

Chapter 13

Signage as a Classroom Prompt: An Evidence-Based Practice?

Ian J. Loverro

Central Washington University, USA

David J. Majsterek

Central Washington University, USA

David N. Shorr

Central Washington University, USA

ABSTRACT

No Child Left Behind emphasizes evidence-based practice (EBP) as a benchmark for educational interventions. Research summaries and meta-analyses have been forthcoming for teachers in content areas like reading and mathematics instruction. Less has been summarized about strategies for promoting targeted classroom behaviors. Visual prompts, in the form of signage, are explored as potentially effective strategies for facilitating a well run classroom. Single-subject design studies that provide initial support for signage in promoting target behaviors are described. Variables from these studies are considered as they may be related to an effective classroom environment.

INTRODUCTION

Lloyd, Forness and Kavale conclude their article *Some Methods Are More Effective Than Others* this way: “We certainly want to tailor educational programs for students with disabilities to meet their unique educational needs. As we do so, it makes sense to incorporate those methods that have the best chances of providing educational benefits” (1988, p. 199). This emphasis on what works ap-

pears in IDEA’s rules and regulations indicating that students will not be determined eligible for special services if their deficits are “due to a lack of appropriate instruction” (§ 300.309, U.S. Department of Education, 2006). Thus, determining a student’s eligibility for special services should be based on “a child’s response to scientific, research-based intervention” (§ 300.309). The question for schools in a response to intervention (RTI) climate is “what constitutes research-based instruction?” Data in the form of meta-analyses

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like the one cited above are appearing more and more in professional journals.

The Council for Exceptional Children (CEC) uses “evidence-based” to describe research-supported instruction and cautions that criteria for determining such strategies vary (Council of Exceptional Children, 2006). Standards for evaluating the effectiveness of instructional procedures appeared in a special issue of *Exceptional Children* (Graham, 2005) and have been applied more recently to reading, math, and writing and behavior in the same (Graham, 2009). Given a choice of academic interventions, teachers can expect greater gains for students when such evidence-based practices (EBP) are implemented in the classroom.

One promising management practice that warrants scrutiny for research comes from applied behavior analysis (ABA): Visual prompts/signage. In this paper the relationship between signage and behavior is examined. Several single-subject design studies will be discussed in which signage was used to occasion a change in the performance of a behavior. Variables related to these signage studies will be described and considerations for classroom settings will be presented.

PROMPTING

Teachers routinely “prompt” students to elicit a variety of behaviors. Examples include a bell or buzzer to promote a rapid line up for a fire drill, or posting a number line or a cursive-letter alphabet on a bulletin board to promote math and written expression, respectively. Prompts are described as “supplementary antecedent stimuli used to occasion a correct response in the presence of an S^D [stimulus for a behavior] that will eventually control the behavior” (Cooper, Heron, & Heward, 2007, p. 401). In effect, “prompts are used to increase the probabilities of success in a task” (Walker, Shea, & Bauer, 2004, p. 113). Cooper and colleagues propose three kinds of prompts;

verbal (e.g., “The animal that ‘oinks’ is?”); modeling (e.g., a P.E. teacher placing her toes behind the back line to illustrate from where to serve a volleyball); and physical guidance (e.g., physically positioning a student’s thumb on the “C” key of the piano to begin a C scale).

Alberto and Troutman (2009) add to this list, *visual* expressions. A multiplication/division matrix, periodic table, student photos over pre-school cubbies, and signs for hand washing in the bathroom are examples seen in schools. Alberto and Troutman add several examples in which vocational skills are taught using a sequence of pictures to illustrate what an individual should do to assemble a product or complete a process (e.g., preparing a hamburger, wrapping a sandwich in a fast-food restaurant). They contend that posting such information in plain view can reduce instructional time and promote classroom order. Adults are familiar with a visual prompts in the form of a “post-it” note that serves as a reminder to perform a domestic task like picking up milk on the way home.

Visual prompts can function in two instructional ways. Response prompts are provided when an expected behavior does not occur spontaneously. A stimulus “has been presented and has failed to occasion the response” (Alberto & Troutman, 2009, p. 313). For example, when typing this manuscript, an incorrectly spelled word becomes underlined in red by MS-Word® (Microsoft, 2007) to signal a potential misspelling to the writer. According to Walker and colleagues (2004), once the behavior occurs, such prompts should “eventually be eliminated” (p. 113), a procedure termed “fading” (Maag, 1999).

While the goal of teachers is to have students respond automatically to multiple classroom stimuli (e.g., $7 \times 8 = \underline{\quad}$, “Please take out your spelling books.”), some prompts are intended to be stimuli for target behaviors. The most common are signs. This second type of prompt, a stimulus prompt, is an “alteration of the stimulus to increase the probability of correct responding” (Alberto

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