

Running head: INCLUSIVE SOCIAL STUDIES

An Exploratory Study Using Participation Plans for Inclusive Social Studies Instruction

Jennifer A. Kurth

University of Kansas

Amanda L. Miller

State University of New York at Cortland

Samantha Gross Toews

University of Kansas

Megan Gross

Poway Unified School District

Amber Collier

Poway Unified School District

Tori Ventura

Poway Unified School District

Citation: Kurth, J. A., Miller, A. L., Toews, S. G., Gross, M., Collier, A., & Ventura, T. (2020). An exploratory study using participation plans for inclusive social studies instruction. *DADD Online Journal*, 6, 158-176.

Abstract

Limited research exists on teaching social studies content, including intervention research, in inclusive settings for students with intellectual and developmental disabilities. The purpose of this exploratory project was to evaluate the use of participation plans for supporting students with intellectual and developmental disabilities in inclusive high school social studies classrooms. The study addressed two questions: (1) To what extent can students with IDD learn prioritized social studies content and skills in inclusive secondary settings? and (2) How do participation plans support students in learning prioritized social studies content and skills in inclusive general education settings? A university research team supported a public high school staff to employ a single-case, multiple baseline design across prioritized skills (knowledge of content, vocabulary, and summarization) and participants. Results showed students' correct responses increased across prioritized skills after the team began using the participation plans. This discreet intervention exhibits promise for school staff (i.e., teachers, paraprofessionals) needing mediating tools for effective inclusive education. We discuss implications for future research and practice.

Keywords: inclusive education, social studies, developmental disability, intellectual disability, autism

An Exploratory Study Using Participation Plans for Inclusive Social Studies Instruction

There is an increased focus on educating students with intellectual and developmental disabilities (IDD) in inclusive general education settings due to converging policy guidelines and research-based evidence over the past several decades. Specifically, the Individuals with Disabilities Education Improvement Act (IDEA; 2004) and Every Student Succeeds Act (2015) focus on students learning general education curriculum, in the general education setting “to the maximum extent appropriate” (34 CFR §1401(29)). Moreover, IDEA requires schools provide students with disabilities “access to the general education curriculum... to learn grade-level content based on grade-level standards” (CFR. Part 34, 300.26 [b] [3] [ii]) whereby the state standards determine the core curriculum. Given the range of extensive learning support needs of students with IDD (Spooner, Knight, Browder, & Smith, 2012), and the requirement for students with IDD to access and show progress in grade aligned state standards, many schools have utilized separate special education settings to teach curricula loosely tied to state standards (Bacon, Rood, & Ferri, 2016). However, as Bacon and colleagues describe, such settings limit “access to the general education classroom [discourse], high expectations, and socialization with same-age peers” (2016, p. 8). In fact, core academic instruction in inclusive settings is recommended to achieving desired student learning outcomes (Jackson, Ryndak, & Wehmeyer, 2008-2009).

Existing research has documented students with IDD can learn academic content and has described effective instructional methods for this population. Findings from comprehensive research reviews indicate students with IDD in grades K-12 can learn mathematics (e.g., Hudson, Rivera, & Grady, 2018) and literacy (e.g., Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006). The studies reviewed were overwhelmingly reflective of instruction in

separate special education settings. In a comprehensive review of teaching academic skills to students with IDD, Spooner and colleagues (2012) identified time delay, task analytic instruction, and systematic prompting and feedback to be effective practices. Yet, the studies were delivered primarily in separate special education settings and by research teams rather than school staff (i.e., teachers, paraprofessionals), limiting generalizations of these instructional strategies to inclusive settings (Spooner et al., 2012).

Methods of providing instruction in core academic content for students with IDD are well documented (Spooner, Knight, Browder, Jimenez, & DiBiase, 2011). Three methods include embedded instruction, curricular modifications to support instruction of prioritized skills, and ecological assessment, as discussed next. We selected these methods due to their supporting evidence and our ability to embed them in existing classroom supports and routines. An organizing framework, which we call *participation plans*, incorporated these three methods. We designed the framework to assist school staff in providing adequate instructional trials on prioritized skills in the general education classroom and curricula.

The use of embedded instruction to teach academic skills to students with IDD in inclusive settings is an evidence-based practice (Jimenez & Kamei, 2015). Embedded instruction is explicit, systematic instruction that uses distributed instructional trials within the on-going routines and activities of the classroom environment (McDonnell, Johnson, & McQuivey, 2008). The use of embedded instruction to teach academic skills has resulted in positive gains for students with IDD in inclusive settings including vocabulary (e.g., Riesen, McDonnell, Johnson, Polychronis, & Jameson, 2003), sight words (e.g., Johnson & McDonnell, 2004), and academic facts (e.g., Collins, Evans, Creech-Galloway, Karl, & Miller 2007).

In addition to embedded instruction, the use of curricular supports and modifications is effective in promoting access to core curriculum and instruction for students with IDD. Students are more engaged in academic related activities when curricular modifications are provided (Lee, Wehmeyer, Soukup, & Palmer, 2010). Curricular modifications may alter what or how content is taught (Janney & Snell, 2006) and should be based on prioritized skills. Prioritized skills reflect a subset of general education learning outcomes targeted for instruction that afford students the opportunity to learn the most important student-specific general education content (Giangreco, Cloninger, & Iverson, 2011). Prioritized skills represent the “big ideas or key content in each [academic subject] ... that will support the student’s ability to achieve [their] life goals” (Hunt, McDonnell, & Crockett, 2012, p. 142). In making modifications based on prioritized skills, school staff provide a personally relevant curriculum for each student, thus enabling access to the general education curriculum with individualized supports (Trela & Jimenez, 2013).

Ecological assessment is a strategy used to examine all routines, including classroom routines, and determine what supports, if any, students need to fully participate in those routines (Haney & Cavallaro, 1996). Ecological assessment consists of developing a task analysis of classroom routines and observing student participation in those routines to determine if there is a discrepancy between expected and actual performance. When a discrepancy exists, school staff determine which supports (i.e., modified materials, communication supports) to provide within the routines and context of the general education classroom in order to minimize or eliminate the discrepancy. Ecological assessment is a person-centered approach for determining individualized supports for students with disabilities (Watson, Gable, & Greenwood, 2011).

While effective instructional strategies are well documented, there is limited empirical research focusing on teaching the full range of state-mandated curricular content to students with

IDD. Limited K-12 social studies content research for students with IDD exists regardless of classroom setting and “is by far the most under-researched core content area. Little to no research has been conducted on effective strategies for use in teaching social studies content to this population of students” (Courtade, Jimenez, & Delano, 2014, p. 354). Yet social studies is required core content for high school students. In a 2013 investigation, Schenning, Knight, and Spooner (2013) taught adapted social studies content to three students with IDD, focusing on comprehension of adapted texts and application to real-world situations. Although the intervention related to state content standards, it took place in a separate special education setting. Similarly, Mims, Hudson, and Browder (2012) taught listening comprehension of historical biographies to four students with IDD. This intervention resulted in high levels of correct responses for students; yet, the study occurred in a separate special education setting.

In consideration of the dearth of social studies research for students with IDD and the limited information on how school staff may provide successful inclusive core academic instruction, research is needed to develop effective social studies instructional practices for students with IDD in K-12 inclusive settings. The nuanced impact of interventions implemented by school staff, rather than research teams, is also needed. The purpose of this exploratory project was to evaluate the use of participation plans, consisting of embedded instruction and curricular adaptations based on ecological assessments, to teach social studies content to high school students with IDD in inclusive general education settings. The study addressed two questions: (1) To what extent can students with IDD learn prioritized social studies content and skills in inclusive secondary settings? and (2) How do participation plans support students in learning prioritized social studies content and skills in inclusive general education settings?

Method

Participants

Three male students, Li, Vishal, and Isaiah, with autism and intellectual disability participated in the study (see Table 1). Each student participant met the following criteria: (a) receive special education services, as determined by the presence of a current Individualized Education Program (IEP), (b) receive special education services on a general education high school campus, and (c) have a significant intellectual disability as determined by school psychological reports and special education eligibility designations. One student, Li, had complex communication needs, and used a speech generating device in addition to pointing and gesturing to communicate. The other two students (Vishal and Isaiah) communicated verbally. Students spent between 40-54% of a typical school day in general education settings, and most of those courses were non-academic (e.g., physical education, art). The special education teacher completed a Likert-type rating scale ranging from 1 (no supports needed in an average week) to 4 (extraordinary supports needed, five or more times in an average day) to indicate the degree to which students needed supports (e.g., self-care, learning academic content, communication; Soukup, Wehmeyer, Bashinski, & Bovaird, 2007).

Two general education social studies teachers, one special education teacher, and two special education paraprofessionals participated in the study ($n = 5$). Teaching experience ranged from 4-22 years in their current role ($Mdn = 9$ years; see Table 1). Two paraprofessionals, Ms. Austin and Ms. Carmel, served as primary data collectors, independently collecting one probe (opportunity for a student to respond) for each prioritized skill per student during each school day. Paraprofessionals were the adults most familiar with supporting the student participants in the general education setting. Each received training in implementation of supports and data collection, described in greater detail in the Experimental Design and Procedures section.

Setting

All phases of the study occurred in general education high school social studies classes. Vishal and Li were enrolled in the same 12th grade Civics course, taught by Mr. Orlando and supported by Ms. Austin and Ms. Carmel. A total of 40 students enrolled in the course. At the time of this study, the Civics curriculum focused on the U.S. Constitution and the three branches of government. Isaiah was enrolled in an 11th grade U.S. History course, taught by Mr. Houston and supported by Ms. Carmel, with 35 other students. At the time of this study, the U.S. History curriculum focused on the latter half of the 20th century. In all cases, a natural proportion of students with and without disabilities was present in the classroom. All student participants sat with their peers in small groups in the two general education classrooms.

Materials

Participation plans, an intervention package, were the primary materials developed and evaluated in this study. The participation plan is an intervention package consisting of three core components: embedded instruction, a system of least prompts, and individualized adaptations focused around student prioritized skills. To create individual participation plans, the general education teachers and special education staff determined prioritized skills for each student using the state standards and curriculum for social studies instruction (grade 11 or 12) and knowledge of student strengths, needs, and IEP goals. Prioritized skills included: vocabulary, summarization, and knowledge of course content (see Table 2) and were the first rows of information in each student's participation plan.

Opportunities to teach prioritized skills were identified within typical routines in the social studies classes, and individualized adaptations were created based on special education staff input and ecological assessment. Instruction, using adaptations as needed, was provided

using a system of least prompts. This information (prioritized skills embedded in routines and individualized adaptations) was described in the instructional plan for each student.

The participation plans consisted of 6 columns (see Table 4). The first column listed the schedule of general education classroom activities, as determined by the ecological assessment. The second column held space for skills to teach beyond IEP goals that matched the context of the activity. Columns 3 and 4 listed natural teaching and embedded instructional opportunities to teach prioritized skills. The university team defined natural teaching opportunities as already-occurring instruction. For example, if a student's prioritized skill was to identify the three branches of government, and the class was discussing the judicial branch, then we considered this a natural learning opportunity. The university team defined embedded teaching opportunities as supplemental teaching opportunities. In the above example, if a student was learning the three branches of government, the school staff would create opportunities by embedding content into existing activities or by simply asking a student to list the branches of government during independent work times when this was not a focus of the lesson that day. The final two columns described adaptations and supports for students to participate in each class activity. Global supports were supports available to all students (i.e., PowerPoint presentations, literacy materials, questions, graphic organizers, rubrics) and corresponded to classroom activities. The adaptations section described student-specific supports as they pertained to each classroom activity listed in the first column.

Experimental Design and Procedures

We used a multiple probe across participants design to evaluate the effects of the participation plan package on students' learning of prioritized, individualized social studies content. This exploratory study consisted of five phases: pre-baseline, baseline, training,

intervention, and maintenance.

Pre-baseline. Prior to beginning the baseline phase of the study, the university team completed ecological assessments of the two social studies classes. The school staff used this information to determine prioritized skills and design participation plans. No student or education team member behavioral data were collected during this process.

Baseline. Students received “business as usual instruction” in baseline. In other words, students received adaptations and prompts, but did not receive embedded instruction of prioritized skills with skill-specific adaptations. For example, a student may have had a worksheet modified with a word bank or added choices, but the modifications were not explicitly linked to the student’s prioritized skills. A multi-tiered entry into intervention was provided, and students moved from baseline to intervention after demonstrating stable responses in three consecutive probes.

Training. In addition to conducting ecological assessments for each student in their social studies classrooms, the research team trained school staff to implement the intervention between baseline and intervention phases. One graduate student from the university team spent three days with the school staff to provide training on how to implement each participation plan. Training included discussing and modeling how to embed prioritized skill practice into class activities. The graduate student and school staff engaged in real-time problem solving to ensure implementation preparedness and fidelity. Participation plan implementation fidelity was ensured via observations of all students across classrooms, with fidelity measured at 100% across students for two (of three) prioritized skills for each student.

The research team also met with Ms. Denver, the special education teacher, and Ms. Austin and Ms. Carmel weekly for approximately 20 minutes via Zoom (2017) over the course

of the 5-week training phase. In the training meetings, school staff received instruction on how to use data collection sheets, provide supports during distinct phases of the study, and collect inter-rater reliability data. We also clarified operational definitions of behaviors, scores for student responses, and strategies for maximizing embedded instruction.

Intervention and maintenance. During intervention, students received individualized supports as specified in their individualized participation plans. All students received the complete intervention package (i.e., embedded instruction, system of least prompts, and adaptations focused on prioritized skills) during the intervention phase. Instructors provided one probe for each prioritized skill per class session during the intervention phase to the extent possible, considering class schedules and student absences. The intervention phase proceeded for at least 4 data points, or until stability had been achieved. School staff completed maintenance probes at least 8 school days after the intervention ended for each prioritized skill to determine retention of learned skills and in consideration of the anticipated length of social studies unit. The same conditions were applied in maintenance as the intervention phase.

Data Collection and Analysis

Data analysis included visual inspection of graphed data (Lane & Gast, 2014). Within condition analysis included trend direction and stability, along with relative level and stability (Horner et al., 2005). Prioritized skill probes were delivered typically by paraprofessionals in the general education classroom during non-invasive instructional times (embedded instruction). Instructional trials were provided at least once, but not more than twice per day. Data sheets included the prioritized skills and adaptations, as articulated in the participation plans. School staff scored: a '2' if the student responded correctly independently (e.g., selected correct vocabulary definition from a field of three, with no prompting); a '1' if the student required any

prompt to respond correctly, using a system of least prompts; and a '0' if the student responded incorrectly (with or without prompting) or failed to respond. The sum for each skill was calculated as total points per day, along with total points possible per day as determined by the total number of instructional trials provided. A percentage score (total points earned divided by total possible points possible multiplied by 100) was calculated and graphed for each student.

Procedural Fidelity and Inter-Observer Agreement

Procedural fidelity was measured using a task analysis of the steps in the participation plan. Due to the varied nature of class activities for each student, the steps needed to complete each student's participation plan also varied. Fidelity was assessed for both school staff implementation of each component of the participation plan. This fidelity data was collected both in-person (i.e., the university team observing within the classroom) and via video provided by the school staff. Procedural fidelity was computed by dividing the number of steps present in the participation plan by total number of steps planned and multiplying by 100. Procedural fidelity was assessed in-person (15% of instruction) and by video (2%), averaging 95% across participants (range: 90-98%). For all phases of the study, the second author entered all data into MS Excel for analysis, with each point of data entered confirmed by the first and third authors.

Inter-observer agreement (IOA) data was collected in baseline (20.04%), intervention (18.65%), and maintenance (44.94%) phases and each student by the paraprofessionals. During reliability, a second graduate student collected data on student performance using the same data collection sheets as the paraprofessionals. After each double coded reliability session, the university team compared both ratings and computed point-by-point IOA. The number of intervals in agreement was divided by the sum of the number of intervals in agreement and disagreement (total intervals), multiplied by 100 to obtain a percentage. Three consecutive

agreements $\geq 90\%$ was established as minimum criteria.

Social Validity

The university team collected school staff and student feedback on intervention feasibility and effectiveness via questionnaire. The staff questionnaire (adapted from Hudson, Browder, & Jimenez, 2014; Tarnowski & Simonian, 1992) targeted overall intervention effectiveness and specific intervention components, and outcomes of the participation plan package. Student feedback (adapted from Knight, Wood, Spooner, Browder, & O'Brien, 2015) was collected via the questionnaire. The form solicited information from the students, including their goals, what supports helped them learn, and what they enjoyed from the social studies class.

Results

Descriptive data were examined to evaluate the outcomes of the intervention on prioritized skills, social validity of the participation plans, and reliability of study data.

Prioritized Skills Outcomes

Vocabulary. Table 2 displays prioritized vocabulary skills. Figure 1 shows each student's scores for vocabulary skills.

Li. During baseline, Li's scores were low and stable, earning 0 possible points. His performance showed an immediate and abrupt change after introduction of the participation plan, with scores ranging from 40 to 60% of possible points (*Mdn* =50%). There was no change in relative level during intervention. Two maintenance sessions were completed over 1 week. Scores during this period range from 50 to 58% (*Mdn* =40%).

Isaiah. During baseline, Isaiah's scores on the vocabulary skill were low and stable, at 0% (*Mdn* =0%). His performance showed an immediate and abrupt change after introduction of the participation plan, with scores ranging from 70 to 100% (*Mdn* =100%). Isaiah had no change

in relative level during intervention. Two maintenance sessions were completed over 1 week. Isaiah's scores during maintenance remained high at 90%.

Vishal. During baseline, Vishal's scores were low and stable, earning 0 possible points during each probe ($Mdn = 0\%$). Baseline data was not completed immediately prior to intervention due to unexpected scheduling issues and considerations related to the impending end of the school year. However, Vishal's performance showed an immediate and abrupt change after introduction of the participation plan, with scores ranging from 50 to 100% of possible points ($Mdn = 75\%$). There was slight improvement in relative level during intervention. Two maintenance sessions were completed. Vishal's scores ranged from 63 to 75% ($Mdn = 69$).

Summarization. Table 2 lists prioritized summarization skills. Figure 2 shows student scores for summarization skills.

Isaiah. During baseline, Isaiah's scores on the summarization skill were low and stable ($Mdn = 0\%$). His performance showed an immediate change after introduction of the participation plan, with scores ranging from 0 to 100% ($Mdn = 62.5\%$). There was an improvement in relative level during intervention. Two maintenance sessions were completed over 1 week. Isaiah's scores during this period remained high at 100%.

Vishal. During baseline, Vishal's scores were low and unstable, ranging from 0 to 50% possible points ($Mdn = 0\%$). His performance showed an immediate and abrupt change after introduction of the participation plan, with scores ranging from 50 to 100% ($Mdn = 75\%$). A total of two maintenance sessions were completed over 2 weeks. Vishal's scores were high at 100%.

Li. During baseline, Li's scores were low and stable ($Mdn = 0\%$). His performance showed a change in level and trend after introduction of the participation plan, with scores ranging from 25 to 75% ($Mdn = 50\%$). There was a deteriorating change in relative level. Two

maintenance sessions were completed over 2 weeks and Li's scores remained high, at 50%.

Knowledge. See Table 2 for student-specific prioritized knowledge skills and Figure 3 for knowledge skill instruction results.

Isaiah. During baseline, Isaiah's scores on the knowledge skill were low and stable ($Mdn = 0\%$). His performance showed an immediate and abrupt change after introduction of the participation plan, with scores ranging from 50 to 100% ($Mdn = 100\%$). There was no change in relative level. A total of four maintenance sessions were completed over 2 weeks. Isaiah's scores during this period were variable, ranging from 50 to 100% ($Mdn = 100\%$).

Li. During baseline, Li's scores were low and stable ($Mdn = 0\%$). His performance immediately improved following introduction of the participation plan, with scores ranging from 30 to 60% ($Mdn = 50\%$). There was an improving trend in relative level during intervention. Two maintenance sessions were completed over 2 weeks, with scores at 50%.

Vishal. During baseline, Vishal's scores were low and stable at 0%. His performance showed an improvement in trend after introduction of the participation plan, with scores ranging from 40 to 100% ($Mdn = 60\%$). There was no change in relative level. A total of three maintenance sessions were completed over 3 weeks; his scores ranged from 80 to 90% ($Mdn = 80\%$).

Reliability and Social Validity

Reliability was established by two raters in 20.63% of sessions. This included 20% of the baseline sessions with 100% agreement, in 18.7% of intervention sessions with 93.46% agreement, and 44.9% of maintenance sessions with 100% agreement. Social validity was assessed by surveying all school participants (see Table 3). Four of the five school staff completed the social validity assessment, with positive responses to the intervention. The most

critical rating ($M = 5.25$) was related to time to implement the intervention. The highest ratings were related to impact on student and school staff willingness to teach other students with IDD in general education settings. One participant noted the intervention “helped [the] team focus on academic-based interventions... [and] increased our conversations.” Student social validity reports indicated positive responses to the intervention; students identified pictures, partners/groups, and definitions as learning supports. Some of the activities they enjoyed included giving presentations, writing reports, and reading news articles. All three students reported meeting their goal for the class.

Discussion

The purpose of the current exploratory study was to evaluate the feasibility and effectiveness of participation plans for teaching social studies content to students with IDD in inclusive settings. While all three students increased their correct responses for all three prioritized skills after the participation plan was introduced, obtaining consecutive data points in all phases was not possible due to time restrictions. Further, our time-limited assessment of student maintenance demonstrated only preliminary evidence that students maintained their skills over time. Yet, the intervention was minimally invasive, occurred in inclusive general education settings in typical instructional conditions, and did not require expensive or time-consuming supports. Together, there is preliminary evidence to support the use of participation plans to facilitate student learning of prioritized skills in inclusive settings.

The university team measured feasibility through fidelity and social validity measures. In all conditions and for all students, fidelity of implementation was high. Overall, stakeholders (staff and students) were satisfied with the intervention. School staff responses indicated the

intervention was effective and reasonable, even in realistic schooling conditions. Students identified several supports they found useful for learning social studies content.

The university team measured effectiveness through visual inspection of the graphed data. Results from this study indicated a possible functional relationship between the use of participation plans and student acquisition of prioritized social studies skills. Examination of the graphs for each participating student revealed students acquired vocabulary, summarization, and knowledge skills in the general education setting. While all three students demonstrated improved learning with maintenance of skills, Li's achievement of all three goals was substantially lower than the other participants. Because Li was the only student with complex communication needs, the findings demonstrate the importance of targeted and intensive supports in inclusive settings for students with significant support needs. It is possible that additional supports, not provided in this study, would have enabled Li to progress to higher proficiency rates. Together, however, results demonstrated inclusive social studies instruction was both feasible and effective for students with IDD and the school staff.

Little research has been completed on the acquisition of social studies content as well as academic instruction exclusively in general education settings for students with IDD. To address these gaps, the present study identified effective practices related to inclusive academic instruction and combined those practices into a single organizational framework referred to as a participation plan. Specifically, the participation plans combined embedded instruction and curricular adaptations based on ecological assessment to teach prioritized skills to students with IDD. The university team taught the school staff how to use the participation plans to provide adequate instructional opportunities for students to learn prioritized skills and needed supports in inclusive general education settings. As such, the present study builds on the ecological

curricular framework articulated by Hunt and colleagues (2012) which recommends developing standards-based academic goals that reflect individual student needs and priorities. Through use of these practices, all team members collaboratively determined how accessing social studies content can correlate with an individual student's quality of life goals (Schenning et al., 2013).

Limitations

The team identified limitations that impacted interpretability and generalization of the findings. First, the research was conducted in a natural school setting that often afforded irregular schedules or events, consequently, data was not collected on consecutive school days in all instances as intended in the study design. Second, additional constraints, including the school's trimester system, impending end of school year, and designated testing days, further impacted study design. As a result, we were not able to obtain consecutive data points prior to change in phase for all students in all skills or additional IOA data. Third, generalization probes were not collected because the participating students were not presently enrolled in other general education courses in which a participation plan could be implemented. Finally, participation plans consisted of embedded instruction and adapted materials. It is possible that our results were due to one of the two major components rather than a combination.

Implications for Research and Practice

Future research can expand the use of participation plans across supports and structures. For instance, additional research is needed to examine the effectiveness of participation plans coupled with peer supports. In the current study, participants primarily received supports from paraprofessionals, yet peer supports are an effective way to promote social and academic engagement for students with IDD in inclusive settings (Carter, 2017). Further, future research

should expand the use of participation plans by pairing them with collaborative teaching arrangements for special and general education teachers.

Future research should include a larger sample size and occur in other social studies classrooms as well as additional high school content areas (i.e., science, mathematics, language arts). Future research should couple participation plans with visual aids (Schenning et al., 2013) or adapted texts and videos (Evmenova, Graff, & Behrmann, 2017; Knight et al., 2015). Finally, replicability needs to occur in inclusive elementary and middle school settings, focused on students with IDD, and expanded across content areas.

The use of participation plans to support student access and engagement in general education settings is a feasible and effective practice but requires time commitments from all stakeholders. Like many schools, the school staff in this study had no designated common planning time (Santoli, Sachs, Romey, & McClurg, 2008). Because development of curricular adaptations can be a time-consuming process (Kurth & Keegan, 2014), the usefulness of participation plans as a time-saving strategy is a promising practice. Relatedly, structures to support family participation in developing prioritized skills should be considered. Inclusive education affords many opportunities for students with IDD to work on skills that may not be actualized as IEP goals, such as working in collaborative groups or learning core content. Thus, partnering with families to review general education content maps and align instruction with family priorities and interests would be beneficial to students and further support family-school connections.

Finally, this study demonstrated the effectiveness of inclusive social studies instruction for students with IDD using participation plans. Currently, most students with IDD are removed from general education settings for academic instruction. The findings from this exploratory

study show removal from general education is not warranted to afford students opportunities to make progress on prioritized skills. When viewed within the context of other studies demonstrating that students learn academic content in inclusive settings (e.g., Ruppard, Afacan, Yang, & Pickett, 2017), along with concerns related to inequitable education in separate special education settings (e.g., Artiles, Kozleski, Dorn, & Christensen, 2006), these findings underscore the effectiveness and feasibility of inclusive academic instruction for students with IDD.

References

- Artiles, A., Kozleski, E., Dorn, S., & Christensen, C. (2006). Learning in inclusive education research: Re-mediating theory and methods with a transformative agenda. *Review of Research in Education, 30*, 65-108.
- Bacon, J., Rood, C. E., & Ferri, B. A. (2016). Promoting access through segregation: The emergence of the "prioritized curriculum" class. *Teachers College Record, 118*, 1-22.
- Browder, D., Wakeman, S., Spooner, F., Ahlgrim-Dezell, L., & Algozzine, B. (2006). Research on reading instruction for individuals with significant cognitive disabilities. *Exceptional Children, 72*, 392-408. doi:10.1177/001440290607200401
- Carter, E. W. (2017). The promise and practice of peer support arrangements for students with intellectual and developmental disabilities. *International Review of Research in Developmental Disabilities*. doi:10.1016/bs.irrdd.2017.04.001
- Collins, B. C., Evans, A., Creech-Galloway, C., Karl, J., & Miller, A. (2007). Comparison of the acquisition and maintenance of teaching functional and core content sight words in special and general education settings. *Focus on Autism & Other Developmental Disabilities, 22*, 220-233. doi:10.1177/10883576070220040401
- Courtade, G., Jimenez, B. A., & Delano, M. (2014). Providing effective instruction in core content areas (literacy, mathematics, science, and social studies) in inclusive schools. In J. McLeskey, N. L. Waldron, F. Spooner, & B. Algozzine (Eds.), *Handbook of effective inclusive schools: Research and practice* (pp. 352-362). New York, NY: Routledge.
- Every Student Succeeds Act, § P.L. 114-95 (2015).
- Evmenova, A. S., Graff, H. J., & Behrmann, M. M. (2017). Providing access to academic content for high-school students with significant intellectual disability through interactive videos.

- Focus on Autism and Other Developmental Disabilities*, 32, 18-30.
doi:10.1177/1088357615609307
- Gast, D. L. & Ledford, J. R. (Eds). (2014). *Single case research methodology: Applications in special education and behavioral sciences* (2nd Ed). New York, NY: Routledge.
- Giangreco, M., Cloninger, C. J., & Iverson, V. S. (2011). *Choosing Outcomes and accommodations for children* (3rd ed.). Baltimore, MD: Paul H. Brookes.
- Haney, M., & Cavallaro, C. (1996). Using ecological assessment in daily program planning for children with disabilities in typical preschool settings. *Topics in Early Childhood Special Education*, 16, 66-81. doi:10.1177/027112149601600107
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71, 165-179. doi:10.1177/001440290507100203
- Hudson, M. E., Browder, D., & Jimenez, B. A. (2014). Effects of a peer-delivered system of least prompts intervention and adapted science read-alouds on listening comprehension for participants with moderate intellectual disability. *Education and Training in Autism and Developmental Disabilities*, 49, 60-77.
- Hudson, M. E., Rivera, C. J., & Grady, M. M. (2018). Research on mathematics instruction with students with significant cognitive disabilities: Has anything changed? *Research and Practice for Persons with Severe Disabilities*, 43, 38-53. doi:10.1177/1540796918756601
- Hunt, P., McDonnell, J., & Crockett, M. A. (2012). Reconciling an ecological curricular framework focusing on quality of life outcomes with the development and instruction of standards-based academic goals. *Research and Practice for Persons with Severe Disabilities*, 37, 139-152. doi:10.2511/027494812804153471

Individuals with Disabilities Education Improvement Act, 20 U.S.C. § 1412, (2004).

Jackson, L., Ryndak, D. L., & Wehmeyer, M. L. (2008-2009). The dynamic relationship between context, curriculum, and student learning: A case for inclusive education as a research-based practice. *Research and Practice for Persons with Severe Disabilities*, 33-4, 175-195. doi:10.2511/rpsd.33.4.175

Janney, R., & Snell, M. (2006). Modifying schoolwork in inclusive classrooms. *Theory into Practice*, 45, 215-223. doi:10.1207/s15430421tip4503_3

Jimenez, B. A., & Kamei, A. (2015). Embedded instruction: An evaluation of evidence to inform inclusive practice. *Inclusion*, 3, 132-144. doi:10.1352/2326-6988-3.3.132

Johnson, J. W., & McDonnell, J. (2004). An exploratory study of the implementation of embedded instruction by general educators with students with developmental disabilities. *Education and Treatment of Children*, 27, 46-63.

Knight, V. F., Wood, C. L., Spooner, F., Browder, D., & O'Brien, C. P. (2015). An exploratory study using science eTexts with students with autism spectrum disorder. *Focus on Autism and Other Developmental Disabilities*, 30, 86-99. doi:10.1177/1088357614559214

Kurth, J. A., & Keegan, L. (2014). Development and use of curricular adaptations for students receiving special education services. *Journal of Special Education*, 48, 191-203. doi:10.1177/0022466912464782

Lane, J. D., & Gast, D. (2014). Visual analysis in single case experimental design studies: Brief review and guidelines. *Neuropsychological Rehabilitation*, 24, 445-463. doi:10.1080/09602011.2013.815636

- Lee, S. H., Wehmeyer, M. L., Soukup, J. H., & Palmer, S. B. (2010). Impact of curriculum modifications on access to the general education curriculum for students with disabilities. *Exceptional Children, 76*, 213-233. doi:10.1177/001440291007600205
- McDonnell, J., Johnson, J. W., & McQuivey, C. (2008). *Embedded instruction for students with developmental disabilities in general education classrooms*. Arlington, VA: Council for Exceptional Children, Division on Developmental Disabilities.
- Mims, P. J., Hudson, M. E., & Browder, D. M. (2012). Using read-alouds of grade-level biographies and systematic prompting to promote comprehension for students with moderate and severe developmental disabilities. *Focus on Autism and Other Developmental Disabilities, 27*, 67-80. doi:10.1177/1088357612446859
- Riesen, T., McDonnell, J., Johnson, J. W., Polychronis, S., & Jameson, M. (2003). A comparison of constant time delay and simultaneous prompting within embedded instruction in general education classes with students with moderate to severe disabilities. *Journal of Behavioral Education, 12*, 241-259. doi: 10.1177/0271121408316046
- Ruppar, A. L., Afacan, K., Yang, Y.-L., & Pickett, K. J. (2017). Embedded shared reading to increase literacy in an inclusive english/language arts class: Preliminary efficacy and ecological validity. *Education and Training in Autism and Developmental Disabilities, 52*, 51-63.
- Santoli, S. P., Sachs, J., Romey, E. A., & McClurg, S. (2008). A successful formula for middle school inclusion: Collaboration, time, and administrative support. *RMLE Online: Research in Middle Level Education, 32*, 1-13. doi: 10.1080/19404476.2008.11462055

- Schenning, H., Knight, V., & Spooner, F. (2013). Effects of structured inquiry and graphic organizers on social studies comprehension by students with autism spectrum disorders. *Research in Autism Spectrum Disorders, 7*, 526-540. doi: 10.1016/j.rasd.2012.12.007
- Soukup, J. H., Wehmeyer, M. L., Bashinski, S. M., & Bovaird, J. A. (2007). Classroom variables and access to the general curriculum for students with disabilities. *Exceptional Children, 74*, 101-120. doi:10.1177/001440290707400106
- Spooner, F., Knight, V., Browder, D., Jimenez, B., & DiBiase, W. (2011). Evaluating evidence-based practice in teaching science content to students with severe developmental disabilities. *Research and Practice for Persons with Severe Disabilities, 36*(1-2), 62-75.
- Spooner, F., Knight, V. F., Browder, D., & Smith, B. (2012). Evidence-based practices for teaching academics to students with severe developmental disabilities. *Remedial and Special Education, 33*, 374-387. doi: 10.1177/0741932511421634
- Tarnowski, K. J., & Simonian, S. J. (1992). Assessment treatment acceptance: The abbreviated acceptability rating profile. *Journal of Behavior Therapy and Experimental Psychiatry, 23*, 101-106. doi: 10.1016/0005-7916(92)90007-6
- Trela, K., & Jiminez, B. (2013). From different to differentiated: Using "ecological framework" to support personally relevant access to general curriculum for students with significant intellectual disabilities. *Research and Practice for Persons with Severe Disabilities, 38*, 117-119. doi: 10.2511/027494813807714537
- Watson, S. M. R., Gable, R., & Greenwood, C. R. (2011). Combining ecobehavioral assessment, functional assessment, and response to intervention to promote more effective classroom instruction. *Remedial & Special Education, 32*, 334-344. doi: 10.1177/0741932510362219

Zoom. (2018). *Collaborative web based application for video and web conferencing*. San Jose, CA: Zoom Video Communications, Inc. Retrieved from www.zoom.us

Table 1
Participant Demographic Information

Student Demographic Information										
Pseudonym	Age	Grade	Ethnicity	Gender	Communication Method	% of time in General Education	Self-Care Support Rating	Learning Support Rating	Behavior Support Rating	Communication Support Rating
<i>Isaiah</i>	<i>16</i>	<i>10</i>	<i>Asian - Other</i>	<i>M</i>	<i>Verbal</i>	<i>51</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>3</i>
<i>Vishal</i>	<i>16</i>	<i>11</i>	<i>Asian – Indian</i>	<i>M</i>	<i>Verbal</i>	<i>54</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>4</i>
<i>Li</i>	<i>17</i>	<i>12</i>	<i>Asian – Chinese</i>	<i>M</i>	<i>Picture symbols; voice output device</i>	<i>40</i>	<i>3</i>	<i>4</i>	<i>4</i>	<i>4</i>
Instructor Demographic Information										
Pseudonym	Age	Current Role	Ethnicity	Teaching Certification(s)	Years in Current Role	Highest Degree	Caseload Size	Instructor Preparation for inclusion		
<i>Ms. Denver</i>	<i>36</i>	<i>SPED</i>	<i>White</i>	<i>Mild/Moderate SPED; Severe/Profound SPED</i>	<i>9</i>	<i>B.S.</i>	<i>11</i>	<i>Pre-Service</i>		
<i>Ms. Austin</i>	<i>29</i>	<i>Para</i>	<i>Pacific Islander</i>	<i>None</i>	<i>4</i>	<i>B.A.</i>	<i>9</i>	<i>In-Service</i>		
<i>Ms. Carmel</i>	<i>39</i>	<i>Para</i>	<i>White</i>	<i>None</i>	<i>12</i>	<i>A.A.</i>	<i>10</i>	<i>None</i>		
<i>Mr. Houston</i>	<i>34</i>	<i>GE</i>	<i>Black</i>	<i>Single Subject – Social Studies</i>	<i>9</i>	<i>M.Ed.</i>	<i>128</i>	<i>Master’s degree in multi-cultural education</i>		
<i>Mr. Orlando</i>	<i>56</i>	<i>GE</i>	<i>White</i>	<i>Single Subject – Social Studies</i>	<i>22</i>	<i>B.A.</i>	<i>120</i>	<i>In-Service</i>		

Note. SPED = Special education teacher; GE = General Education teacher; Para = Paraprofessional

Table 2

Student prioritized learning skills

Student	Prioritized Skill 1 (Vocabulary)	Prioritized Skill 2 (Summarization)	Prioritized Skill 3 (Knowledge)
Isaiah	Learn 10 vocabulary words for the unit (discrimination, protest, labor, ally, conflict, segregation, economics, grassroots, social change, patriotism)	Demonstrate understanding of content by correctly answering “who” and “what” questions about content covered in class	Use sentence stems to identify one thing learned that day in class, and one opinion about what was learned.
Vishal	Learn 10 vocabulary words for the unit (liberal, moderate, conservative, democrats, republicans, colonist, constitution, bill of rights)	Write a sentence to identify one thing learned in class that day and one opinion about the topic.	Explain the responsibilities of the President, Vice President, Executive Branch, Legislative Branch, and Judicial Branch.
Li	Learn six vocabulary words for the unit (constitution, conservative, liberal, democrat, republican, supreme court)	Demonstrate understanding of content by correctly answering “who” and “what” questions about content covered in class	Use iPad to construct sentence to demonstrate knowledge of President, Vice President, branches of government (executive, legislative, and judicial) and explain responsibilities of each branch

Table 3
Social validity rating scale scores

School Staff Responses			
Question	Rating		Range
	M		
Students with ASD can learn academic content in the general education classroom	5.75		5-6
This was an acceptable intervention for the student’s learning needs.	5.5		4-6
The intervention was effective in supporting the student’s learning.	5.5		4-6
The student’s learning needs are severe enough to justify the use of this intervention.	5.75		5-6
Overall, the intervention helped the student learn.	5.75		5-6
This intervention would not have bad side effects for the student.	6		N/A
I liked this intervention.	5.75		5-6
Following this experience, I will agree to teach other students with ASD in general education in the future.	6		N/A
I will recommend including students with ASD in general education classrooms to other teachers.	5.75		5-6
The demands on my time related to including students with ASD, as part of this intervention, were reasonable.	5.25		4-6
I have the skills and knowledge to include students with ASD in general education settings	5.75		5-6
I will use adapted materials, including participation plans and curricular modifications, again.	5.67		5-6
The use of adapted formative assessments was accurate and fair for use with students with ASD.	5.67		5-6
Student Responses			
Question	Isaiah	Vishal	Li
What things helped you learn in this class?	Pictures, partners/groups, definitions	Pictures, partners, definitions	Pictures
What things did you like doing in this class?	Presentations (Google slides), activities (dancing)	* The words (definitions [with] pictures) * True/False * Writing (documents)	Videos, news articles
What was your goal for this class?	My goal was to learn about history.	My goal is trying to learn.	Learn new things about civics.
Did you reach your goal?	Yes, I learned about history World War II.	I reached my goal.	Yes.

Note. 1 = Strongly Disagree; 2 = Disagree; 3 = Slightly Disagree; 4 = Slightly Agree; 5 = Agree; 6 = Strongly Agree. All student participant responses are recorded verbatim.

Table 4
Sample participation plan for Li

<p>Student Goal Summary:</p> <ol style="list-style-type: none"> Li will learn six vocabulary words for the unit (constitution, conservative, liberal, democrat, republican, supreme court) Li will demonstrate understanding of content by correctly answering “who” and “what” questions about content covered in class Li will use an iPad to construct sentence to demonstrate knowledge of President, Vice President, branches of government (executive, legislative, and judicial) and explain responsibilities of each branch 					
<i>Schedule of Activities</i>	<i>Skills to Teach (beyond goals)</i>	<i>Natural Teaching Opportunities (of goals)</i>	<i>Embedded Teaching Opportunities (of goals)</i>	<i>Global Supports</i>	<i>Individual Adaptations</i>
Teacher lecture with power point	Note taking Attending to teacher	<u>Goal # 1</u>	<u>Goal # 1</u> – Embed vocabulary words into power point	Power point on screen	1. Visual reminder to look at teacher / screen
Group discussion / Questions	Raise hand to answer a question	<u>Goal# 2, 3</u>	<u>Goal # 3</u>	Teacher questions	1. iPad 2. Visual reminder to listen to peers 3.
Analyze primary sources – may be individual or small group	Communicate with group members	<u>Goal# 2, 3</u>	<u>Goal # 1, 2</u>	Highlighters Primary documents Assignment rubric	1. Supports (peer, visual, script, adult) 2. Graphic organizer 3. Paragraphs numbered (1, 2, 3) 4. Highlight key phrases or sentences in text 5. Adapt questions

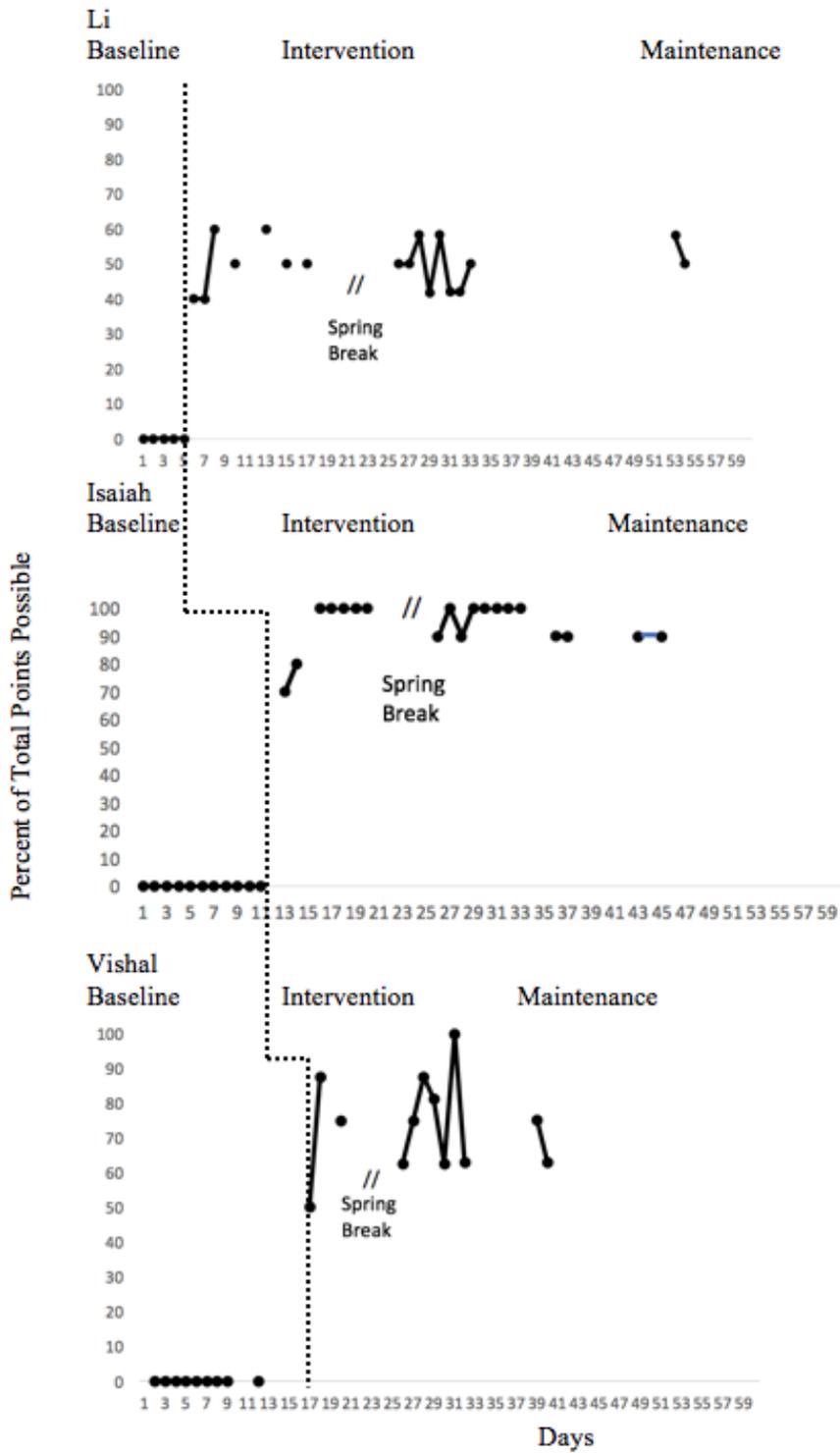


Figure 1. Prioritized skill 1 - Vocabulary.
 Note. Vishal and Li are receiving instruction in Civics; Isaiah’s instruction was in U.S. History.

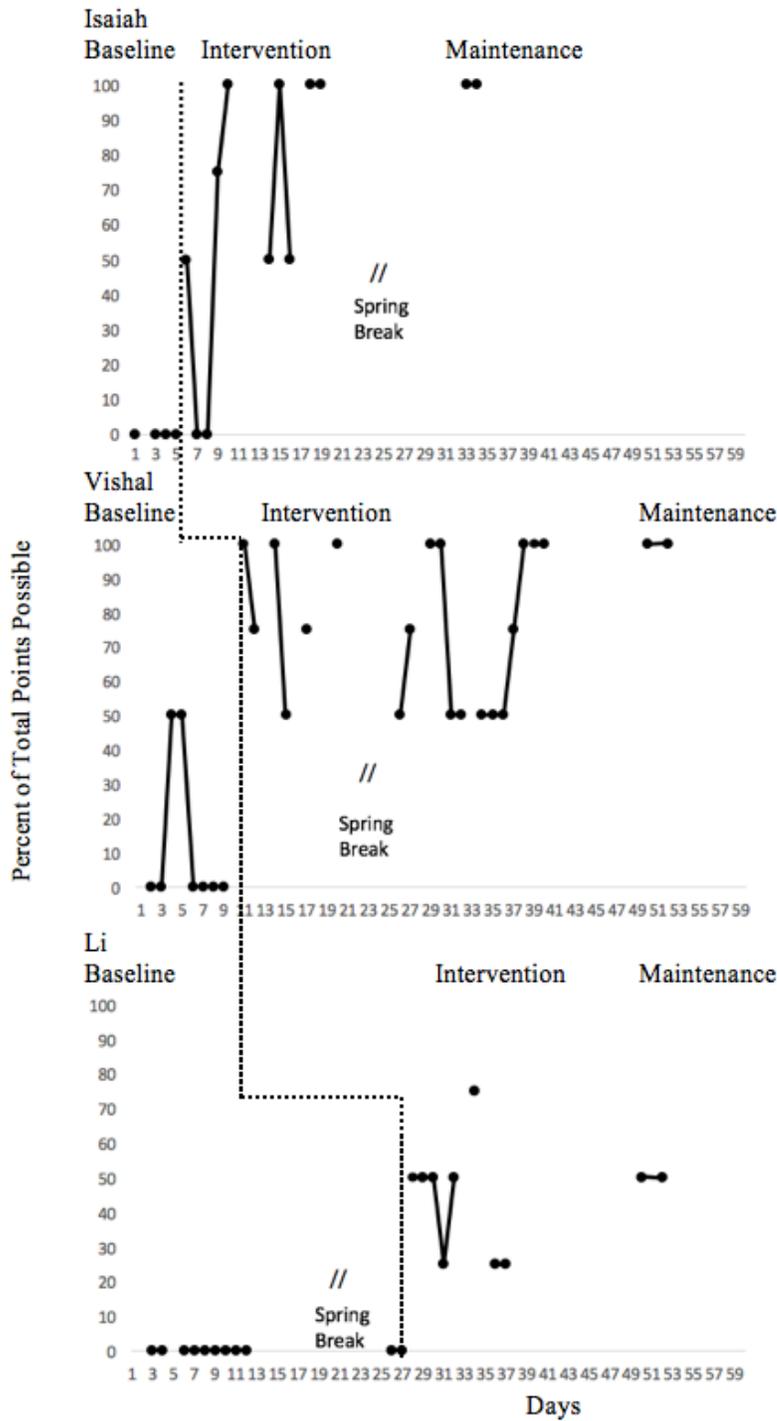


Figure 2. Prioritized skill 2 - Summarization.

Note. Vishal and Li are receiving instruction in Civics; Isaiah’s instruction was in U.S. History.

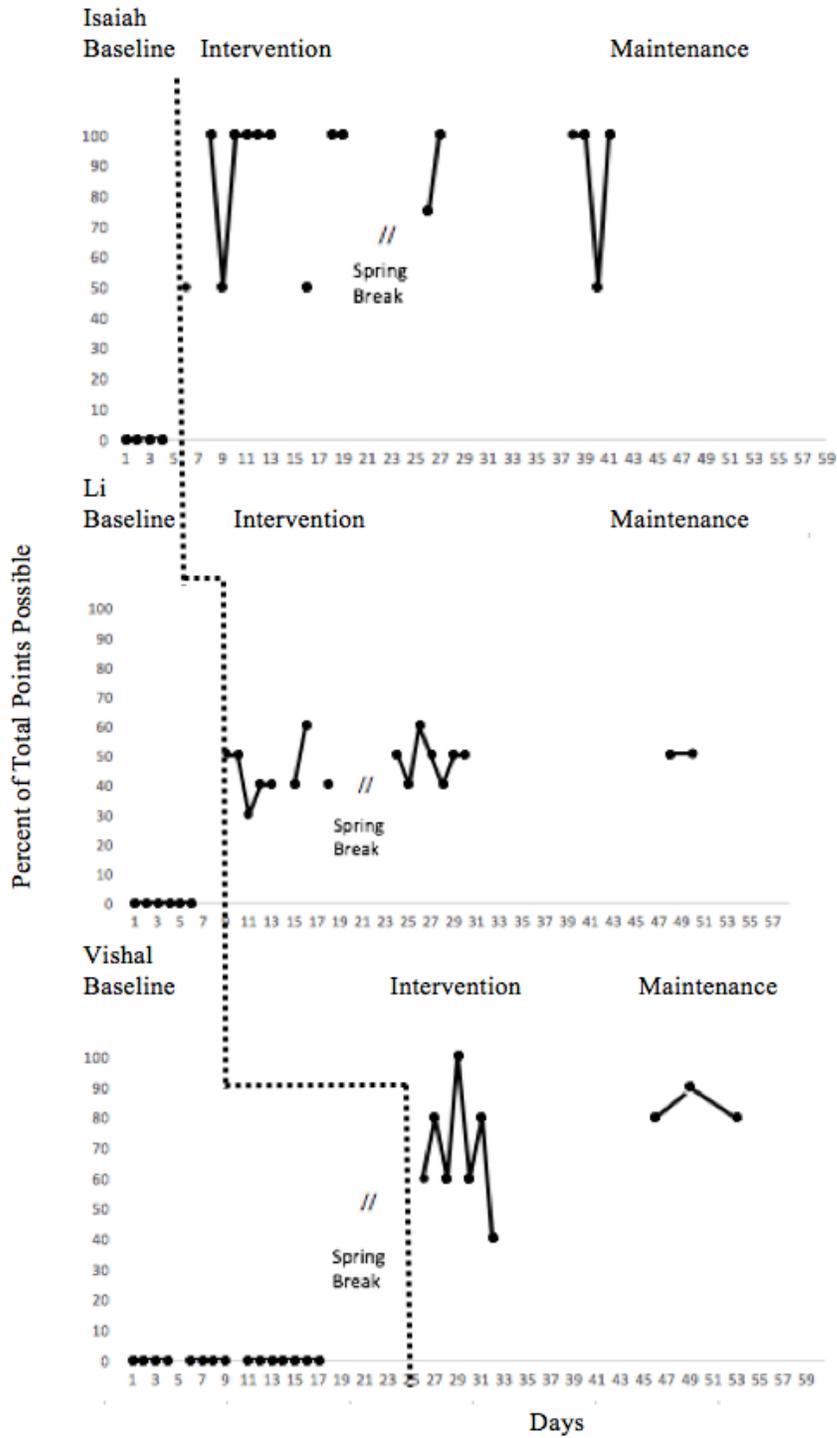


Figure 3. Prioritized skill 3 - Knowledge.
 Note. Vishal and Li are receiving instruction in Civics; Isaiah’s instruction was in U.S. History.