

Effective and Efficient Beginning Strategies for Intensifying Instruction

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Introduction

Intensifying instruction refers to adapting instruction, so it is more individualized for a student. In the United States, intensifying instruction has been described in the context of tiered intervention frameworks, which are organizational schemes designed to match a school's system of interventions to each student's instructional needs [1]. In most instances, intensifying instruction concerns students demonstrating academic achievement deficits.

Teachers have reported that they need more information about intensifying instruction. For instance, in Braun et al.'s [2] study of the implementation of tiered intervention frameworks across 19 educators from urban schools in the United States, they reported that when students were provided intensive instruction that was not effective relatively quickly, the teachers were not sure how to proceed with more intensification. Given this circumstance, this paper explains how to manage the process of intensifying instruction. First, the concept of intensifying instruction is discussed within the context of a tiered intervention framework. Afterward, seven strategies for intensifying instruction that are relatively easy to understand, and implement are explained.

Intensifying Instruction in the Context of a Tiered Intervention Framework

As was noted above, a tiered intervention framework is an organizational scheme designed to match a school's system of interventions to each student's instructional needs. Each tier is defined concerning the interventions provided and their intended outcome. A common tiered intervention framework involves three tiers. This framework is described next, along with an explanation of how intensifying instruction occurs within the framework.

A three-tier framework is often depicted in a graphic as a pyramid with Tier 1 at the bottom, Tier 2 atop it, and Tier 3 atop Tier 2. Tier 1 serves as the foundation for the school's system of interventions, hence the reason it is positioned at the bottom of the pyramid. This tier involves providing all students with high-quality instruction in general education classrooms. High-quality instruction involves teaching students the core curriculum academic standards using evidence-based practices [3]. Tier 2 interventions are described as targeted and supplemental [4]. Targeted means the focus is on academic skills students have not mastered. Supplemental signifies that the students who receive Tier 2 services will continue to receive Tier 1 services. Finally, Tier 3 is intensive instruction [5]. It, too, is supplemental instruction. Yet, Tier 3 is decidedly individualized, given the significant, persistent academic achievement deficit a student demonstrates despite receiving Tier 1 and Tier 2 services.

Intensifying instruction consists of changes to alterable variables and occurs when a student begins receiving Tier 2 interventions [1]. A recommended starting point is to alter two variables: dosage and group size [6]. Dosage refers to the total time a student receives instruction, and instruction is intensified when a student's dosage increases. A student's dosage increases when he begins receiving Tier 2 interventions while continuing in Tier 1. Subsequently, the dosage is increased by extending the time of each supplemental session, increasing the number of sessions per week, or both.

Group size is the pupil-to-teacher ratio during instruction. Reducing the number of students in the group is considered an

intensification strategy because the new pupil-to-teacher ratio enables the teacher to engage with students in ways that were not possible with a larger pupil-to-teacher ratio, such as responding more often and more directly to each student than was the case when the students were in a large group instructional arrangement in a general education classroom.

Fuchs et al. [7] and Vaughn and Zumeta [8] have explained categorical approaches for intensifying instruction. Vaughn and Zumeta also presented lists of effective evidence-supported strategies comprising their categories. The strategies are the alterable variables for intensifying instruction. Altogether, the authors identified more than 40 strategies. Below, seven of them that are relatively easy to understand and implement are discussed. While intensifying instruction is a labor-intensive, data-driven process requiring much thought, here, an introduction to intensifying instruction is presented to further educators' knowledge about the concept, thereby addressing the need identified by the teachers in Braun et al.'s [2] study.

Before discussing the strategies, however, the concepts of instructional effectiveness and efficiency warrant an explanation, given their relevance. An effective instructional strategy is responsible for a student's mastery of a targeted learning outcome, while an efficient strategy produces more learning with less effort or resources than an alternative strategy. There are two reasons why educators must be cognizant of these two strategy features. The first reason is that the goal of intensifying instruction is to make it more effective than the instruction a student has been provided. The second reason is that intensifying instruction is meant to eliminate a student's academic achievement gap, meaning the student must demonstrate a greater rate of learning than was the case previously.

Seven Straightforward Strategies for Intensifying Instruction

Increase the Dosage

A student's dosage is the total time he receives instruction about an academic skill. Instruction is intensified when a student's dosage increases. Instructional time is increased by lengthening each supplemental session's time, increasing the number of sessions per week, or both. When the dosage is first increased, the instruction presented can be the same Tier 1 instruction the student has received, just for a longer period. Or, as is often the case, the student's instruction is adapted such that it differs from, and is supplemental to, Tier 1 instruction. The result is more individualized instruction. In these instances, a challenge that often arises is ensuring the student continues receiving all his Tier 1 instruction [9]. A primary reason for increasing a student's dosage is to provide the student with more instructional time, during which he receives more opportunities to respond, followed by immediate, behavior-specific feedback. This is why an increase in dosage has been referred to as a proxy for increasing a student's opportunities to respond and receive feedback [6].

Rosenberg et al. [10] posited a paradigm for characterizing the time available for presenting instruction. According to this paradigm, allotted time refers to the length of the school day, while allocated time refers to the time set aside for subject matter area instruction during the allotted time. Engaged time is when a student attends to instruction, and academic learning time is when a student is taught instructional-level content. Intensifying instruction by increasing a student's dosage should increase academic learning time because it is individualized instruction.

Change the Size of the Group

Group size is commonly referred to as the pupil-to-teacher ratio during instruction. Instruction is intensified when the pupil-to-teacher ratio is reduced, resulting in fewer students being taught by the instructor. Sometimes, a student will spend more time attending to instruction and improve his academic achievement in a group with a lower pupil-to-teacher ratio because there will be fewer distracting stimuli. However, in most instances, just reducing the group size will not produce effective instruction [11]. Instead, having fewer students in a group will permit the teacher to intensify instruction through strategies that increase the probability that effective instruction is presented. For instance, the teacher can monitor each student's response more closely and follow it with immediate behavior-specific feedback, such as reinforcement for correct responses and error correction for incorrect responses. Students can be given more opportunities to respond since the same number of questions or directives will be spread across to fewer students. Instruction may be more efficient if students demonstrate observational learning, which may be more likely to occur given the physical proximity of one student to another. Bailey et al. [5] provided guidelines for group sizes in Tier 2 (3-7 students) and Tier 3 (2-3 students). Also, a one-to-one instructional arrangement may be appropriate based on a student's needs and available resources.

Increase the Number of Opportunities to Respond and Receive Immediate, Behavior-Specific Feedback

This intensification strategy refers to the Russian saying, "Repetition is the mother of all learning." Every student must practice a skill repeatedly to learn it. Yet, the number of practice opportunities varies across students. Gersten et al. [12] observed that students demonstrating significant and persistent academic achievement deficits may need 10-30 times more practice opportunities to demonstrate skill mastery than their peers performing on grade level. As much as possible, an opportunity to practice a skill should be followed by immediate, behavior-specific feedback [13]. Proper feedback benefits students in numerous ways, including confirming their accurate performance of a skill and disallowing errors to become ingrained and difficult to fix.

Fortunately, this strategy for intensifying instruction is cost-effective and readily available to teachers [14]. Teachers can direct students to use various response modes when they practice, including stating answers orally, writing them on

response cards, holding up a response card that has an answer written on it, pressing a button on a digital clicker, and displaying a gesture such as a thumbs up, thumbs down, or thumb pointed sideways. Furthermore, the number of opportunities to respond can be maximized when students are directed to engage in choral responding rather than individual responding.

Once students respond, they should receive immediate, behavior-specific feedback [13]. Behavior-specific, affirmative feedback is presented after a correct response and includes a brief description of the skill the student performed (e.g., “Good, Eric. You said the sum of $3+2$ is 5.”). Corrective feedback is presented after an incorrect response. The initial corrective feedback can be indirect to keep the student engaged and not become discouraged (e.g., “Let’s take another look at that” or “Let’s think about that some more”). Afterward, the teacher could provide support that enables the student to perform the skill correctly. As noted above, this intensification strategy can be related to the decreasing group size strategy. The smaller the group, the more opportunities each student can be presented to practice an instructional-level skill.

Limit the Number of Skills Taught

Instruction can be intensified when a student is only taught skills she must master [7]. Skills a student has acquired and must review periodically so they are retained are not included in daily lessons. Limiting the number of skills taught enables the teacher to provide the student with more opportunities to practice each skill. This ensures that the student’s short-term memory and cognitive load are not overtaxed [15].

Establish an Appropriate Environmental Arrangement

Adapting to the environmental arrangement can increase students’ academic learning time, resulting in more intensive instruction. For instance, an appropriate environmental adaptation can eliminate distractions that result in off-task behavior. An example would be configuring a location in a small classroom area so that it is surrounded by portable dividers that eliminate distracting visual stimuli that trigger a student’s off-task behavior. While the strategic utilization of individualized behavior supports can increase a student’s time on task, universal environmental arrangement protocols can also be employed to increase students’ academic learning time [16]. One universal environmental arrangement protocol is to have instructional materials nearby and ready to use. This arrangement enables a teacher to maintain a brisk pace while monitoring students for on-task behavior. Second is displaying visual supports depicting the tasks students will complete. These supports make a lesson predictable, thus reducing a student’s anxiety while increasing his engaged time.

Present Explicit, Systematic Instruction

The terms explicit and systematic refer to the characteristics of instruction. Explicit instruction is overt, involving a host of

observable teacher behaviors that include telling students a lesson’s learning objective and demonstrating how to perform the skill they are learning. Systematic instruction refers to presenting the content to be learned in a logical, step-by-step, orderly sequence. Together, they comprise an instructional approach whose effectiveness is supported by more than 50 years of research [17]. The National Center on Intensive Intervention’s explicit instruction framework is an example of an approach for presenting explicit, systematic instruction well suited to intensifying instruction. This is because the framework’s multiple components can be adapted using various evidence-based strategies, which function as alterable variables. The framework’s components include a clear objective, modeling, practice, and supporting practices [18]. Each component can be configured so that the resulting lesson is “fit for purpose,” meaning the components can be configured one way to teach a new skill and another way as a student approaches skill mastery. For instance, a response prompting strategy called simultaneous prompting might be used during initial practice to enable a student to engage in errorless learning. In contrast, a different response prompting strategy, constant time delay, would be used during later practice sessions as the student approaches skill mastery because it is designed to enable independent student responses.

Conduct Cumulative, Systematic Skill Reviews

This intensification strategy involves practice. Practice consists of a student’s repeated and regular performance of a skill for one or more clearly defined purposes [19]. One purpose is skill acquisition, addressed previously in the discussion about opportunities to respond, followed by immediate, behavior-specific feedback. After a student has demonstrated skill acquisition, he must engage in cumulative, systematic reviews of acquired skills to maintain them in long-term memory. The design, timing, and execution of these reviews will depend on a student’s needs and, therefore, result in intensifying instruction.

Two types of effective practice that deserve attention are distributed and interleaved. Distributed practice involves deciding when and how to schedule practice opportunities over time and has proven to improve retention. Interleaved practice concerns how content is selected, arranged, and formatted to improve the effectiveness and efficiency of a practice session [20]. Effectiveness and efficiency improve when the content practiced is varied properly.

Conclusion

The number of strategies for intensifying instruction and the amount of intensification some students require to remediate their academic achievement deficits are reasons why intensifying instruction can be a labor-intensive, lengthy process. Additionally, both are likely reasons teachers are unsure how to proceed with intensifying instruction when a student’s academic achievement deficit is not resolved quickly. A key feature of the seven strategies

for intensifying instruction briefly discussed in this paper is that they are under a teacher's control. This allows the teacher great flexibility when intensifying instruction, which may increase the probability that teachers will move forward in this regard. Beyond these seven strategies, Vaughn and Zumeta [8], Potter [1], and Fuchs et al. [7] are excellent resources for information about additional strategies, many of which afford teachers similar flexibility.

Equipped with proper knowledge and skills, every teacher can intensify instruction. However, the extent to which they can do so depends on factors such as the number of students needing intensified instruction and the time available to provide it during the school day. These factors highlight the role that school administrators play in intensifying instruction. A team effort across multiple school personnel is necessary for every student to receive intensive instruction that proves effective and efficient.

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