</th>
<th>4 3</th>
<th>2 1 0</th>
<th>Only attending to select students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending to all</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Obsv.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special education teacher is attending to all students</th>
<th>4 3</th>
<th>2 1 0</th>
<th>Only attending to select students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending to all</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Obsv.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paraprofessional supporting all students?</th>
<th>4 3</th>
<th>2 1 0</th>
<th>Only attending to select students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending to all</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Obsv.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observation Notes:

(continued)
Figure 1. (continued)

7. **Peer Assisted Learning** (mark all observed)

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pairs</td>
<td>Frequent and positive</td>
<td>Infrequent and/or negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative groups</td>
<td>Observation Notes:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer tutoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Student-led demonstrations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stations/centers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
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</tr>
</tbody>
</table>

**NOTE:** From Classroom Observation Record For Special Education, WestEd.

8. **Universal Design for Learning** – How is instruction designed to accommodate the full range of student diversity? Please mark the elements you observe and provide description

- **Multiple and flexible methods of presenting information/content**
  - Visual + auditory
  - Modeling
  - Video
  - Pictures
  - Objects/manipulatives
  - Materials at multiple skill levels
  - Technology to access information (including AAC)
  - Other:
  - Not observed

**Observation Notes:**

- **Multiple and flexible methods for expression of learning**
  - Oral
  - Demonstration
  - Written
  - Video
  - Pictures
  - Objects/manipulatives
  - Technology to demonstrate learning (including AAC)
  - Other:
  - Not observed

**Observation Notes:**

- **Multiple is used to systematically support engagement**
  - Student choice for participation
  - Using rubrics for assessment/guidance
  - Varied levels of text available
  - Technology embedded w/in lessons
  - Opportunities to practices skills
  - Choices for learning strategies
  - Culturally relevant information
  - Other:
  - Not observed

**Observation Notes:**

9. **Behavioral interventions** – consistent and positive behavioral expectations and interventions in use

- **Classroom-wide behavioral expectations** are clearly displayed and accessible to all students
  - Not Obsv.

**Observation Notes:**

- **Students’ individual support needs** are aligned with school-wide behavioral rules and procedures
  - Not Obsv.

**Observation Notes:**

- **Classroom interventions** are positive and focus on supporting appropriate social skills
  - Not Obsv.

**Observation Notes:**

(continued)
### Figure 1. (continued)

10. Accommodations, Adaptations and Modifications for Learning – mark examples you observe and provide a brief description:

<table>
<thead>
<tr>
<th>Accommodations</th>
<th>Examples Observed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td></td>
</tr>
<tr>
<td>Flexible scheduling</td>
<td></td>
</tr>
<tr>
<td>Presentation of material</td>
<td></td>
</tr>
<tr>
<td>Order of completion of activities decided by student</td>
<td></td>
</tr>
<tr>
<td>Environmental adjustments</td>
<td></td>
</tr>
<tr>
<td>Alternate setting: small group; different location in room</td>
<td></td>
</tr>
<tr>
<td>Response accommodation</td>
<td>Respond orally or through a scribe.</td>
</tr>
<tr>
<td>Alternative text, languages</td>
<td></td>
</tr>
<tr>
<td>Strategy Instruction</td>
<td></td>
</tr>
<tr>
<td>Use of supports or aids</td>
<td>Calculator or assistive aids</td>
</tr>
<tr>
<td>Volume adjustment</td>
<td>Smaller amount of material to produce or process</td>
</tr>
<tr>
<td>Format adjustment</td>
<td>Presented in a manner that the student can process more effectively (e.g., films, oral reports, taped)</td>
</tr>
<tr>
<td>Use of alternative evaluations</td>
<td>(e.g., performance assessments, authentic assessments, daily or weekly tests)</td>
</tr>
<tr>
<td>Prioritization</td>
<td>Certain task components are stressed over others; (e.g., student is asked to concentrate on the ideas rather than spelling/grammar)</td>
</tr>
<tr>
<td>Focus skills embedded across learning activities</td>
<td></td>
</tr>
<tr>
<td>Alternative format</td>
<td>Peer/adult read to student; audiobooks,</td>
</tr>
<tr>
<td>Reduced/alternative reading content</td>
<td></td>
</tr>
<tr>
<td>Computers/word processors</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Reduced number of responses</td>
<td></td>
</tr>
<tr>
<td>Modified assignments</td>
<td></td>
</tr>
<tr>
<td>Adapted levels of instructional materials</td>
<td></td>
</tr>
<tr>
<td>Use of pictures and other formats for responding</td>
<td>Other:</td>
</tr>
<tr>
<td>Not observed</td>
<td></td>
</tr>
<tr>
<td>Highlighting words/phrases</td>
<td></td>
</tr>
<tr>
<td>Summaries of main ideas</td>
<td></td>
</tr>
<tr>
<td>Advanced organizers</td>
<td></td>
</tr>
<tr>
<td>Using text/pictures</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Alternate Goals (modify goals/outcome expectations using the same materials)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

11. Evidence of standards-based instruction*  

<table>
<thead>
<tr>
<th>Evidence of standards-based instruction*</th>
<th>Examples Observed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional objectives posted in classroom</td>
<td></td>
</tr>
<tr>
<td>Objectives/learning targets in student friendly language</td>
<td></td>
</tr>
<tr>
<td>Teacher refers to instructional objectives during class</td>
<td>Other:</td>
</tr>
<tr>
<td>Not observed</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
A total of 65 distinct classrooms were observed, concentrated primarily in K-4 grades, as the majority of KDS were elementary schools, although observations were also conducted in upper grades and at one middle school. The average duration was 38 min per observation (see Table 1). The overwhelming majority of observations occurred in general education classrooms (89%), with the remainder in such other settings as the school library, playground, cafeteria, and art and music rooms. The majority of academic subjects addressed during the observations were reading (34%; 22 observations) and math (29%; 19 observations). Other 37% of content areas included writing (10 observations), science (3 observations), and social studies (2 observations) among such others (9 observations) as opening/calendar time, music, and art activities.

Observers generally had free access to visit any classroom, although there was variability based on school and teacher preferences and availability (e.g., testing was occurring or an observation was deemed to be too disruptive). Staff were not notified which classrooms would be observed or when; therefore, observers were able to collect data reflecting “business as usual” occurring across the six schools. If the primary teacher(s) were not present (i.e., out sick, involved in professional development), then these classrooms were not entered. Observers tried to situate themselves so that they could observe the overall classroom activities without being overly intrusive. Typically, they stood or sat at the perimeter of the classroom, and moved throughout the room when students were engaged in centers/stations or other forms of small group instruction.

Observers typically remained in a classroom until they had observed a complete instructional cycle or lesson. This protocol accounted for the variability in duration of observations as some visits required a
longer wait period before a new lesson was launched. This approach allowed observers to remain flexible to meet the dynamics of classrooms, as well as maintain the validity of the observation—to gain structured insights into how inclusive classrooms function and how students are supported to participate and learn.

The range of opportunities to observe in the KDS classrooms was wider than anticipated (e.g., 3-25 observations per school) as a result of specific school factors (e.g., teachers absent, meetings taking place during scheduled observations, observations not completed during a school visit) that impeded certain observations in specific schools. Typically, these factors were the result of the school schedule and access, but in one circumstance, an emergency pulled the ICOT observer from the site.

Analysis

The focus of our descriptive analysis was documenting patterns across and within classrooms and schools. Descriptive statistics were reported for the scaled items (frequency and Likert-type scales), with examples from the field notes used to contextualize quantitative results. When we report certain findings disaggregated by the six KDS, we do so to emphasize different models of providing supports for learning and participation rather than comparing the schools to one another.

Results

Results are reported across the two essential dimensions of inclusive classrooms impacting students: (a) supports necessary to participate in inclusive environments, and (b) supports needed to engage in learning. Within each of these domains, specific classroom programmatic characteristics are described.

Dimension 1: Supports for Participation

Five areas were targeted and coded describing how inclusive classrooms support all learners to fully participate, including (a) instructional staffing, (b) instructional formats, (c) peer-supported learning, (d) adult engagement, and (e) access to academic curricular content. The following results describe the strategies by which classrooms operationalized inclusive practices supporting participation of all students, including those who have significant support needs.

Instructional staffing. Across the 65 observations, variation existed primarily at the school level with regard to the configuration of instructional staff. Overall, almost all classrooms had general and special educators represented, and paraprofessionals were found in over half. For the most part, paraprofessionals were supporting individual students with more significant disabilities.

Two schools implemented a full co-teaching model, with 100% of the observations across all classrooms having a general and special educator in the class throughout the day working as a team to organize and deliver curriculum and provide tiered instructional supports. The roles assumed by the general and special educators in these classrooms were fluid with the two teachers engaged in multiple instructional roles across each instructional session. In the remaining schools, co-teaching was implemented less frequently

<table>
<thead>
<tr>
<th></th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
<th>School 4</th>
<th>School 5</th>
<th>School 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of observations</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>13</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Ave. min/observe</td>
<td>45</td>
<td>65</td>
<td>40</td>
<td>42</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Classroom type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General education</td>
<td>10 (100%)</td>
<td>3 (100%)</td>
<td>5 (83%)</td>
<td>8 (62%)</td>
<td>23 (92%)</td>
<td>8 (100%)</td>
</tr>
<tr>
<td>Special Education</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (17%)</td>
<td>5 (39%)</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>
(27%-43% of observations across four schools). The predominant staffing model in the four schools was primary instruction led by the general education teacher (25%-80%), with full-time paraprofessional support (17%-44%) directed toward students with significant disabilities. Special education teachers served in an intermittent co-teaching capacity, being assigned to more than one classroom, typically configured by grade level (e.g., all of the first-grade classrooms). Special educators were entering and leaving classrooms, typically on a schedule, and providing support to the general education teacher. Most effort was directed toward students with significant disabilities or with students working on academic content different from the class. Field notes indicated use of both push-in (e.g., behavioral consultants working in classrooms with students with significant behavioral support needs) and pull-out related services (e.g., occupational therapy in sensory room; speech and language services in office).

Observers rated the level of attention instructors provided to students during observations on a 5-point Likert-type scale (0 = only attending to select students to 4 = attending to all students). General education teachers scored highest in their attention to all students (\( M = 3.55, SD = 0.85, \) range = 3.11-4.0) while paraprofessionals scored the lowest (\( M = 1.29, SD = 1.67, \) range = 0-2.0) and special education teachers fell in between (\( M = 2.73, SD = 1.64, \) range = 1.67-3.67). A few instances were observed where paraprofessionals worked with all students, but this pattern tended to occur only at the direction of the general education teacher. For the most part, the general education teacher was the instructional leader in the four schools that did not support full-time co-teaching. In the schools where a special education teacher was assigned full-time to one classroom, levels of engagement with all students were considerably higher. In settings where special educators consulted across more than one classroom, ratings of instructional attention focused more specifically on students with disabilities.

**Instructional formats.** Overall, 134 occurrences of classroom and instructional approaches were counted, and averaged about two distinct approaches per observation. Typically, classroom instruction of a lesson started with whole-group instruction, and students transitioning into flexible groupings (e.g., small groups, stations/centers, paired learning). Across all observations and schools, whole class instruction was observed most often (39% of total observations; range = 28.6%-47.1% among schools), typically with the teacher(s) delivering instruction from the board (15% total observations; range = 0%-27.5% among schools). Small-group instruction was also regularly used, typically using student groups assigned by the teacher (16.4% of total observations, range = 0%-31.8% among schools). Center-based learning (8.2% of observations; range = 0%-19% among schools) and paired learning (8.2%, range = 0%-27.3% among schools) were also observed across classrooms.

Variations across schools were seen, as would be expected. For example, at one school, almost half of the observations used whole class instruction and time at the board (47% of observations), and in other schools, flexible group instruction was used more often. However, these differences followed an expected pattern: the less frequently whole class and board work were observed, the more likely classrooms were using flexible grouping (e.g., centers, pairs, small groups).

Regardless of the type of instructional format, observers scored the quality of the formats to promote learning and engagement as generally effective. Observers scored overall level of engagement across a Likert-type scale of 0 = not effective to 4 = highly effective. Teacher-led instruction from the board scored the highest ratings of student engagement (\( M = 3.9, SD = 0.31, \) range = 3.75-4.0) followed closely by paired learning (\( M = 3.8, SD = 0.44, \) range = 3.5-4.0). Many of the classrooms had Smart Boards and, therefore, whole-group learning was noted to be interactive with students engaged when the teacher was instructing from the board. For example, in one math lesson, fourth graders voted for their favorite color on the Smart Board, as an introduction to a lesson on graphing and analyzing data; in another, a phonics lesson was introduced to the class of first graders using an interactive video via the Smart Board. After brief whole-group introductions, students then transitioned to small groups and/or centers to continue to engage in the lesson objectives. For the most part, especially among the primary classes, grouping arrangements were teacher-led; whereas in upper elementary and middle school classrooms, small groups were student-led, and teacher(s) rotated among groups. Not having access to interactive technology may explain lower engagement scores when a teacher instructed the whole class, however, this was difficult to sufficiently confirm,
as it was not an expected element for observational coding. Field notes explicated that when whole-group instruction was scored least effective, adults in the classroom were less likely to be using empirically supported behavior management strategies, which impeded instruction. The instructional arrangement scored least effective ($M = 2.0$, $SD = 1.41$, range $= 1.0-3.0$) by observers was the pull-out approach, which typically occurred when students with significant disabilities were working one-on-one with a paraprofessional or with a special education teacher during flexible group instructional times, especially when working on content different from the rest of the class. However, pull-out was observed relatively infrequently, so caution is warranted in interpreting these findings.

**Peer-supported learning.** In total, 60 instances were observed where peers engaged in learning with each other. Specifically, observers noted frequencies and quality of: pair work, cooperative grouping, peer tutoring, student-led demonstrations, and stations/centers. The most common approach was pair work (38.3% of total observations). The range among schools observing peer-supported learning was from 4% to 39.1%. Cooperative groups was the next most prominent instructional format (26.7% of total observations) with a range from 0% (1 school) to 37.5% among the schools. Stations/centers was observed in 16.7% of the observations and ranged from 0% to 30% across the schools. Formal peer tutoring approaches were infrequently observed (3.3% of overall observations; with only 2 schools observed implementing 1 instance of peer tutoring). This could be due to the timing of the observation, rather than a lack of formal peer tutoring approaches. Other examples of peer assisted learning were noted for 8.3% of the observations, and field notes indicated these were helping relationships, such as pushing a student’s wheelchair. Overall, peer engagement was rated as average to above average levels of engagement ($M = 2.97$, $SD = 1.34$, range $= 2.14-4.0$) on a scale of $0 = \text{infrequent and negative engagement}$ to $4 = \text{frequent and positive engagement}$. From field notes, peer supports provided to students with significant disabilities were almost exclusively teacher-directed.

Some schools used peer-supported learning more frequently and exhibited higher quality scores. Schools that received higher ratings tended to have established peer strategies embedded within classroom activities. Examples included: (a) working with “shoulder partners” to review answers to a math problem, (b) working in small groups and rotating through learning centers, (c) working in pairs to practice presenting work to each other, and (d) working in small groups rotating to different science experiments.

Observers rated the overall frequency of social engagement among students. Across all schools, the frequency averaged 2.7 instances per observation, with the quality of the interactions averaging 3.44 (on a scale of $0 = \text{never}$ to $4 = \text{frequently}$), with the range among the schools from a mean of 1.67 to 3.5. In three schools, observations indicated percentages of engagement between peers with and without disabilities (88%, 91%, and 100% of observations) with the other schools exhibiting lower engagement levels (38%, 50%, and 57%). In such circumstances, field notes reported a paraprofessional working one-on-one with students with significant disabilities was observed.

In terms of levels of adult facilitation of peer engagement, data are reported for 54 observations, due to missing data as a result of reporting errors. Within 68% of these observations, it was reported that adults facilitated peer supports (range among schools 60%-100%). For 13% of these observations, engagement occurred without adult facilitation; and in 18% of the observations, peer engagement was not observed. Across all schools, the number of peer interactions facilitated by adults averaged three per observation. All schools were seen providing adult and peer supports in well over half of the observations.

**Adult engagement.** Across all schools, observation of adults positively engaging with each other was reported to be high, with four schools being rated at 100%, one school at 89%, and one at 70%. The average number of positive adult engagements per observation was 3.6, with the frequency of adult interactions averaging 3.24 ($0 = \text{never}$ to $4 = \text{frequently}$), with means ranging from 2.71 to 4.0. Observers noted at least one instance of limited engagement among the adults; however, this behavior did not indicate a negative interaction, just limited communication among the adults during the observation.

**Access to academic curricular content.** Observers noted the degree to which all students accessed core academic content corresponding to the lesson. Frequency data were collected during only 48 of the observations, due to limited access to specific pre-information about the academic content. During 72.9% of
these observations, students were engaged in learning experiences congruent to the lesson being taught (ranging from 2.08%-31.3% across schools). Accommodations and modifications were generally associated with students with significant disabilities, however, because observers were not privy to which specific students in the room had an identified disability, this finding should be considered with caution. In one school, 100% of the observations reported all students were working on learning goals associated with the lesson/activities occurring in the class; whereas in another school, fewer class observations found this to be the case. When students with significant disabilities were working on individualized content, that content was less likely to align with classroom learning activities and more likely to occur in isolation from peers.

As might be expected, but useful to document, when students with significant support needs were more engaged in academic content in ways congruent to their peers, scores on the measure of classroom presence were higher. Observers rated on a 5-point Likert-type scale (0 = excluded to 4 = all participating) the degree to which all students were full members of the classroom and participated in the typical classroom routines. The overall mean was 3.43 across all schools, with a large range among schools (SD = 1.23, range = 2.0-4.0). Examples of full participation included teachers making sure all students heard instructions and initiated activities; all students transitioned in and out of the room together; and all students participated in large group activities. The few instances of exclusion tended to be situations when students with significant support needs were seen exiting and entering classroom at times different from peers or in the middle of a lesson; or sitting in a different area working on separate goals from the rest of the class; or a paraprofessional working one-on-one and limiting engagement.

### Dimension 2: Supports for Learning

Within this dimension, observations were clustered around three main areas: (a) universal design for learning, (b) behavioral interventions at the classroom and individual student level, and (c) individualized accommodations and modifications.

**Universal design for learning.** Observers coded the frequency with which certain features of universal design for learning (UDL) were evident in the classroom. Typically, during any one observation, multiple methods of UDL were counted. Teachers frequently used multiple means of representation of content, with an average of 2.3 methods per observation. Across observations, teachers most often used visual and auditory methods to introduce a lesson (34% of all observations; range = 20.6%-44% across schools), as well as other modalities, including modeling (15%; range = 5.0%-29.4%), pictures (13%; range = 0%-18.2%), objectives/manipulatives (12%; range = 6.7%-18.2%), and technology to access information (10%; range = 0%-26.7%). Teachers used technology (e.g., Smart Boards, LCD projectors) to model how to complete a worksheet or calculation. Graphic organizers, pictures of materials, and verbal directions were also noted. Typically, teachers offered a variety of modalities to access information to the full class for all students to use.

In terms of multiple means of expression, a range of ways were supported to express learning was seen, with an average of 2.6 methods per observation. The most frequent methods were as follows: allowing students to orally respond (31% of observations; range of 18.2%-40% across schools); writing answers (24%; range = 18.2%-33.3%), physical demonstrations (15%; range = 0%-20%); and using objects/manipulative (10%; range = 0%-20%). Less frequently, students used pictures (9%; range = 0%-18%) and technology (7%; range = 0%-12%). Across all schools, oral and written responses were most often observed. Forms of expression included singing the answer, pairing up with a partner to review answers, drawing graphs, pointing to pictures of parts of the flower, working in workbooks to write, drawing and discussing with a partner, and choral responding.

Finally, in terms of multiple means of engagement, students were generally observed to be limited in individually selecting a modality from among a range of choices (M = 1.3 per observation). However, students had choices in other aspects of instruction (e.g., order of activities, choice of learning strategies). Students made choices in instructional activities in 27% of observations (range = 6.3%-50% across schools) and chose how to practice skills in 19% of observations (range = 0%-53%). For example, students were allowed to choose from among several centers during a math lesson.
**Behavioral interventions.** Observers coded the presence of class-wide behavioral expectations, classroom behavioral interventions and supports, and individualized interventions for students. Observers rated these areas using a 5-point Likert-type scale (from 0 = not present to 4 = accessible to all students). In almost 75% of the total classrooms, classroom-wide behavioral expectations are clearly displayed and accessible to all students. Behavioral expectations that were posted in classrooms were observed within the 48 classrooms, and for each school, this represented between 63% to 80% of the classrooms. The degree to which students’ individual support needs aligned with class-wide behavior expectations was reported for only 25 observations and were highly rated ($M = 3.0$, $SD = 1.54$, range = 1.0-4.0). Without specific knowledge of students who had individualized behavior support plans, it was not possible to accurately gauge this indicator, and observers were not able to score this item in the majority of classrooms.

Observers tended to report that students understood classroom expectations by noting that students responded to behavioral management approaches, such as a teacher holding up a hand or clapping three times with students responding by quieting down or orienting to the front of the room. Other teachers were observed verbally reiterating expected behaviors prior to starting a new activity or when dividing into groups. Classroom-wide behavior management systems (e.g., charts to acknowledge performance of expected class behaviors, passing out “gold slips”) were noted.

Overall, classroom expectations and interventions were very positive. However, among those with observable individual behavior supports, when observers rated the level of congruency as lower, field notes indicated a more negative response to off-task or inappropriate behaviors; or adults in the room were incorrectly using specific interventions (e.g., timeout, reinforcement strategies). Paraprofessionals were observed using ineffective prompting strategies to try to keep students on task (e.g., repeating “shhh” to little effect; allowing students to wander and distract others; not following through on a reinforcement or consequence).

**Adaptations and modifications.** Some of the most frequently cited adaptations were changes in how materials were presented (31% of observations and range = 0%-53%) such as large print or different formats for graphic organizers. Environmental adjustments were observed in 23% observations (range = 0%-45%), for example, students moving to the front of the room, wearing headphones. Response alterations (e.g., teacher scribing for students who were responding verbally; extra time; using calculators) were observed in 25% of the classrooms (range = 0%-58%). For modifications, the most frequent form was reductions in cognitive demands of work (51% of observations), such as completing fewer items, picture-based stories rather than written stories, or differing complexity of math problems.

**Summary**

The ICOT (Morningstar & Shogren, 2013), developed specifically for this study, organized observation data for the purpose of identifying how inclusive classrooms provide support for student access, participation, and engagement in learning. This study reported the results of 65 classrooms that, on average, were 38 min in length. All of the observations took place in inclusive settings, in elementary and middle school classrooms, and in a few instances in other school settings such as the playground or lunchroom.

Supports for participation examined how classrooms utilized instructional staff and implemented instructional arrangements to support all learners. The results suggest co-teaching as a contributing factor leading to high levels of student participation. Student supports were evident in a variety of learning arrangements, with whole class instruction and flexible groupings (e.g., centers, small groups, paired learning) occurring most often and with the greatest success. Classrooms equipped with learning technologies used by educators appeared to have the greatest potential for access and participation of all learners. High rates of peer-supported learning were observed throughout classrooms, with the majority of the instances planned and supported by the adults. For the most part, adults, primarily a general educator, special educator, and paraprofessional, were observed interacting and collaborating at high rates. Finally, access and alignment with classroom academic content was observed for 60% of observations.

Supports for learning targeted three major strategies: UDL, classroom behavioral interventions, and adaptations and modifications to curricular content. Among the hallmark features of UDL, we observed teachers providing multiple means of accessing instructional content, with an average of two instances per
observation. Similarly, students were given the opportunity to express their knowledge in multiple ways, and teachers provided students opportunities to select multiple methods for engaging in learning, with the primary modality being choices about the order of completing activities.

Schoolwide and classroom behavioral expectations were clearly exhibited in KDS classrooms and were accessible to all students. A variety of strategies for promoting positive classroom climates were evident, with relatively few instances of negative or punitive behavioral interventions. Individual behavior support plans appeared to have overall positive effects. However, when individual behavioral interventions were inadequate, a paraprofessional using behavioral strategies not supported by the literature tended to be the most prevalent.

The adaptations and modifications were varied and frequent. Some of the most frequently observed adaptations included changes to presentation materials (e.g., large print, different formats), environmental adjustments, and response adaptations. The most frequent curricular modifications included reductions in cognitive demands, which were most often observed, along with increased use of graphics to depict content, and manipulating learning tools (e.g., number line).

Discussion

The purpose of this study was to examine how highly inclusive classrooms support participation and learning of all students, including those with significant support needs; and to document practices occurring within those classrooms that support participation and learning. Research has documented the benefits to students with disabilities who experience qualitatively different learning experiences in inclusive settings (McDonnell et al., 2006). An essential dimension of the KDS is that all students spend the predominant portion of their days in general education classes with the supports they need. For these reasons, among the KDS schools, inclusive education clearly goes well beyond “placement geography” and involves an array of supports necessary for participation and engagement in learning (Kurth, Morningstar, & Kozleski, 2014).

Educational systems inherently resist systemic changes in services, leading to significant lags between what we know about educating students with disabilities in general education contexts and what occurs in practice (Ryndak, Jackson, & White, 2013). However, the results from this research offer insights into the daily business of teaching and learning, leading to academic achievement among students with the full range of support needs. Such data exemplify for practitioners, researchers, and policymakers how highly localized (i.e., classroom level) supports and services can be transformed to promote academic and functional outcomes for all students.

Classroom supports are a necessary and critical dimension of systems-level approaches resulting in educational reform (Sailor, 2009). Given that models of inclusion tend to vary in both scope and intensity (Ainscow & Miles, 2008; Kozleski & Smith, 2009), continued research is needed to identify how inclusion is implemented and to determine both short-term and long-term impact. Without the examples provided herein, further recognition of how schools can transform services is limited, thereby potentially ensuring continued overreliance on separate and specialized settings for students with disabilities maintained in the futile effort to improve achievement outcomes.

Implications for Further Research and Practices

Limitations. The findings must be considered in light of limitations to the data collection and analysis procedures. First, because only one observer at a time had access to a classroom, we were not able to report inter-rater reliability, which opens the possibility for bias in the findings. We were also not allowed to video record classrooms to establish reliability among the observers post-visit. An effort to remediate this limitation included development of descriptions of each item and expected criteria prior to a visit, and to hold post-observation discussions among the three researchers who completed observational data collection. Next, as described previously, the observations were of brief duration and were general observations of classroom practices, rather than specific time sampling or duration metrics of the use of specific practices. Observers recorded whether specific practices were being implemented; however, during the short observation periods, a practice may not be implemented or needed because of the nature of the classroom activity observed. If it was present at other times, this was not captured. Although the large number of observations
across schools does lend credence to trends observed, the results would be strengthened with further and more systematic observational methods. In addition, a practice might be observed in part but not widely (e.g., adaptations being implemented for some, but not all, students who could benefit). Finally, while an effort was made to provide guidance ahead of each visit on the types and range of classrooms to visit, few if any of the schools identified classrooms, and instead all schools gave us permission to enter any classroom. The open-ended approach to visiting classrooms afforded to the observers avoided school-driven selection bias that might have directed observers to visit only the most effective classrooms. The range of grades and subjects observed provides some assurance that a wide variety of classrooms were observed. In the end, while unanticipated, we were able to visit a wide range of classrooms and observe business as usual in these inclusive classrooms. However, additional research is needed regarding how these factors identified within inclusive classrooms could be examined more systematically.

Given the descriptive nature of this study, expanding this research to establish more sophisticated measures of duration of use of specific supports would provide meaningful information on how often evidence-based approaches are used in classrooms. Currently, most time sampling research has focused specifically on student behaviors rather than global classroom settings (cf. McDonnell et al., 2006). Expanding the focus of inclusive observations to classroom-wide factors is an important future line of research.

In addition, as the focus for this study was the classroom, no specific efforts were made to systematically observe students with disabilities in the classroom other than through the use of field notes (see Kurth, Lyon, & Shogren, 2015, for individual student observations). Access to adaptations and modifications were noted, but future research is needed that examines the experiences of individual students under inclusive models. There was also variability in the range of observations at the different schools largely driven by school-specific needs (e.g., unable to observe in certain classrooms because of professional development). This is a potential limitation of the study, as more observations were conducted in some schools, which likely impacted the findings particularly as we were unable, per our IRB agreements, to analyze school-level factors that may impact the results. Also, little data were collected from teachers about the activities that would be conducted during the observation, such as linkages to grade-level standards, established lesson plans and learning goals, and planning for UDL options and choices. Determining ways to capture this information during brief observations will be necessary in future research to further extend the focus on classrooms. Finally, our relatively small sample of schools, their variable local contexts and cultures, as well as stage of development with regard to inclusion constrained possibilities for cross-school comparative analyses.

Supports for participation and access in general education. Clearly, these six inclusive schools utilized school personnel in ways that supported all students. The prevalence of co-teaching arrangements suggests this approach can successfully promote inclusion and access to general education curriculum. Given the knowledge development design of this study, it was not possible to ascertain the impact of differences in classroom configurations, particularly regarding the two forms of co-teaching (full vs. partial). The descriptive results from this study call attention to the need for further research to compare academic, behavioral, and social outcomes of students served in classrooms where full co-teaching occurs as compared to partial co-teaching or consulting models of support from special education.

The KDS schools also showed varied roles and uses of paraprofessionals, and in many instances, paraprofessionals were still associated with the one-on-one model for supporting students with significant disabilities. From our results, and especially the field notes, the one-on-one support model may be related to classrooms that less frequently utilized peer supports—a supposition that should be considered cautiously, given potential limitations of this study with respect to observations. Clearly, continued research is needed to better understand how paraprofessionals can and should be used to support increased peer interactions (Brock & Carter, 2013; Fisher & Pleasants, 2011).

It is essential that as a field, we develop and examine effective interventions for paraprofessionals to promote learning of all students. The barriers paraprofessionals inadvertently place on effective inclusive practices is not new, and our results lend further support to researchers invested in improving paraprofessional impact on learning (Giangreco, Suter, & Hurley, 2013). Likewise, fostering cooperative learning (McMaster & Fuchs, 2002) and interventions that engage peers in learning together will be an essential direction in future technical assistance and research (Carter, Cushing, Clark, & Kennedy, 2005).
Supports for learning. One of the most visible changes in educational practice over the past decade has been the shift toward promoting access to the general education curriculum (Wehmeyer, 2014). The increased focus on supporting classroom learning has led to developments of innovative practices and evidence-based interventions including UDL, positive behavior supports, and curricular adaptations and modifications (Turnbull et al., 2013). The results of this study exemplify inclusive classrooms that can and do engage students with diverse learning needs if educators carefully and collaboratively differentiate instruction and establish a universal approach to learning (Salend & Duhaney, 2011). It was also seen that educators must provide positive and consistent classroom behavioral and curricular supports.

The UDL and differentiated instructional approaches observed point to the importance of educators using multiple means to convey information, as well as opportunities for students to demonstrate mastery. In addition, our results may suggest that if a wide array of UDL strategies are in place, fewer specialized adaptations are needed. This conclusion warrants further examination, given the descriptive nature of this study. However, anecdotally, observers noted that when classrooms offered differentiated instruction combined with multiple modalities for accessing information and demonstrating knowledge, students were less likely to require individualized supports for learning. Further research is needed in this area, and designing more sophisticated observational approaches for examining and distinguishing levels of UDL is required.

Despite limitations, this study provides useful and informative data on how inclusive classrooms’ structure supports learning and participation for all students. This descriptive study extends our understanding of how classroom practices support access to and full participation in learning for all students. Although not designed to reach comparative conclusions, the results offer a glimpse into six inclusive classroom ecologies. The results lend credence to the importance of designing and evaluating classroom-level changes as an essential element of systems-wide transformations of schools.

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