T-CARE

Teachers Connecting to Advance Retention and Empowerment

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CTL@CSUN IS THE RESEARCH AND PROFESSIONAL DEVELOPMENT ARM OF THE MICHAEL D. EISNER COLLEGE OF EDUCATION.

Founded in 2002 through the Eisner Foundation, our mission is to identify, research, and disseminate what really works in education.

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TCARE was first created to support new teachers. A small workgroup at California State University, Northridge (CSUN) got together with the goal of empowering new teachers in order to increase teacher retention, recognizing how many new educators "burn out" in their first five years of teaching. The result of their collaboration was the TCARE newsletter. TCARE stands for *Teachers Connecting to Advance Retention and Empowerment*. Over time, the newsletter grew from a local hard-copy product that went to CSUN students only, to the peer-reviewed international digital newsletter you are reading today. The focus remains however: How can we help educators avoid burnout while we advance retention and empowerment? Our piece of the puzzle are these short, informal, concrete and practical articles that offer a "shot in the arm" motivation for teachers.

While our authors are encouraged to write brief, focused articles that appeal to busy educators, we also emphasize that they are research-based. We don't need tons of citations, but we do want to make sure the articles are more than just fun tips or cutesy ideas. For this theme, we encouraged writers to consider linking their topics to the high-leverage practices (HLPs). Not sure what HLPs are? You can certainly google them or go to www.highleveragepractices.org. You can read about the 19 general education HLPs through TeachingWorks or the 22 special education HLPs through CEEDAR. I may be a tad biased (or, ok, a lot biased) but I also recommend the new 2023 book out of Corwin Press, *Connecting High-Leverage Practices to Student Success: Collaboration in Inclusive Classrooms*, by Jenkins and Murawski.

HLPs are evidence-based instructional approaches that make the most impact on learners and are practices that every educator should know and do. It does not matter if you are a general education Kindergarten teacher, a middle school special education teacher, or a high school Physics teacher; all teachers need to have competency in the HLPs. These practices are foundational to effective instruction, help teachers manage behavior, and support the successful implementation of adaptations and specially designed instruction.

As you read the articles in this issue of TCARE, please think about going deeper on your own with the HLPs. Work with a colleague to identify your own strengths and areas of need. Identify a few practices you can work on to improve as you demonstrate through your actions that you are a life-long learner. Above all, recognize that collaboration is an HLP for a reason. Reach out and build your own tribe to help you stay motivated, energized, and excited about your teaching profession. The students need that and you deserve that.

Stay positive.

Wendy W. Murawski, Ph.D.
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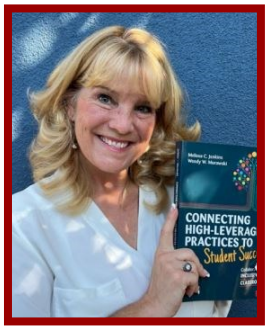

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What Really Works

High Leverage Practices and Foundational Literacy Skills Instruction

A tremendous amount of attention over the past few years has been devoted toward the national literacy crisis, fueled by underwhelming fourth-grade literacy scores (USDOE, 2022), a resurrection of the literacy wars, increased attention and awareness amongst parents and family advocates, and barriers preventing effective literacy instruction during the virtual era of the COVID-19 pandemic. Educators and school districts across the country are working feverishly to make up for the lack of effective literacy instruction that has plagued most school districts, both prior to, and during the crisis caused by the Corona virus. Educators are in consensus that to combat the many social justice issues that intertwine themselves with illiteracy, they must begin to integrate research-based practices for literacy instruction, utilizing a vast body of interdisciplinary research known as *The Science of Reading.*

While most educators agree that one of the pillars of the *Science of Reading* is effective instruction in foundational skills (phonological awareness, phonics, and fluency), there is less clarity around how to best teach these crucial foundational skills in the classroom.

High leverage practices (HLPs) can provide a starting spot for many educators looking for answers about how to best teach foundational skills. Although originally designed for special education teachers and teacher candidates (McLeskey & Brownwell, 2015), the HLPs, specifically those focused on the area of instruction, can provide a curricular agnostic starting point for all teachers looking to effectively teach important foundational literacy skills. Here are a few examples:

HLP 12: Systematically design instruction toward a specific learning goal.

Teachers should ensure that their foundational skills instruction, specifically in phonics, has a well-designed scope and sequence. When designing, or reviewing a curriculum's scope and sequence, educators should first start at the end, making sure that the end goals of the scope and sequence align with the grade-level standards for phonics. Next, educators should ensure that the phonics scope and sequence builds strategically, starting with easier phonics skills, (i.e., short vowel sounds, CVC words) and progressively develops into more challenging phonics skills (i.e., r-controlled vowels, silent letters). Finally, educators should ensure that there are cumulative review and assessment opportunities embedded within the scope and sequence.

HLP 13: Adapt curriculum tasks and materials for specific learning goals.

Change the typical classroom "word wall" into a "sound wall." Instead of placing vocabulary and other words on a wall in the classroom sorted by initial letter, teachers should consider sorting words on the word wall by common sounds, (the long /i/ sound section: eye, my, why, etc.) Words that are placed on the sound wall should align with the scope and sequence, and specific sounds on the sound wall should be rotated as the scope and sequence progress throughout the year.

HLP 18: Use strategies to promote active student engagement.

Multi-sensory foundational skills instruction promotes active student engagement by involving more than one of the five senses. Using movement and motion in the classroom with phonics songs, rhymes, and games will increase student engagement, and build student proficiency with foundational skills at the same time. Elkonin boxes, and using manipulatives during blending, segmenting, and decoding, are other multisensory phonics strategies that work well.

Remember that HLPs are not based on a specific curriculum or publishing company, nor are they directly associated with a specific school of thinking regarding literacy instruction (i.e., whole language, structured literacy). By utilizing these high leverage practices in your classroom, you will build student proficiency in essential foundational literacy skills and do your part to combat the tremendous number of injustices related to illiteracy!

McLeskey, J., & Brownell, M. (2015). High leverage practices and teacher preparation in special education. Gainesville, FL: CEEDAR Center. Retrieved from http://ceedar.education.ufl.edu/wpcontent/uploads/2016/05/High Leverage-Practices-and-Teacher-Preparation-in-Special-Education.pdf

U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2022 Reading Assessment.

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What Really Works

Flipping the Classroom as an Inclusive practice

The Power of "I Do, We Do, You Do"

Educators often rely on the familiar "I do, we do, you do" pattern of explicit instruction. This pattern involves teachers demonstrating a task or concept ("I do"), explaining it thoroughly and working it through with the class ("we do"), followed by having the students practice independently (the "you do" phase). Why? Because it works. It also reduces task anxiety and boosts learners' self-efficacy. However, the "you do" phase, where students practice independently, often needs more time and guidance – especially for students with disabilities. This is where flipping the classroom comes in handy.

Flipping the Classroom: What's up (side down)?

Flipping the classroom is a teaching strategy that flips the traditional learning model. Instead of spending class time on lectures, students gain knowledge (the first level in Bloom's Taxonomy) outside of class through video lessons. When they come to class, they engage in the more challenging work of knowledge assimilation through activities, problem-solving, debates, and more (ASCD, 2013). The flipped approach typically includes students watching video mini-lessons, reading, completing graphic organizers, and engaging in various preparatory activities before coming to class (Flipped Classroom Network, 2012).

Why Should We Flip?

Most learning doesn't occur during a lecture (Sousa, 2011); it happens when students actively practice or teach others. The flipped approach aligns well with the theory of constructivism, which suggests that we construct our understanding based on experiences (Hein, 1991). Flipping the classroom aims to foster more profound, applicable learning, and a flipped classroom provides the space for this active engagement. It may not always resemble traditional schooling; it can feel dynamic, even slightly disorganized, as students explore and work through challenges.

Before Class: students take charge of their learning journey by:

1. Watching teacher-created presentations, podcasts, or videos.
2. Completing graphic organizers, outlines, or questions.
3. Participating in online discussions.

Activities may vary based on individual strengths, needs, interests, and content.

In Class: students actively apply their pre-class knowledge through:

-Cooperative learning activities.

-Case scenarios.

-Developing student plans.

-Engaging in class discussions.

-Delving into synthesis assignments.

The teacher may kick off with a brief "mini-lecture"(5-10 minutes) to set the stage and then pose a "big picture question" for class discussion and application. Students can work in small groups to synthesize their learning. Students with disabilities benefit immensely from a tailored and supportive learning environment. A flipped classroom offers multiple opportunities to provide scaffolding, that extra structure and support they may require to grasp concepts effectively. The cooperative and small group instruction opportunities also allow educators to address individual needs more closely, providing specialized guidance and fostering a sense of inclusivity. Because of the supervised practice opportunities in the flipped classroom, students with disabilities can get the frequent feedback they need to track their progress, identify areas of improvement, and build confidence in their abilities. By flipping the classroom, we can create an inclusive and empowering educational experience that enables students with disabilities to thrive academically and personally. Incorporating flipped learning can be a game-changer. It's a step toward creating a more interactive and engaging learning environment while having additional opportunities to build in support for students with disabilities.

ASCD (2013) Evidence on flipped classrooms is coming. Retrieved from http://www.ascd.org/publications/educational-leadership/mar13/vol70/num06/Evidence-on-Flipped-Classrooms-Is-Still-Coming-In.aspx

Hein, G. E. (1991). Constructivist learning theory. Institute for Inquiry. Retrieved from http://www.exploratorium.edu/ifi/resources/constructivistlearning.html

Sousa, D. A. (2011). *How the brain learns*. Corwin Press.

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Formative Assessments and Progressive Monitoring:

The Dynamic Duo

In Special Education, High-leverage Practices (HLP) include specific assessment strategies designed to bolster student success (McLeskey et al., 2017). Using data to inform teaching decisions is especially important when working with students with disabilities. There are two ways to gather this critical information: formative assessment and progress monitoring. When general and special educators join forces to use these methods, they can create personalized instruction that matches the needs of each student. This collaboration helps facilitate student success.

Formative assessment is an ongoing activity that occurs during instruction as students are learning. It offers teachers and students feedback to bridge the gap between what's known and the goals to be reached (Heritage, 2012). Teachers can use games, quick writes, observations, class discussions, and peer feedback to gather information about student learning. Educators then use the data collected to make instant changes to their teaching methods to ensure students stay on track to meet their learning goals.

Progress monitoring, on the other hand, helps track students' growth and development over time. Unlike formative assessment, progress monitoring involves more structured assessments in line with the curriculum. Its use helps track whether students are making progress toward their specific learning goals. These assessments are done regularly, often weekly, to get a bigger picture of students' progress. The data are graphed, making it easier to spot trends and change instruction, curriculum, or interventions (National Center on Response to Intervention, 2013).

Both of these processes require attention and communication between teachers. So, how can general and special education teachers work together to make the most of formative assessments and progress monitoring for their students?

1. Understand Student Needs Together:

- General Education Teacher: Share insights about the subject and curriculum goals.
- Special Education Teacher: Offer insights into the specific needs of students with disabilities.
- Collaboration: Meet regularly to discuss students' profiles, IEPs, and any changes needed to make the curriculum accessible.

2. Plan Formative Assessments as a Team:

- General Education Teacher: Provide an overview of the subject and curriculum plan.
- Special Education Teacher: Bring strategies that work with students with diverse learning needs.
- Collaboration: Work together to plan formative assessments that match the needs of all students with the context of the general education class. Agree on different ways to assess or adapt assessments if necessary.

3. Collect and Analyze Data Together:

- General Education Teacher: Conduct formative assessments with the whole class.
- Special Education Teacher: Collect progress monitoring data on students with targeted needs.
- Collaboration: Look at the data collected from formative assessments and progress monitoring, including observations of student work, and make adjustments to instruction as necessary.

4. Use Data to Make Decisions:

- Collaboration: Meet regularly to share student data and teaching strategies and make joint decisions about changes to assessment and instruction.

When general and special education teachers collaborate using formative assessment and progress monitoring, students benefit. The learning environment becomes more inclusive, equitable, and supportive, helping all students achieve their full potential.

Heritage, M. (2012, June 21). *Formative assessment and common core state standards*. WestEd. https://www.wested.org/resources/effective-formative-assessment/

McLeskey, J., Barringer, M-D., Billingsley, B., Brownell, M., Jackson, D., Kennedy, M., Lewis, T., Maheady, L., Rodriguez, J., Scheeler, M. C., Winn, J., & Ziegler, D. (2017, January). *High-leverage practices in special education*. Arlington, VA: Council for Exceptional Children & CEEDAR Center.

National Center on Response to Intervention (January 2013). *Progress Monitoring Brief #1 Common Progress Monitoring Omissions: Planning and Practice.* Washington, DC: U.S. Department of Education, Office of Special Education Programs, National Center on Response to Intervention.

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Collaborating with Educational Professionals: The TAG Framework

"It takes a village" is a phrase often heard in education, referencing the idea that a strong support system is necessary for a student's learning and development. Jenkins and Murawski (2024) affirm that collaboration is essential to creating a network to connect traditional academic skills and social emotional learning, and in doing so we allow our students to find deeper and greater success. Collaboration between teachers and other educational professionals (e.g., therapists, counselors, coaches, etc) fosters overall growth in students, while serving as a form of on-the-job training that elevates teachers' competencies in differentiating instruction (Mofield, 2020). Despite the positive outcomes associated with interdisciplinary collaboration, these relationships are difficult to establish and maintain, especially with professionals, both inside and outside of schools.

Mofield (2020) states that lack of time and structure are common barriers associated with collaboration; in fact, teachers reported "not having enough time to meet and collaborate" as a barrier (p.25). Additionally, a teacher's limited knowledge of other professionals' scope of practice resulted in conflicting assumptions and a lack of understanding about each other's roles and responsibilities. This deficit hinders effective collaborations as teachers may not fully understand the expertise and contributions of the other educational professionals (e.g., Educational Therapists, Marriage and Family Therapists, Speech and Language Pathologists). Leaning into collaboration with other educational professionals is not only an effective way to support students, but an opportunity to relieve some of the stress traditionally placed on teachers to foster student success independently.

The ***TAG*** framework is designed to structure and support collaboration among educational professionals, a high-leverage practice. It provides a mnemonic device to remember the key elements of effective collaboration: **Traits, Applications, and Goals**. The underlying goal of the organizer is to address three common barriers that often preclude educators from collaborating: knowledge, intention, and time constraints.

(1) The first step in completing the graphic organizer is to understand the *traits or characteristics* of the educational professional involved. By solidifying a well-defined characterization of the professional, educators gain clarity on the scope of practice, which allows them to engage in meaningful and intentional conversations with their colleagues. This understanding serves as the foundation for effective collaboration.

(2) The second step, *application*, allows teachers to understand the intentionality of the work these professionals are doing with their students and how the skills gained can optimize their success in the classroom. Once a teacher understands the traits and has a deeper understanding of how the developed skills can be applied in the classroom, they can begin (3) the final step, *goals for collaboration* (short term, long term) and specific timelines. The intensity and frequency of the collaboration should be highly individualized (i.e., some students may be more impacted and require ongoing discussions). The final step ensures that the collaboration is organized and intentional, allowing educators to work in meaningful ways towards a common objective.

Teachers need support. Parents need support. Students need support. Educational professionals collaborating effectively can be instrumental in meeting the varied needs of diverse learners and the ***TAG*** framework provides a structural framework from which to do so. Scan the QR code below to access examples of the ***TAG*** framework, along with a blank template to aid in your collaborative work.

Jenkins, M., & Murawski, W. W. (2024). *Connecting High-Leverage Practices to Student Success: Collaboration in Inclusive Classrooms*. Thousand Oaks, CA: Corwin.

Mofield, E. L. (2020). Benefits and barriers to collaboration and co-teaching: Examining perspectives of gifted education teachers and general education teachers. *Gifted Child Today*, *43*(1), 20-33.

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What Really Works

Developing IEP Goals for Inclusive Settings

All students with disabilities (SWD) are entitled to "full educational opportunity" (IDEA, 2004). This *full opportunity* is assured through a student's individual education program (IEP) (Rodriguez & Murawski, 2022). This article will give you three steps to follow to ensure you have compliant and meaningful IEP goals for inclusive settings. Therefore: *Given this article, special educators will consistently write compliant IEP goals with 100% accuracy.*

Step 1: Determine the baseline. The baseline is the starting point and a reflection of assessment data. These can be curriculum-based measurements (CBM), student work samples, observations from the classroom, or rubrics created from grade level standards. There are multiple ways to gather data, just be sure to document the source in the present level section of the IEP (Rodriguez & Murawski, 2022). Let's look at two examples:

Elementary:

Paula is a 3rd grader with needs in reading. Grade level CBM data indicates Paula reads 40 words correctly (40 wpm) with 70% accuracy. This means she attempted 57 words with 17 mistakes.

Secondary:

Rafael is a 6th grader with needs in written language. On a persuasive essay, Rafael scored 4/24 points on a grade level writing rubric.

In both examples you know what the student can do in relation to the grade level expectations. These examples also provide a means to collect progress monitoring data, allowing you to reflect on both student growth and instructional practices.

Step 2 : Reflect on grade level standards and expectations. To calculate a meaningful goal, you need to understand a) grade level expectations and typical growth rates, and b) the student's current growth rate. Work with general education teachers to review standards and typical grade level growth rates. Using the examples above, you may learn that: a) typical 3rd graders read approximately 100 wpm with 95% accuracy with a growth week of 1 word/week, and b) typical 6th graders score an average of 13/24 points, with a goal of 18 or higher by the end of the year. Now you can review and compare the SWD's record of growth. This is another reason that data collection is ongoing. Based on this comparison, you are ready for the next step.

Step 3 : Calculate meaningful goals. Use a) current baseline data, b) grade level expectations, and c) the SWD current growth rate to calculate rigorous but obtainable goals.

Elementary:

Typical growth rate for a 3rd grader is 1 word/week. Paula is currently improving at 0.68 word/week. You will intensify her instruction and project Paula will improve by .85 words/ week. Do the math: a school year is 36 weeks, 0.85 X 36 ≅ 30 words. Her baseline is 40 wpm, 40+30=70. IEP goal: *Given a 3rd grade level CBM reading passage, Paula will read 70 wpm with greater than 90% accuracy.*

Secondary:

Typical 6th graders scored 13/24 on a rubric based on the grade level standard. Rafael scored 4/24. The grade level expectation of 18/24 is unrealistic for Rafael, but with intensive interventions he can increase more than 5 points. You project an 8-point growth, 4+8=12. New IEP goal: *Given a persuasive writing prompt, Rafael will score at least 12/24 on a standards-based rubric*.

Taken together, these three steps will help you develop rigorous, obtainable, and easy to monitor, and compliant IEP goals for inclusive classrooms. For more information, check out *Pursuing academic and functional advancement: Goals, services, and measuring progress* by Goran and colleagues in the May/June 2020 issue of *TEACHING Exceptional Children*.

Individuals With Disabilities Education Act, 20 U.S.C. §§ 1400 et seq. (2006 & Supp. V. 2011).

Goran, L., Harkins Monaco, E. A., Yell, M. L., Shriner, J., & Bateman, D. (2020). Pursuing academic and functional advancement: Goals, services, and measuring progress. *TEACHING Exceptional Children*, *52*(5), 333-343.

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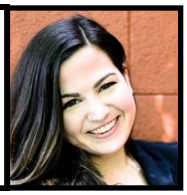

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What Really Works

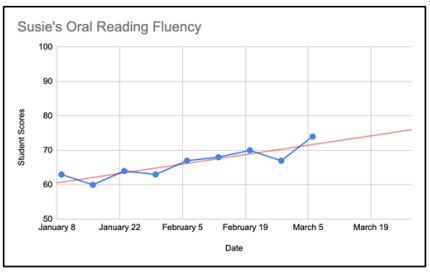
Drowning in data? Here is your lifeboat!

As noted in the CEC High Leverage Practices in Assessment, it is vital that all teachers collect and analyze data for students to "...receive equitable educational opportunities…" and make adequate progress (Kuntz et al., 2023, p.80). However, there are many barriers that prevent teachers from successfully using student data to make decisions. A lack of understanding of the purpose of, and process for, analyzing data can lead to teachers feeling that data collection is a waste of time. These sentiments were shared by a teacher in a recent online discussion: "DATA- I'm sick of it. We spend so much time collecting recording and 'analyzing' data but nothing we 'do' with it gets any better results than if we all just had some free planning time" (JA, 2023). This quote conveys the real sense of despair teachers can feel when they spend time collecting data without knowing how to utilize it to make informed decisions.

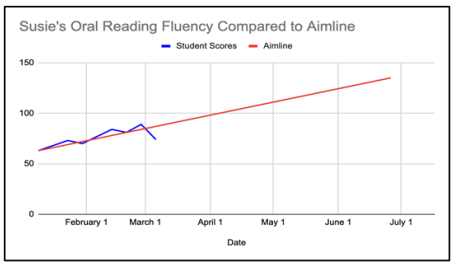
To assist teachers in making accurate decisions about student progress, teachers need support around graphing. Training should include a focus on visual analysis, such as using trendlines, as teachers who use trendlines to analyze data are more likely to make correct instructional decisions (Kuntz et al., 2023). Understanding visual analysis allows teachers to feel more confident in making data-based decisions and recommendations.

Options for Visual Analysis

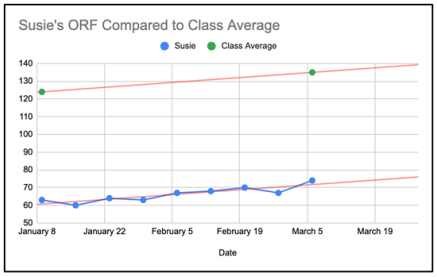
Teachers can use Excel or Google Sheets to create a graph by entering each data point by date. Once the student's data is graphed, it's simple to add a **trendline**. A trendline will show the teacher the student's "overall" progress and the predicted trajectory to determine if the current intervention is working.



Teachers also have the option to create an **aimline**, which graphs the student's baseline performance and end goal on top of the student's performance data. To analyze the data and aimline, teachers can use decision rules (e.g., 3 consecutive points below the aimline means the intervention is not working) to determine if the student is making sufficient progress, though this is not as accurate a visual analysis using a trendline.



Teachers can also graph the class average along with the student's data in order to see just how far behind the student is compared to their peers, and if they are closing the gap between their performance and that of their peers.



Want a step-by-step guide to creating graphs with these tools? Using an AI tool called Scribe, we created a step-by-step guide to show teachers how to do this on Google Sheets! Access the guide here: https://education.wm.edu/centers/ttac/resources/focusarea/dataanalysis/graphingstudentdata.pdf

JA (2023, September 8). DATA- I'm sick of it. We spend so much time collecting recording and 'analyzing' data [Comment on the article "10 things teachers do every day that are a complete waste of time"]. *WeAreTeachers*. https://weareteachers.com

Kuntz, E.M., Massey, C.C., Peltier, C., Barczak, M., & Crowso, H.M. (2023). Graph manipulation and the impact on pre-service teachers' accuracy in evaluating progress monitoring data. *Teacher Education and Special Education, 46*(1), 65-82.

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What Really Works

Collaborating for Access Through Ecological Assessment

Great teachers continually reflect on the match or mismatch between their classroom environment, instruction, and their students' unique support needs. The Ecological Inventory (EI) (Brown et al., 1979; Ruppar & Kurth, 2023) can be a helpful tool for general and special education teachers to observe, analyze, and address any mismatches that occur. Using this observational tool, teachers can increase the accessibility of instruction for all students in inclusive classes. The EI form has seven components and is completed while observing a classroom. The first three areas identify the *demands* of the general education environment for all students. The final four areas build on the first three areas as they identify *supports and instruction* that are needed for the focus student.

Here are the steps to complete an EI:

Conduct an Analysis of the Environment

1. List the steps in the activity: Observe and record what students are doing for one class session. Chunk each section of the class in a separate row (e.g., getting ready for class, whole group instruction, independent work).

2. Cues: Record the natural cues in the environment that support students to complete the task. These are things that students see, hear, feel, or otherwise sense. Identifying the cues that students without disabilities use in an environment can help a teacher decide how to teach participation and independence in the environment by drawing student attention to natural cues.

3. Skills needed: Record all skills needed for students to succeed in the observed tasks. Think deeply about each task and the individual skills it requires. For example, writing the date on a paper requires fine motor skills, comprehension of calendar and date structure, and number identification skills.

Conduct an Analysis of the Student

4. Student Performance: This column is intended for the observer to identify any mismatch between individual student skills and the environment. Record what the student does during the observed time and whether they complete the steps described in # 1 (List the steps in the activity).

5. Discrepancy Analysis: Think about the mismatch between the student skills or capacities and the environment in this column. Why do you think they responded to the situation or task in that way they did? For example, if a student does not write something, it may be due to fine motor delays, limited comprehension, motivation, or many other factors. Consider all factors in your analysis. Discuss these with your co-teacher!

6. Intervention Plan/Skills to Teach: Using your analysis from #5 (discrepancy analysis), identify the individual or class wide supports that may help the student better access instruction or physical environment (Universal Design for Learning, udlguidelines.cast.org) (CAST, 2018). These may include: *physical and accessibility supports* (e.g., adapted equipment such as seating or writing utensils, larger text to support vision, amplification to support hearing); *instructional supports* (e.g., curricular modifications that reduce complexity or provide comprehension supports such as images, access to read-aloud, graphic organizers); *behavior supports* (e.g., token economy system, increased access to reinforcement); *social-communication supports* (access to communication devices, peer support); and *collaborative supports* (e.g., increased adult assistance, staff training in communication supports).

7. Action Plan: The action plan should describe who, how, and when team members will deliver the supports and services described in #6 (Intervention plan).

Type in the link to download the form!

https://tinyurl.com/EcoInvent

Brown, L., Branston, M. B., Hamre-Nietupski, S., Pumpian, I., Certo, N., & Gruenewald, L. (1979). A strategy for developing chronological-age-appropriate and functional curricular content for severely handicapped adolescents and young adults. *The Journal of Special Education*, *13*(1), 81-90.

CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from http://udlguidelines.cast.org

Ruppar, A. L., & Kurth, J. A. (2023) Discussing data and making decisions. In Ruppar, A. L. & Kurth, J. A. (Eds), *Equitable and Inclusive IEPs for Students with Complex Support Needs.* Brooks Publishing.

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Mathematical Routines to Support Inclusion

To begin thinking about inclusion in the mathematics classroom, consider the *Principles to Actions: Ensuring Mathematical Success for All* (2014) from the National Council of Teachers of Mathematics (NCTM). Effective practices from NCTM include mathematical discourse, connecting representations, productive struggle, implementing tasks that promote reasoning and problem solving, and getting at student thinking. These practices support the use of mathematical routines with varied access points to support and engage all learners at their appropriate level. When students experience success in the math classroom, not only do they feel belonging, but their math identity, or ability to see themselves as a math learner, is supported. The following routines offer examples that can be implemented in the inclusive classroom.

On his website talkingmathwithkids.com, Christopher Danielson describes supportive routines that allow students to visually look at images to describe what they see and explain relationships within the images. In *How Many and How Do You Know?,* students look at an image and describe how many of something they see. One student may simply identify the number of something within the image, while another student may begin to see fractional relationships, multiplication problems, or patterns within the image. As students share and explain, the level of engagement increases and additional connections are made. This routine allows for all students to engage with the problem at an appropriate skill level. With the routine *Which One Doesn't Belong?*, students look at a collection of four images and determine why one image doesn't belong with the other three. These images are intentionally selected and combined to ensure there is no single correct answer. The value of this routine comes in students justifying their choice by explaining their thinking; these strong practices support mathematical problem solving.

Another inclusive mathematics routine is *Would You Rather… Why?*. In this routine, students are given two options and they select which they prefer with a justification of their thinking. One example is to choose between eight quarters or two one-dollar bills. Although each is viable, real mathematical thinking is demonstrated in the justification of their choice. Teachers are encouraged to ask follow up questions, bring in mathematical vocabulary, and help make connections across student explanations. In addition, answers may also be turned into a visual or physical graph to represent classroom data.

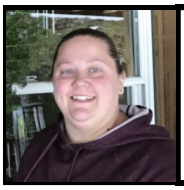
Number talks are short mental exercises aimed at having students talk about a problem and identify how many ways they may solve that problem. Students might use subitizing dot cards, solve a computation problem, or create a target number from a variety of digits. It is important that there are multiple ways in which a problem may be solved, so as a student shares out solution strategies or thinking, authentic connections can be made. During a number talk, a student may use hand signals to indicate their readiness and how many different strategies they have discovered. The teacher can then structure the share out to maximize participation opportunities.

Creating an inclusive classroom community with purposefully designed tasks that are universally accessible allows the teacher to create a single instructional plan, rather than having to plan separately for individual students. Each student feels supported and successful, building their own identity as math learners. Imagine living in a world where everyone sees themselves as a math person and is celebrated for what they bring to the math community.

Resources and Routines to Support and Inclusive Math Classroom:

How Many? and Christopher Danielson
https://talkingmathwithkids.com/
Which One Doesn't Belong?
https://wodb.ca/
Would You Rather Math…
https://www.wouldyourathermath.com/
Esti-Mysteries & Splat!
https://stevewyborney.com/

National Council of Teachers of Mathematics. *Principles to Actions. Ensuring mathematical success for all*. NCTM.



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Using Think - Write - Pair- Share for Student Engagement

Cooperative learning has become part of common teacher lingo, yet many do not realize the value the strategies can bring to enhance student learning. First introduced by Kagan (1989) and Johnson and Johnson (1991), cooperative learning provides a structural approach to group work. A key to successful practice is executing the chosen cooperative learning strategy with fidelity. Fidelity means implementation of the strategy the way the original research study intended. Let's consider a common cooperative learning strategy originally developed to enhance "wait time" and encourage classroom participation: the Think-Write-Pair-Share strategy.

THINK - Students are given quiet time to THINK about a response to a question presented by the teacher or peer. The teacher asks the students in the room to remain completely quiet for a specified period of time (e.g., one minute). This allows everyone time to process, ponder, and formulate a response. Providing "think time" increases the quality of student response and gives students time to reflect. This is particularly important for students with executive functioning or learning disabilities. The depth of knowledge in the response is typically expanded by this step because of the time to simply think.

WRITE – Students WRITE the answer to the question independently. The teacher again requests the room remain quiet while everyone writes their response to the original question. When students have time to write down their thoughts, it helps store ideas in long term memory for later retrieval. This is an important step for students who have memory or processing challenges. Additionally, the WRITE component provides for accountability. This helps avoid situations where students merely agree without actually doing any of their own thinking. During the WRITE component, everyone is accountable for their own ideas. If writing is a challenge, students may DRAW to conceptualize their ideas.

PAIR – Students are cued to PAIR with a neighbor and discuss their responses. Each partner is asked to share the response they wrote down, discussing similarities and differences. The pairs are encouraged to justify their responses using appropriate language. Teachers should consider how students are paired, linking each to someone close to their ability level. It is easy to partner students by numbering off 1's and 2's. Tell the 1's to speak first and 2's to listen first. Designate an appropriate time frame for their responses. For example, "1's- you have three minutes to share your answers with your partners, then 2's, it will be your turn."

SHARE – After reflecting with their partner, students are encouraged to SHARE with the class. For example, "My partner suggested…. My partner and I agreed…." Ask students not to use the name of their partner. The focus should be on the content, not who said it. Sharing with the whole class enables students to make connections, validate their responses, and broaden their views.

In using the Think-Write-Pair-Share strategy, teachers become facilitators of student learning instead of merely giving answers. During the partner talk, walk around the room and listen in to the conversation, but avoid joining in! This is also a great time for formative assessment. Formative assessment is real time assessment and will allow you to learn what students know, need to know, and have misunderstood. This information also enables you to adjust your instruction and even differentiate as needed. Research based practices help leverage student learning. Using practices such as Think-Write-Pair-Share encourages student engagement and helps the inclusive school to thrive (Karge, 2023).

Additional Resources

www.kaganonline.com

https://systemimprovement.org/uploads/files/CEC-HLP-Web.pdf

www.highleveragepractices.org

Kagan, S. (1989). *The structural approach to cooperative learning*, Educational Leadership, Vol.47(4), 13-15.

Karge, B. D. (2023). *Watch, listen, ask, learn: How school leaders can create an inclusive environment for students with disabilities.* Solution Tree.

Johnson, D. W., & Johnson, F. P. (2009). *Joining together: Group theory and group skills*.(10th ed.) Prentice-Hall, Inc.

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Subs are Superheroes:

Strategies to Help Them Have a Great Day (*and* Want to Come Back!)

Substitute teachers (subs) are a vital part of schools. Schools scramble to ensure adequate adult supervision when subs are unavailable (which appears to be happening increasingly). However, students need to *learn*, and not only be supervised, when a sub takes over their classroom for the day. Most subs are not fully trained teachers. How can you help ensure your sub is prepared to take over for the day? This article provides you with some strategies.

First, establish a strong classroom climate. Subs report that classroom management is one of their biggest issues (Duggleby & Badali, 2007). Help the sub by challenging your class to follow the rules. Leave directions for the sub to provide a novel reinforcer if the class has a good day/class period. It could be a game (make sure to leave directions), a special treat (that you provide), or a privilege they don't typically get when you are present. You can offer a reinforcer upon your return if the sub reports they had a good day. This "double reward" may motivate students to "stay calm and carry on."

Many students struggle with exhibiting appropriate behavior when routines are disrupted. There may be no bigger disruption than for their teacher to be absent. Here are some strategies to share with your subs to help them and your students have a successful day!

- ✓ *DO give short, succinct directions.* Use First/Then statements, such as "First complete the task, then you can have 10 min of free time."
- ✓ *DO provide frequent, specific praise.* Focus on desired behaviors as opposed to negative ones. Praise the behaviors as soon as you see them.
- ✓ *DO implement the Behavior Intervention Plan (BIP) with fidelity.* If a student has a BIP, be sure to familiarize yourself with it. Ask other adults in the room if needed. Remind the student of their goals, ask how they will meet their goals, and encourage them.
- ✓ *DON'T get into power struggles*. This escalates the situation. Calmly acknowledge the student's current emotional state, succinctly say what is needed, provide options for regulating emotions, and give time for the student to regain control.
- ✓ *DON'T talk too much.* No one wants to sound like Charlie Brown's teacher. Simply state the directions and give a bit of wait time for the students to comply or ask questions.
- ✓ *DON'T threaten.* This is sure to escalate the situation. State a simple consequence you know you can follow through with. (Teachers should provide the sub with options).

While some students may exhibit behavioral needs, others may experience academic challenges with their teacher absent. Help your sub know how to support students with these tips:

- ✓ *DO recognize some misbehaviors are due to academic frustrations.* The academic need may require addressing rather than the misbehavior. Plan to support students by restating directions, reintroducing concepts in a different way, prompting students to use their notes, or providing a task analysis or cue card.
- ✓ *DO follow a sequence of "I do it, we do it, you do it" to help with understanding.*
- ✓ *DO chunk tasks into smaller parts and frequently check in with students to provide feedback.*
- ✓ *DO guide them as opposed to doing the work for them.*
- ✓ *DO offer supportive guidance, instead of offering unhelpful statements, such as, "Just do it the way the teacher said." If the student knew how to do it, they would have.*
- ✓ *DO circulate to ensure academic and behavioral engagement; avoid sitting beside one student for the full period.*

Set your sub up for a wonderful day! By offering a simple page of strategies – in addition to your academic sub plans - you can breathe more easily, knowing your students are well cared for in your absence.

Duggleby, P., & Badali, S. (2007). Expectations and experiences of substitute teachers. *Alberta Journal of Educational Research*, *53*(1) 22-33.

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