Click Here



Systematic instruction definition

As educators, working toward meeting (and exceeding!) your students' education goals is always top of mind. Goals are built into student IEPs, covered in your daily classroom routines, woven into your lesson plans, etc., which is why including systematic instruction while teaching your students is key. Defining systematic instruction Systematic instruction follows a clear, sequential method of instruction helping students to build off of already mastered skills. In some cases, you'll hear systematic instruction. Systematic instruction incorporates scaffolded supports to develop a foundation for students to progress through the introductory skills to more complex ones. Students with moderate to severe disabilities benefit from scaffolded, systematic instruction, as scaffolding helps to break drown instruction into more manageable chunks/topics for both teachers and students to work through. Using this method, teachers allow for transfer of instructional control from the teacher to the students with moderate to severe based teaching practices that incorporate systematic instruction and have shown to be effective for teaching students with moderate to severe disabilities: 1) Constant Time Delay: This is a systematic method that teaches a variety of skills using prompting. Initially, the teacher asks the student to indicate the correct response immediately prompting. the student is given the opportunity to display the skills they have learned as the teacher provides a pre-determined "wait time" or time delay for student demonstration once a question is asked. 2) Discrete Trial Training: This is a strategy based on the methodologies of Applied Behavior Analysis (ABA) that breaks skills down into different segments in order to teach discrete skills by themselves. Discrete skills have one clear, direct response. For example, pointing to an object can be defined as a discrete skill. Discrete trial instruction should be used in combination with other systematic teaching methodologies to maximize generalization across settings, people and time frames. Implementing systematic instruction with your students with extensive support needs, TeachTown's standards-based, adapted core curriculum, enCORE, provides educators and students with domain-specific content for ELA, Math, Science and Social Studies in a systematic lessons plans which allows for fidelity of instruction. All of the lesson plans included within the curriculum build on one another to form instructional sequences. All educators are given an implementation guide which clearly outlines when to teach what content. Additionally, a Scope and Sequence Guide is provided for teaching in a scaffolded format. demonstrate learning progress. Currently, enCORE is driving a 69% student improvement rate between pre- and post-test scores. Interested in learning more about enCORE? Get in touch with a member of our team to see firsthand how the curriculum can benefit the students you serve. Siegfried EngelmannWhat is DI?Direct Instruction (DI) is a model for teaching that emphasizes well-developed and carefully planned lessons designed around small learning increments and clearly defined and prescribed teaching tasks. It is based on the theory that clear instruction eliminating misinterpretations can greatly improve and accelerate learning. Its creators, Siegfried Engelmann and Dr. Wesley Becker, and their colleagues believe, and have proved, that correctly applied DI can improve academic performance as well as in Canada, the UK and Australia. Schools using DI accept a vision that actually delivers many outcomes only promised by other models. Direct Instruction operates on five key philosophical principles: All children can be taught. All children can improve academically and in terms of self image. All teachers can succeed if provided with adequate training and materials. Low performers and disadvantaged learners must be taught at a faster rate than typically occurs if they are to catch up to their higher-performing peers. All details of instruction must be controlled to minimize the chance of students' misinterpreting the information. Why does DI work? There are four main features of DI that ensure students learn faster and more efficiently than any other program or technique available: Students are placed in instruction at their skill level. When students begin the program, each students are grouped together with other students needing to work on the same skills. These groups are organized by the level of the program that is appropriate for students, rather than the grade level the students are in. The program is organized so that skills are introduced gradually, giving children a chance to learn those skills and apply them before being required to learn another new set of skills. Only 10% of each lesson is new material. The remaining 90% of each lesson's content is review and applications. All details of instruction are controlled to minimize the chance of students' misinterpreting the information being taught and to maximize the reinforcing effect of instruction. Instruction is modified to accommodate each student's rate of learning. A particularly wonderful part about DI is that students are retaught or accelerated at the rate at which they learn. If they need more practice with a specific skill, teachers can provide the additional instruction within the program to ensure students master the skills and needs to advance to the next level, students can be moved to a new placement so that they may continue adding to the skills they already possess. Programs are field tested and revised before publication. DI programs are very unique in the way they are written and revised based on those tests before they are ever published. This means that the program your student is receiving has already been proven to work. The implementation of Direct Instruction and the five key philosophical principles will introduce a crucial element in the schools may need an entirely different organization than they previously employed. Even staff members will be called upon to alter some operations. The popular valuing of teacher creativity and autonomy as high priorities must give way to a willingness to follow certain carefully prescribed instructional practices. Remaining the same, however, are the importance of hard work, dedication and commitment to students. And, it is crucial that all concerned adopt and internalize the belief that all students, if properly taught, can learn. Skip to content Manage consent Transcript: Explicit, systematic Instruction during a mathematics lesson. During the first step of explicit, systematic instruction, the teacher prepares the students for the lesson. Teacher: Today during math class, we are going to use the tangent function to help us find the height of objects. And if you recall, this week we've been learning all about right triangles. Mateo, do you remember what angle makes right triangles so special. Mateo: Ninety degrees. Teacher: That's right. They always contain a 90-degree angle. And when we have a right triangle, we know we can figure out the other angles or the lengths of the sides of the triangle using special functions. And we learned the phrase Soh Cah Toa to help us remember what these ratios are. Raise your hand if you remember what these ratios for. Yes, Jermaine: Sine. Teacher: That's right. The "S" stands for "sine." The "C" stands for the "cosine." And, Susan, do you remember what the "T" stands for? Susan: Tangent. Teacher: So using this knowledge and thinking about Soh Cah Toa to help us remember what those ratios are, we are going to solve a problem and figure out the height of a flagpole. Now, you wouldn't normally be able to climb a flagpole or have a tape measure in your pocket at all times to help you figure out what the height is without having to go climb it. Narrator: During the next step, the teacher models several problems, asking questions throughout to check for understanding and to ensure student engagement. Teacher: So, to start, I'm going to draw a picture to help me figure out what the problem's telling me. I have a flagpole, and I notice that it says "the angle of elevation from Juan's feet to the top of the flagpole—so here to here—is 70 degrees. So I'm going to label that on my diagram. And looking back at the problem, I've created a diagram showing me everything the problem is telling me. But I notice something else. I notice that this flagpole and the ground make a 90-degree angle, which means this is a right triangle, and we can use one of our ratios to help us figure out the height of the flagpole. And for this I know I want to figure out the side adjacent to my target angle, so that's what I'm going to use. Sophie, remind me what the ratio for tangent is. Sophie: Opposite over adjacent. Teacher: That's right! The tangent is the ratio of the opposite side over the adjacent side. Great thinking, Sophie. Given this equation, I'm going to then fill in all the information I have from the problem? Yes. Student: Seventy degrees. Teacher: Great! It is 70 degrees. So the tangent of 70 degrees equals the opposite. I don't know what the opposite is a ligacent to the 70-degree angle is 11 feet, so I can write "11" right there. Now that my equation is written, all I have to do is solve...equals 30.25. So I know the length of the side opposite to my target angle is, which is also the height of the flagpole, is 30.25 feet. Narrator: After the teacher leads the students through several more problems, she implements guided practice. Teacher: Next, I'm going to have you work with a partner on the next two problems. Again, you're going to be solving for the tangent function, and I'm going to be walking around, answering guestions or providing help as needed. Narrator: After the teacher plans to complete problems independently. To ensure maintenance, the teacher plans opportunities for ongoing practice and provides additional instruction for students who have not mastered the concept or procedure. Systematic instruction, active learning, and ongoing assessment. It provides learning experiences to promote mastery of essential knowledge and skills. Systematic instruction is guided by research-based principles and involves collaboration among teachers, students, and apply their learning to new situations. Systematic Instruction: A Comprehensive Guide Systematic instruction is a structured approach to teaching that ensures students acquire essential knowledge and skills in a logical sequence. It follows a systematic framework that enhances understanding, retention, and application. Key Principles of Systematic Instruction Logical Sequence. It follows a systematic framework that enhances understanding, retention, and application. manner, building upon prior knowledge. Active Learning: Students actively engage with the material through guided practice, discussions, and problem-solving. Feedback and assessments inform adjustments to the instruction and support student progress. Scaffolding: Students receive gradual support that is gradually reduced as they develop competence. Components of Systematic Instruction. Direct Instruction: Explicitly teach new concepts and skills through demonstrations, explanations, and guided practice. Guided Practice: Provide students with opportunities to practice with support from the teacher or peers. Independent Practice: Assign exercises and activities for students to demonstrate their understanding and application. Assessments, such as quizzes, tests, and observations. Review and Feedback: Regularly review the material and provide specific feedback to reinforce learning. See also Digital Marketing Strategies For Adventure TourismBenefits of Systematic Instruction Improved Understanding: Logical sequencing and scaffolded support enhance comprehension. Students develop confidence and competence in applying new skills. Reduced Gaps: Targeted instruction ensures all students acquire essential knowledge and skills. Efficient Instruction for a scilla students acquire essential knowledge and skills. or process. Guided Practice Students practice the skill with guidance from the instructor. Independent Practice Students practice without guidance. Feedback Instructor provides specific corrections and suggestions. Cooperative Learning Students work together in small groups to facilitate learning. Technology Integration Incorporates educational technology to enhance instruction. Question 1: What is the definition of systematic instruction? Answer: Systematic instruction? Answer: See also Essential Practical Skills For SuccessSystematic instruction differs from traditional instruction in its emphasis on clear learning objectives, sequenced instruction 3: What are the key elements of systematic instruction in its emphasis on clear learning objectives, sequenced instruction and regular assessment to monitor student progress. include: -明確的學習目標: Stating what students should be able to do by the end of the lesson -循序漸進的教學活動: Breaking down skills into smaller steps and teaching them in a logical order -定期的評量: Using formative assessments to track student progress and make adjustments as needed And there you have it, folks! Now you know a little something about systematic instruction. If you're still feeling a bit lost, don't fret. We'll be diving deeper into this topic in the future, so be sure to check back. In the meantime, thanks for giving this article a read! I appreciate your time and interest. Please wait while we attempt to authenticate you... This hour-long webinar details how Siegfried Engelmann developed and refined Authentic Direct Instruction, the most comprehensive and effective system for teaching the widest range of learners. The features are the basis for Barak Rosenshine's 10 Principles of Instruction, as well as their distinct differences include: field-tested programs, revised on the basis of field-test results faultless communication via scripts procedures for placing students at their skill level in-program assessments to confirm mastery of skills Original broadcast December 9, 2020You can download the handout version of the PowerPoint presentation for your reference. What does systematic instruction mean? Dr Kerry Hempenstall, Senior Industry Fellow, School of Education, RMIT University, Melbourne, Australia. My blogs can be viewed on-line or downloaded as a Word file or PDF at New Addition -March 2025So, at the end of this section is my paper from some years ago. Below is the update of studies restricted to the years from 2020 to 2025. Has the systematic instruction mean (2023) Breaking lessons and activities into sequential, manageable steps that progress from simple to more complex concepts and skills. (2022) There are three components to systematic instruction. These three components include measurable learning goals, sequence lessons, and structured learning. Systematic implies that there is attention paid to the detail of the teaching process. The plan for instruction that is systematic is carefully thought out, builds upon prior learning, is strategic building from simple to complex, and is designed before activities and lessons are planned. Instruction is across the five components (phonemic awareness, phonics, fluency, vocabulary, and comprehension". It promotes retention of information: through direct, systematic, and explicit instruction, students learn to master concepts and retain information, building a solid foundation for future learning and progress. 22 Aug 2023 What is Systematic Instruction? (2017) Systematic instruction is an evidence-based method for teaching individuals with disabilities that spans more than 50 years. It incorporates the principles of applied behavior analysis and allows for educators to teach a

wide range of skills, including everything from academic to functional living skills. Why is Systematic Instruction involves breaking a skill down into individual components so that students can learn it more easily. This approach helps students understand what they need to do to complete a task or achieve a goal. How to implement Systematic Instruction Data collective first and then break it down in to a single step or a chain of steps to complete. You should also review students' prior learning history, preferences, or prerequisites skills that might assist in obtaining the skills or steps in the chain. If you know that a student is having difficulty with instruction in a particular lesson, as an educator, you should find a way to teach or prompt them through the process to eventually get to the instructional strategy might support me in prompting or teaching my student to complete this skill? You should also consider how you will fade out teaching prompts over time and support your students are doing over instructional trials and whether they are gaining independence over time. You should make sure that the evaluation method is sensitive enough to pick up on how students are progressing in becoming independent and performing the skills necessary for their success. Step 4: Implement the instructional strategies designed for success and that, even though variations are inevitable, all individuals teaching the skill are implementing them in a similar way. It is imperative that you also determine an appropriate reinforcement strategy. So many students have a negative experience when it comes to learning fun by reinforcing the benefits of correct skill usage and support students along the way. After that, you should aim to fade prompts and scale back until students become independent. Step 5: Evaluate your data You should do this to find out whether there is an increase in student comprehension or capability. If there is a positive trend, then continue to implement the same instructional strategy. If the trend is flat or variable (meaning it jumps up and down) you should reevaluate the data to determine if the instructional method will be effective in the long term. Step 6: Refine the process and make decisions based on data You should always take the results you are seeing in your data into consideration when determining whether you should adjust your instructional strategies. If the instructional objectives were attained, then you must determine the next step of your instructional materials required and if there is an inconsistency in the implementation of the instructional strategy. Occasionally, you might discover the instructional method you're using needs to be broken down into a simple steps or that you need to teaching a learning objective. Systematic instruction is a great way to show that any student can learn. Educators are also responsible for breaking skills down to help students learn, no matter their challenges. Discovering and utilizing the power of systematic instruction can ensure that educators everywhere are helping students at every grade and level. How can Systematic Instruction benefit educators? Systematic instruction is a great way to show that any student can learn. Educators are also responsible for breaking skills down to help students learn, no matter their challenges. Discovering and utilizing the power of systematic instruction can ensure that educators everywhere are helping students at every grade and level. Ascherman, A. (2017). The Importance of Systematic Instruction. RethinkEd. Purposeful, Direct, Explicit, and Systematic Instruction (2023) "In contrast to listening and speaking, which develop naturally, the intricacies of written language must be explicitly taught. Direct, explicit, systematic instruction has been recognized as an important strategy for this purpose. The Florida Center for Reading Research provides definitions of direct, explicit and systematic instruction: Direct Instruction: Direct Instruction: The teacher defines and teaches a concept, models the learning process, guides students through its application, and arranges for extended guided practice until mastery is achieved Systematic Instruction: A carefully planned sequence for instruction, similar to a builder's blueprint for a house characterizes systematic instruction. A blueprint is carefully thought out and designed before building materials are gathered and construction is one of maximizing. As stated by Adams (2001, p. 74) The goal of systematic instruction is one of maximizing. the likelihood that whenever children are asked to learn something new, they already possess the appropriate prior knowledge and understandings to see its value and to learn it efficiently. The plan for instruction that is systematic is carefully thought out, builds upon prior learning, is strategic building from simple to complex, and is designed before activities and lessons are planned. Instruction is across the five components (phonemic awareness, phonics, fluency, vocabulary, and comprehension). Explicit instruction is across the five components (phonemic awareness, phonics, fluency, vocabulary, and comprehension). language is concise, specific, and related to the objective. Another characteristic of explicit instruction is a visible instruction means that the actions of the teacher are clear, unambiguous, direct, and visible. This makes it clear what the students are to do and learn. Nothing is left to guess work." Elements Comprising the Colorado Literacy Framework, (2023). Office of Elementary Literacy and School Readiness. What exactly does direct, systematic, and explicit instruction entail? (2023) "Direct, systematic, and explicit instruction is an approach that places focus on clear, structured, gradual teaching methods to promote effective learning. Whenever you teach students in your classroom struggling with learning difficulties like ADHD, dysgraphia, and other challenges. According to the Florida Center for Reading Research, these three concepts can be defined as follows: Direct instruction - this approach involves the teacher presenting information directly to the students, through clear, concise explanations and examples that help students process what they're being taught. It's a way of eliminating confusion and guesswork and guiding students through concepts and applications, going into detail where needed to make sure all students have processed and understood the lesson. Systematic instruction - this approach basically involves segmenting, or ganizing, or separating lessons into sequences to help students better process new information step by step. Lessons should follow a logical, gradual progression, where each new piece of information builds upon the previous one, making things easier to understand by all students. This concept focuses on building knowledge gradually, going from simple ideas to more complex concepts, laying the groundwork for students to build knowledge and mastery. Explicit instruction - every new concept or lesson taught in the classroom has to be logical, gradual, and easy to process for all students, regardless of their learning difficulties. Explicit instruction means that the teacher should use concise, specific, and clear language, without any ambiguity or vagueness, leaving out any guesswork or interpretation from the students. This approach also involves a high level of direct interaction between student and teacher, where needed. Why is it important? Incorporating the principles of direct, explicit, and systematic instruction into the curriculum can lay the foundation for students to be able to process and understand information and reach fluency and literacy effectively. These principles are also incredibly useful when it comes to teaching students struggling with learning challenges or disabilities, or who simply require additional support to move on from one lesson to the next. Direct, systematic, and explicit instruction can be useful to teachers in various ways. It promotes efficiency: through direct and focused teaching methods, students receive direct, targeted information without any distractions or confusion, making it easy for them to follow lessons and build knowledge gradually. It caters to diverse learners: this type of instruction is not only beneficial to struggling students, but to general education students, as well. Each student has a different learning style, different needs, and moves at a different pace, and these approaches can easily be tailored to fit different learning preferences. It promotes retention of information: through direct, systematic, and explicit instruction, students learn to master concepts and ideas, building gradually from simple to more complex lessons. This helps them better process and retain information, building a solid foundation for future learning and progress. It helps Build confidence: struggling learners often have a hard time being confident in their skills or speaking out in the classroom, because they might not have grasped the information as well as other students or they feel left behind Through direct, systematic, and explicit instruction, they receive clear guidance and they know exactly what's expected of them and what comes next, thus eliminating anxiety and uncertainty. This type of instruction also allows them to interact more directly with their teacher, get focused, targeted feedback, and to see progress as they move on to increasingly more complex ideas." Da Vinci Collaborative. (2023). What is direct, explicit, and systematic instruction, and why is it important? This next segment is the original, broader document and includes earlier periods. We frequently read in research papers, and increasingly in education policies, that a systematic approaches (Clark, Kirschner, & Sweller, 2012). This seems particularly to be the case when introducing new skills and knowledge to students and for those who tend towards slow progress in their academic learning. Systematic is sometimes paired with the teacher takes centre stage and the student learning is controlled by the teacher's curriculum and teaching behaviour. Implicit is usually reserved for instruction that is student-directed. So, implicit usually refers to a discovery, constructivist, or minimal guidance model. In this implicit usually refers to a discovery constructive to as the guide-on-the-side, while the students take greater responsibility for their own learning from the outset. So, there's systematic vs unsystematic vs unsystematic over phonics programs may be highly systematic, and others less so. Of course, being systematic doesn't guarantee student outcome but when the curriculum is closely aligned with the consensus of what's important and when it should be introduced, then such programs lacking in system. It should be noted that in the USA, explicit has another meaning as it applies to reading instruction. It is often used as a synonym for the term synthetic phonics - the latter is more commonly employed in Great Britain and Australia to refer to a specific model of reading instruction that emphasises the structure of the language - teaching letter-sound relationships and blending as the key entry skills for beginning readers. In this paper, the intended meaning is that conveyed in the previous paragraph. Apart from curriculum content, there's also a continuum of degree of system in how the curriculum, teachers may assiduously implement it as written, or they may adapt it according to their own predilections. This is usually called a departure from program fidelity, and is abhorred by those program designers who incorporate a strongly systematic bent. However, some programs are loosely coupled in that they presume teachers will be expert in presenting their curriculum. "They're teachers, they yre professionals, they would know how to teach my stuff." we've seen research in Australia and elsewhere that few teachers have been trained in explicit instruction. Attempting to reduce these sources of variation, some designers provide a script for whole curriculum, for example Direct instruction, Open Court, and Success For All. Is it possible to be systematic without being explicit? In some respect, perhaps, in that a teacher might specify a comprehensive curriculum is passed to the student. So, the curriculum could be systematic though the instruction would not be - except for those students adept at designing their own instructional sequences. Is it possible to be explicit without being systematic? Yes, certainly. Consider a teacher-directed classroom in which the teacher provides the majority of the curriculum, but teaches off the top of his head. There is no particular pre-planning based upon what works, rather the mood of the day drives what he attempts to teach. So, what is taught with clarity, but the jumbled up nature of the curriculum sequence. In terms or reading instruction, the discrepancy between systematic and unsystematic approaches was most sharply delineated in the debate over the supporters of the whole language approach to reading compared with those who asserted that an early focus on the alphabetic principle was a necessary component of effective beginning reading approaches. A necessary element in the whole language approach was that students should be provided solely with attractive and meaningful story books to enable them to develop their reading provess. As we shall see, the central tenet of whole language that meaningful story books must not be skill-based precluded systematic instruction. "Purist whole language teachers have never felt comfortable with demonstrating to students the manner in which words are composed of sounds. They were exhorted in their training not to examine words are constructed. Teachers who accepted this to examine words are constructed. restriction took meaning-centredness to extreme s - an example of ideology precluding effectiveness. Other whole language teachers, who could not accept such an extreme view, might include some references to alliteration or rhymes during a story. "Did you notice that "cat" and "mat" end with the same sound?" Sadly, for struggling students such well-intentioned clues are neither explicit enough, nor are they likely to occur with sufficient frequency to have any beneficial impact. This spur-of-the-moment approach is sometimes called embedded or incidental phonics because teachers are restricted to using only the opportunities for intra-word teaching provided within any given story. students have great difficulty in appreciating individual sound-spelling relationships if their only opportunities to master them occur at variable intervals and solely within a story context. In a children's story, the primary emphasis is on understanding its meaning not on word structure, so restricting to story reading activities any opportunities to focus on word parts is ineffective and even counter-productive. At-risk students require careful systematic instruction in individual letter-sound correspondences, and developing them requires teachers to explicitly isolate the phoneme from the word, for example, This letter has the sound "mmm". At-risk students also need ample practice of these sounds in isolation from stories if they are to build a memory of each sound-symbol relationship. It is necessary to teach about 40-50 such associations, and to provide stories in which these associations are beneficial to gaining meaning. Herein lies another problem for whole language purists. A fascination with authentic texts precludes the use of stories that are constructed using only the words that a student can currently decode - the very ones that will build students' confidence in the decoding strategies that do not follow the sound-symbol convention (sometimes called inconsiderate text) does no favours for struggling students. It reduces confidence that the decoding process is a worthwhile strategy with which to persevere, and it encourages them to guess from story context (a notoriously inaccurate strategy) or even from the associated pictures. The more recent response of the formerly no phonics in context." However, this model also implies that it is valuable to inter-mix a sound-spelling emphasis simultaneously with comprehension. Children enter school knowing the meanings of thousands of words, but it is some years before their written vocabulary matches their oral comprehension. Both written and oral language development, it is more effective to address them separately. Thus, the use of teacher-read stories is an excellent vehicle for improving oral comprehension, and allows for a level of language complexity that students could not attain if the stories were presented in written form. Meanwhile, the students' relatively undeveloped decoding skill requires simpler text to allow the development of the competence and confidence needed for the ultimate objective - equivalent oral/written comprehension proficiency. Those arguing that the two are inextricable confuse process with objective, and they compromise the development of both oral and written language." Hempenstall, K. (1999). Stop, children, what's that sound? The Australian, Nov 8, p.21. (with apologies to Buffalo Springfield) Some quotes on systematic teaching of phonics "Systematic phonics based instruction methods are basec on the assumption of incrementally building a solid baseline of alphabetic knowledge in order to further support the building of an orthographic lexicon through this phase of mastering the alphabetic principle. Simultaneously, the development of the self-teaching mechanism of word decoding is optimally triggered. During incremental phonics instruction, a small set of grapheme- phoneme correspondences is first presented to the children who practice them by reading words and short sentences comprising trained graphemes. graphemes, subsequent sets of new graphemes are incrementally added to the baseline set. Every time a set of new graphemes is added, the full set of graphemes is added, the full set of graphemes is added, the full set of graphemes is added to the baseline set. (see Ellis & Ralph, 2000). This controlled environment of learning to read provides an opportunity for children to practice conversion rules and blend skills without being bothered by unknown graphemes and orthographic units that they have not been taught yet." (p.1530-1531) Schaars, M.M.H., Segers, E., & Verhoeven, L. (2017). Word decoding development in incremental phonics instruction in a transparent orthography. Reading and Writing, 30, 1529-1550. "The common factor in [systematic] approaches is that prespecified sets of phonic elements such as simple grapheme-phoneme correspondences and onset and rimes are taught sequentially. For instance, in the PHAB/DI program (Phonological Analysis and Blending/Direct Instruction) that focuses on remediation of basic phonological analysis and blending deficits, letter sounds are taught and reviewed in a cumulative manner to ensure that children will retain individual letter sounds. Skills like sound segmentation and blending are taught to a clear standard of mastery. The Orton-Gillingham method (Gillingham & Stillman, as cited in Foorman et al., 1997) is characterized by a similar systematic and step-by-step approach. The method starts by reading and writing sounds in isolation. syllables and words. The phonics elements, such as consonants, vowels, digraphs, blends, are taught in an orderly fashion. When simple elements are mastered, more complex elements are reviewed until automaticity has been reached. ... In whole-language approaches, it is believed that children will learn language (oral and written) best if it is learned for authentic purposes (Stahl, 1999). It is assumed that exposure to a literate environment is sufficient to make children read (Goodman, as cited in Stahl & Miller, 1989), and phonics is taught unsystematically and only if the need arises." (p.319) de Graaff, S., Bosman, A.M.T., Hasselman, F., & Verhoeven, L. (2009). Benefits of systematic instruction. A blueprint is carefully thought out and designed before building materials are gathered and construction begins. As stated by Adams (2001, p. 74) The goal of systematic instruction is one of maximizing the likelihood that whenever children are asked to learn something new, they already possess the appropriate prior knowledge and understandings to see its value and to learn it efficiently. The plan for instruction that is systematic is carefully thought out, builds upon prior learning, is strategic building from simple to complex, and is designed before activities and lessons are planned. Instruction is across the five components (phonemic awareness, phonics, fluency, vocabulary, and comprehension". Colorado Department of Education. (2017). Elements comprising the Colorado Literacy Framework: IV. Purposeful, direct, explicitly teaching students a prespecified set of letter sound relations and having students read text that provides practice using these relations to decode words. Instruction lacking an emphasis on phonics instruction does not teach letter-sound relations systematically and selects text for children according to other principles. The latter form of instruction includes whole language programs, whole language programs, and some basal reader programs. The meta-analyses were conducted to answer several questions about the impact of systematic phonics instruction on growth in reading when compared to instruction that does not emphasize phonics. Findings provided strong evidence substantiating the impact of systematic phonics instruction on learning to read." (p.2-84) National Reading Panel. (April, 2000). Report of the National Reading Panel. Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading Instruction. National Institute of Child Health and Human Development. "Systematic implies that there is attention paid to the detail of the teaching process. Instruction will usually be teacherdirected, based on a logical analysis of the skills required and their optimal sequence. At its most systematic, it will probably involve massed and spaced practice of those skills (sometimes in isolation and in text), corrective feedback of errors, and continuous evaluation of progress. In contrast, incidental instruction shifts the responsibility for making use of phonic cues from the teacher to the student. It assumes that students will develop a self-sustaining, natural, unique reading style that integrates the use of contextual and graphophonic cues without any preordained teaching in a code-emphasis program is to make explicit to students in the context of authentic literature as the situation arises, the limitations of such incidental analytic phonics are most apparent for at-risk students. This is the group on whom the failure of incidental analytic phonics are most apparent for at-risk students. to be sufficiently explicit and unambiguous impacts most heavily." (p.11) Hempenstall, K. (2016). Read about it: Scientific evidence for effective teaching of reading. CIS Research Report 11. Sydney: The Centre for Independent Studies. Jennifer Buckingham (Editor). Retrieved from "Most compelling from the current analyses are results directly and unambiguous impacts most heavily." investigating the differences between three modalities (Alternating, Integrated, Additive) of instruction. Outcomes showed clearly that modality of instruction can matter considerably for these older struggling readers. The differences in gains clearly that modality, with its sequential addition of each component (isolated phonological decoding instruction, followed by addition of spelling instruction, followed by addition of fluency instruction, and finally the best modality for remediating reading skills (decoding, spelling, fluency, comprehension) in older struggling readers, of the three approaches that were compared in this research. These students show that they are highly sensitivity to the scheduling of the components and the amounts of instructional time per component; this is an important finding for the development and refinement of reading programs for struggling adolescent readers. While more research still needs to be conducted in this area, this study lends credence to the different requirements this unique population of students may need in order to close the achievement gap in acquiring adequate reading program design: Examining reading gains across three middle school reading projects. Reading and Writing, 26(4), 565-592. "In sum, this experiment investigated the behavioral and neural consequences of different methods of reading instruction for learning to read single words in alphabetic writing systems, in the case where oral vocabulary is relatively secure. Under these circumstances, our findings suggest that interventions aiming to improve the accuracy of reading aloud and/or comprehension in the early stages of learning should focus on the systematicities present in print-to-sound relationships, rather than attempting to teach direct access to the meanings of whole written words. phonics-based methods of reading instruction, and rejecting multicuing or balanced literacy approaches which, our results suggest, may hinder the discovery of spelling-sound relationships essential for reading aloud and comprehension." (p.22) Taylor, J. S. H., Davis, M. H., & Rastle, K. (2017, April 20). Comparing and validating methods of reading instruction using behavioural and neural findings in an artificial orthography. Journal of Experimental Psychology: General. Advance online publication. "Descriptive studies have typically focused on lesson-to-text match (LTTM): the match between the instruction of phonics elements in teacher guides and the words in student texts (Stein et al., 1999) Such a focus began with Chall's (1967/1983) analyses of four first-grade reading programs: two code emphasis and two meaning-emphasis basal programs included phonics instruction; however, the phonics instruction; how because th they did in the code emphasis programs. For each of the four decades following Chall's (1967/1983) work, researchers have analyzed and compared LTTM in meaning- and code-emphasis first-grade reading programs, and, as a result, shifts in various copyrights are evident. In reading programs copyrighted in the 1970s, Beck and McCaslin (1978) reported that patterns of LTTM had not changed from those reported by Chall (1967/1983) and noted that the analysis of two reading words, whereas the LTTM of meaning-emphasis programs did not. Four copyrighted programs of the 1980s were analyzed by Meyer et al. (1987), who noted that meaning-emphasis programs continued to have low LTTM. Three out of four of the programs analyzed were meaning-emphasis, and their LTTM was less than 10%. Stein et al. (1999) found that decodable texts and lessons mandated for adoption in California and Texas in the 1990s featured LTTMs. similar to the meaning-based programs analyzed by Beck and McCaslin (1978)." (p.483-484) Murray, M. S., Munger, K. A., & Hiebert, E. H. (2014). An analysis of two reading intervention programs: How do the words, texts, and programs compare? Elementary School Journal, 114, 479-500. "What is Systematic Phonics Instruction? Phonics is a method of instruction that teaches students correspondences between graphemes in written language and phonemes in spoken language and how to use these correspondences are taught and they are covered in a clearly defined sequence. This includes short and long vowels as well as vowel and consonant digraphs such as oi, ea, sh, th. Also it may include blends of letter-sounds that form larger subunits in words such as onsets and rimes....When phonics instruction is introduced after students have already acquired some reading skill, it may be more difficult to step in and influence how they read, because it requires changing students' habits. For example, to improve their accuracy, students may need to suppress the habit of guessing words based on context and minimal letter cues, to slow down, and to examine spellings of words more fully when they read them. Findings suggest that using phonics instruction to remediate reading problems may be harder than using phonics at the earliest point to prevent reading difficulties. ... Systematic phonics programs might exhibit the very best instructional features. However, if they are not carried out by a knowledgeable teacher, their likelihood of success is diminished. Teachers must understand how to implement and the earliest point to prevent reading difficulties. phonics program effectively, how to plan lessons and make sure they are carried out. Teachers must hold expectations about the effects of their instruction on students. They must understand what students should know and be able to do better as a result of their teaching. To verify that their instruction is working, teachers need to use informal testing to monitor students' progress toward the expected accomplishments. Teachers need to understand how to enrich instruction for students requires a high degree of professional competence indeed." (p.2, 8, 16) Ehri, L.C. (2003). Systematic phonics instruction: Findings of the National Reading Panel. Paper presented at the invitational seminar organised by the Standards and Effectiveness Unit, Department for Education and Skills, British Government (London, England, March 17, 2003). Retrieved from "Moreover, wrote Gersten et al. (1986), this instruction "must contain clearly articulated [learning] strategies" (p. 19): a step-by-step process involving teaching to mastery, a procedure for error correction, a deliberate progression from teacher-directed work, systematic practice, and cumulative review (cf. Gersten et al., 1986)." (p. 285). Kearns, D. M., & Fuchs, D. (2013). Does cognitively focused instruction improve the academic performance of low-achieving students? Exceptional Children, 79(3), 263-290. "Engelmann is meticulous about designing programs that teach to mastery. Each DI curriculum is a staircase, each lesson a step. Each step comprises at most 15% new material and 85% reinforcement of things already taught. The effect is to impart "a systematic trickle of new information" that accelerates learning but at no point inundates the learner with too much too fast. Content is arranged in strands that extend across several lessons; each lesson extends several lessons; each lesson extends several lessons; each lesson extends that extend across several lessons; each lesson extends several lesson; each isolated skills are taught and combined with other skills to teach more complex skills. Some DI programs take six weeks to complete and free of gaps as possible. Engelmann creates placement tests so sensitive they tell teachers not only which grade level but which lesson the learner should start in a program (i.e., the one in which the learner can do at least 70% of the tasks correctly on the first try). He also creates mastery tests after every five to ten lessons so that teachers can make informed and timely decisions about what to do next—whether to go on to the next lesson, re-teach students A and B some things, or jump student C ahead in the program. He field-tests programs prior to publication to see how much and what kind of practice students need to make sure they get it. Practice makes permanent; perfect practice makes perfect. How students get their practice matters as much as how much practice they get. Engelmann pioneered the Model—Lead—Test technique: demonstrate a task, do it with the students, observe them as they do it alone. If they make a mistake, correct immediately and succinctly. (Delayed feedback doesn't work very well because students forget.) Correcting is in fact the hardest skill for teachers to master, but it's among the most important. "A correction procedure that makes sense to the learner is the coin of the realm," Engelmann says. DI programs help teachers with corrections in three ways: Content is carefully arranged so that when a student errs, the mistake can be corrected by re-teaching something taught earlier in the program. Tasks are explicit and specific enough to be correctable. And different correction procedures, though they obviously can't be scripted, are specified for a range of errors. For instance: never repeat a wrong answer before giving the right one—it reinforces the confusion. When correcting a decodable word, don't say the word—ask the student to try sounding it out again. When correcting a sound, say the right sound and have the student repeat it. Student errors should not be seen as problems, but as valuable information, Engelmann says. 'They tell you exactly what you need to teach at any given moment to bring your students to mastery, so that testing and teaching become the same package.'" (p.26-7) Barbash, S. (2012). Clear Teaching. Education Consumers Foundation. Retrieved from "Key findings from extensive meta-analytic syntheses of evidence-based reading research - many of which are cited in this review - consistently indicate that since systematic, explicit phonics approaches are significantly more effective than nonsystematic approaches for children with and without reading of Literacy (2005). Teaching of Literacy (2005). Teaching reading - A review of the evidence-based research literature on approaches to the teaching of literacy, particularly those that are effective in assisting students with reading difficulties. Australian Government: Department of Education, Science and Training. Retrieved from "Explicit instruction is a systematic instructional approach that includes a set of delivery and design procedures derived from effective schools research merged with behavior analysis (Hall, 2002). Instructional design refers to the way in which information in a particular domain (e.g., phonemic awareness, reading, mathematics) is selected, prioritized, sequenced, organized, and scheduled for instruction within a highly orchestrated series of lessons and materials that make up a course of study (Simmons & Kame'enui, 1998). According to Smith and Ragan (1993), instructional design refers to the "systematic process of translating principles of learning and instructional design is concerned with the intricacies of analyzing, selecting, prioritizing, sequencing, and scheduling the communication of information before it is packaged for delivery or implemented. In other words, it is the behind-the-scenes activity that appears as the sequence of objectives, schedule of tasks, components of instructional strategies, amount and kind of review, number of examples, extent of teacher direction, and support explicated in teachers' quides and lesson plans" (p.145-6). Pollard-Durodola, S.D., & Simmons, D.C. (2009). The role of explicit instruction and instructional design in promoting phonemic awareness development and transfer from Spanish to English. Reading & Writing Quarterly: Overcoming Learning Difficulties, 25(2-3), 139-161. "Instructional Confusion 2 - It's arguable, and certainly in my position, that well designed instructional materials, by well designed instructing materials, instructional materials, teachers who know how to support children are falling behind. Standard packages of materials and periodic assessments so we know when children are falling behind. It will not get us the whole way, but it's going to get us, I think, a long way there. One of the principal problems here is instructional confusion. If we can reduce that confusion we're going to generate more successes in learning to read." Grover (Russ) Whitehurst, Ex-Director (2002-08), Institute of Education Sciences, U.S. Department of Education. Source: COTC Interview: And for the masochists among us, the view from the dark side: 'The first alternative is to skip over the puzzling word. The second alternative is to sound the word out. Phonics, in other words, comes last.' (p.66). Smith, F. (1979). Reading without nonsense. New York: Teachers College Press. 'Unpredictability is not the exception in English spelling-sound correspondences, it is the rule' (p.152). Smith, F. (1999). Why systematic phonies and phonemic awareness instruction constitute an educational hazard. Language Arts, 77, 150-155. "Initial consonants and consonant clusters, used with syntactic and semantic information, usually provide sufficient information for word recognition and reading for meaning. Teaching phonics children best acquire phonic and related knowledge through rich experiences with using print for real purposes." Emmitt, M. (1996). Have I got my head in the sand? - Literacy matters. In 'Keys to life' Conference proceedings, Early Years of Schooling Conference, Sunday 26 & Monday 27 May 1996, World Congress Centre, Melbourne' pp. 69-75. Melbourne: Directorate of School Education. [On-Line]. Available: "Children can develop and use an intuitive knowledge of letter-sound correspondences [without] any phonics instruction [or] without deliberate instruction from adults" (p. 86). Weaver, C. (1980). Psycholinguistics and reading. Cambridge, MA: Winthrop. "We cannot teach another person directly; we can only facilitate his learning". Rogers, C. (1961). On becoming a person. Boston: Houghton Mifflin. "And so the pedagogy reflected this understanding and the literacy period seemed to be seamless with no distinct lessons on reading skills or spelling drills". Cambourne, B. & Turbill, J. (2007). Looking back to look forward: Understanding the present by revisiting the present by revisiting the past: An Australian perspective. International Journal of Progressive Education, 3(2), 8-28. "Whole language advocates frequently assert that the key to learning language well rests in enjoying the learning language, students will enjoy learning more and hence learn more" (p.36). Jeynes, W.H., & Littell, S.W. (2000). A metaanalysis of studies examining the effect of whole language instruction on the literacy of low-SES students. The Elementary School Journal, 101, 21-38. "Knowledge of reading, not through the practice of reading, not through anything that is taught at school" Smith, F. (1973). Psychology and reading. New York: Holt, Rinehart & Winston. "One of my children learnt to read from cook books, because he loved cooking. ... Reading is just like footy or cricket or golf. You learn by doing it." Children's author, Paul Jennings interviewed in Cafarella, J. (2011). Bringing books to life. The Victorian Premiers' (sic) Reading Challenge. The Age, Sunday June 19. (It is) ... "through using language and hearing others use it in everyday situations--that children learn to talk. Our research has indicated that the same is true of learning to read and write" National Council of Teachers of English. (1993). Reading process and practice. Exeter, NH: Heinemann. "Reading print is no more complex than reading faces and other things in the world. Making sense of speech, which begins much earlier" (Smith, 2003, p. 12). Smith, F. (2003). Unspeakable acts unnatural practices. Portsmouth, NH: Heinemann. "Children are more likely to make connections between phonics and their reading and writing of texts if they are engaged and involved in making discoveries for themselves" (p.7). Ministry of Education. (2003, June 2). Learning to read. NewZealand Education Gazette, 82(10), 8-10. Should you, dear reader, wish to delve deeper into the whole language morass, by all means seek out my two papers on whole language: Direct, explicit, and systematic instruction has been recognized as an essential strategy for teaching reading and writing. The Florida Center for Reading Research defines these terms as follows: Direct Instruction: The teacher defines and teaches a concept, models the learning process, guides students through its application, and arranges for extended guided practice until mastery is achieved. Systematic Instruction: The goal of systematic Instruction is one of maximizing the likelihood that whenever students are asked to learn something new, they already possess the appropriate prior knowledge and understanding to see its value and to learn it efficiently. The plan for instruction that is systematic is carefully thought out, builds upon prior learning, is strategic building from simple to complex, and is designed before activities and lessons are planned. explained and skills are clearly modeled, without vagueness or ambiguity. The teacher's language is concise, specific, and related to the objective. Another characteristic of explicit instruction is a visible instruction is a visible instruction approach which includes a high level of teacher's language is concise, specific, and related to the objective. unambiguous, direct, and visible. This makes it clear what the students are to do and learn. Nothing is left to guess work. The Meadows Center at the University of Texas identifies the following as making an effective literacy lesson: Explicit Instruction: Overtly teaching each step through teacher modeling and many examples Systematic Instruction: Breaking lessons and activities into sequential, manageable steps that progress from simple to more complex concepts and skills Ample Practice Opportunities: Providing many opportunities for students to respond and demonstrate what they are learning Immediate Feedback: Incorporating feedback (from teachers or peers) during initial instruction and practice The Meadows Center also provides the following examples of explicit: "The first sound in man is /mmm/." Implicit: "Man starts with the same sound as the first sound in mountain, mop, and moon. Does anyone know any other words that begin with the same sound as man?" Example 2: Teaching a main idea names who or what the story was about and the most important thing that happened to the who or what. Model stating the main idea for the story just read, "Dinosaurs." Jacob is the who or what in the story. The most important thing about Sarah? What is the main idea of that story? Repeat with other short paragraphs. Implicit: Tell students to tell the main idea of a story tells the most important part of the story. The National Center on Intensive Instruction offers a simple example of explicit instruction in the 8-minute video "Example of Explicit Instruction: Cutting an Onion." In another helpful video, "Utilizing Explicit Instruction" offered by Middle Tennessee State University's Center for Dyslexia, Anita Archer provides the rationale and overview of explicit instruction and its benefit to students. Direct, explicit, and systematic instruction are the hallmarks of Pearson and Gallagher's 1983 Gradual Release of Responsibility model, often referred to as the "I do it, we do it, you do it" approach to teaching. Click here to see a previous post I wrote about this model. The Colorado Department of Education notes that the effectiveness of direct instruction for teaching literacy is well-supported by research, as demonstrated by Adams & Englemann's comprehensive review and meta-analysis of 30+ studies on the effectiveness of direct instruction, as well as in the findings of the National Reading Panel. The report from this panel (NICHD, 2000) notes that there is compelling evidence for explicit, systematic instruction for each of the five essential components of reading (phonemic awareness, phonics, fluency, vocabulary, comprehension): "Explicit instruction in reading makes a difference in students outcomes, especially for those who are low achieving." Structured literacy is a comprehensive approach to literacy instruction that research shows is effective for all students and essential for students who have difficulty with reading. This approach addresses all the foundational elements that are critical for reading, speaking, reading, and writing. Click here to see a previous post I wrote about this topic, including Nancy Hennessey's explanation of structured literacy in a video offered by the Center for Dyslexia at Middle Tennessee State University (MTSU). Additional Resources References Adams, G. L. and Engelmann, S. (1996). Research on Direct Instruction: 25 Years beyond Distar. Seattle: Educational Achievement Systems. National Institute of Child Health and Human Development. (2000). Report

of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implication No. 00-4769). Washington, DC: U.S. Government Printing Office. Pearson, P.E., & Gallagher, M.C. (1983). The instruction of reading comprehension. Contemporary Educational Psychology, 8, 317-344. Joan Sedita is the founder of Keys to Literacy and author of the Keys to Literacy professional development programs. She is an experienced educator, nationally recognized speaker and teacher trainer. She has worked for over 35 years in the literacy education field and has presented to thousands of teachers and related professionals at schools, colleges, clinics, and professional conferences.