



Review article

The independent use of self-instructions for the acquisition of untrained multi-step tasks for individuals with an intellectual disability: A review of the literature



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ABSTRACT

Systematic instruction on multi-step tasks (e.g., cooking, vocational skills, personal hygiene) is common for individuals with an intellectual disability. Unfortunately, when individuals with disabilities turn 22-years-old, they no longer receive services in the public school system in most states and systematic instruction often ends (Bouck, 2012). Rather than focusing instructional time on teacher-delivered training on the acquisition of specific multi-step tasks, teaching individuals with disabilities a pivotal skill, such as using self-instructional strategies, may be a more meaningful use of time. By learning self-instruction strategies that focus on generalization, individuals with disabilities can continue acquiring novel multi-step tasks in post-secondary settings and remediate skills that are lost over time. This review synthesizes the past 30 years of research related to generalized self-instruction to learn multi-step tasks, provides information about the types of self-instructional materials used, the ways in which participants received training to use them, and concludes with implications for practitioners and recommendations for future research.

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An increasing number of individuals with developmental delay (i.e., 17.1% increase over a 12-year period), including autism and/or intellectual disability (ID), transition out of secondary settings each year (Boyle et al., 2011). As the number of individuals with disabilities exiting out of secondary settings increases, practitioners must efficiently spend instructional time programming for independence, generalization, and overall success for post-secondary settings. Despite educators and direct care providers focusing educational planning on necessary skills like employment, independent living, and social interaction, postsecondary outcomes for individuals with disabilities remain poor.

Employment is important for individuals with disabilities for a variety of reasons, as it has been reported to lead to financial independence and higher self-esteem (Newman et al., 2011). Although gaining and maintaining employment is a crucial part of successful adult outcomes for many individuals with disabilities, according to the National Longitudinal Transition Study 2 (NLTS2), only 38.8% of transition-age youth with ID and 37.2% with autism spectrum disorder (i.e., ASD) were employed at the time of interview after leaving high school (Newman et al.). Obtaining employment related skills remains the focus of instruction and transition planning for many students with disabilities, but often times similar jobs to those practiced in secondary settings are not acquired upon graduation (Bouck, 2012). This discrepancy in training jobs and actual available jobs causes reliance on job coaches or other adults in post-secondary settings to train necessary skills to gain and/or maintain employment.

Poor employment outcomes however represent only one area needing improvement. Many individuals with disabilities do not have the necessary skills to live independently, defined as living with a spouse, partner, roommate, or alone, or semi-independently, defined as living in a college dorm, military housing, or group home (Newman et al., 2011). According to the individuals with ID surveyed in NLTS2, 36.3% lived independently and 0.2% lived semi-independently. For individuals with ASD, 17% of individuals lived independently since leaving high school and 3.4% lived semi-independently (Newman et al.). Some skills necessary to live independently or semi-independently post-high school include home living, community living, safety, social, advocacy, and health-related skills. Therefore, educational planners and caregivers should place a high-priority on teaching these skills because of their impact in post-secondary settings. Further, according to the NLTS2, only 46.7% of individuals with ID and 61.1% of individuals with ASD engaged in social interaction, defined as participating in lessons or classes, volunteer or community service activities or community groups such as sports, hobbies, and religious groups, each week after leaving high school (Newman et al.). Increasing employment, independent/semi-independent living, and social interaction may provide additional opportunities for social engagement. Skill deficits may preclude individuals with disabilities from accessing these environments.

Teachers and caregivers have the primary responsibility to prepare individuals with disabilities to maximize life outcomes (Brown, Branston, Hamre-Nietupski, Pumpian, Cert, & Gruenewalk, 1979). However, the overall level of support necessary to complete daily tasks may impact an individual's independence in post-secondary settings. One curricular strategy is to teach as many task-specific skills as possible (e.g., laundry, preparing food items, etc.). Researchers have evaluated many instructional strategies to increase independence on multi-step tasks, such as vocational and daily living skills, for adolescents and adults with ID including simultaneous prompting (e.g., Fetko, Schuster, Harley, & Collins, 1999), time delay (e.g., Snell, 1982), and video-based instruction (e.g., Van Laarhoven & Van Laarhoven-Myers, 2006). Although these strategies have a strong evidence base, they require 1:1 or small group instruction, which requires the presence of an instructor. These arrangements require an adult to facilitate instruction of skills to the individuals with disabilities. Given the range and number of skills needed to reduce dependence on caregivers, shifting the focus from task-specific instruction to pivotal skill instruction may maximize efficiency.

By definition, trained pivotal skills produce collateral effects in many other skills (Koegel, Koegel, Harrower, & Carter, 1999). Self-instruction (SI) meets this definition as a pivotal skill because once mastered, an individual is able to learn a variety of other skills independent of caregiver or educator instruction. For example, a student who learns to wash laundry via teacher direct instruction will simply know how to do laundry. In contrast, when the teacher instructs the same learner to navigate a mobile device, such as a smart phone, to view and imitate videos they can then teach themselves to do a wide range of other skills (e.g., brushing teeth, making coffee, making a copy). Acquisition of this pivotal skill (i.e., SI via a mobile device) may initially require more training time than just teaching the skill of washing laundry. However, the skill has utility across a range of environments where the learner can use SI to acquire new skills as well as assist with skills that have not maintained over time.

Browder and Shapiro (1985) defined SI as “the use of self-talk, printed instructions, or other materials that are used by the person alone rather than provided by the teacher. These instructions ‘set the occasion’ (i.e., are a discriminative stimulus) for

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