


Chapter 6


AI in the Special Education Toolbox: Strategies, Tools, and Techniques for Teachers

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ABSTRACT

Special education teachers face challenges in addressing diverse student needs. This chapter explores how AI enhances both teacher efficiency and student outcomes. AI supports individualized lesson plans, behavioral management, and progress tracking, enabling tailored interventions. Assistive technologies like speech-to-text and adaptive learning platforms personalize instruction, while AI tools such as Magic School AI and Brisk Teaching provide real-time feedback and data-driven insights. This chapter will provide a variety of strategies, tools, and techniques for special education teachers. AI offers powerful tools to enhance efficiency and personalized learning in special education. Future advancements require ongoing teacher development and ethical considerations to ensure AI remains a supportive tool, empowering educators rather than replacing them.

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INTRODUCTION

In ever-changing academic environments, special education teachers face a unique and demanding set of responsibilities that require a diverse skill set, flexibility, and a deep commitment to their students' academic and personal growth. One of the most significant challenges special educators manage is meeting the diverse learning needs of their students (McKleskey, 2017). Special educators support students with a range of abilities and disabilities, including autism spectrum disorder (ASD), specific learning disabilities (SLD), emotional and behavioral disorders (EBD), and physical challenges. These students have varying ability levels, and their significantly different needs require educators to identify individual strengths, weaknesses, and preferred learning strategies, all while tailoring their instruction to accommodate the individual differences of their students (Cummings et al., 2008).

A core component of special education is the creation and implementation of individualized and differentiated instruction (Kaufman, 2018). Special educators are responsible for developing detailed, personalized curricula, using evidence-based practices, for each student's unique educational goals as outlined by their Individualized Education Plans (IEPs). Individualized instruction is flexible and adaptable, as students may progress at different rates, experience setbacks, or require differentiated instruction. In other words, special educators must regularly monitor each student's progress, assess their ongoing needs, and adjust lesson plans and instruction accordingly. This requires a significant amount of planning and organization to ensure that each child receives the appropriate level of support while still being challenged.

Managing challenging student behaviors is another critical skill that special educators need to develop (Kaufman, 2018). Many students in special education settings face difficulties with self-regulation, impulse control, and social interactions. These difficulties can lead to challenging behaviors that range from disruptions during class to more severe outbursts. Managing these behaviors requires a thorough understanding of behavioral contingencies and implementation of proactive strategies in the classroom all while fostering a positive and supportive learning environment (Hopman et al., 2018), can be emotionally draining, and takes a significant amount of time.

In fact, one of the biggest challenges special educators face is finding enough time. Managing the required administrative tasks, attending school meetings, communicating with caregivers, and supporting school partners all takes a significant amount of time and diverts time away from instructional time (Billingsley, 2004; Goldman et al., 2024). Special educators must juggle paperwork for IEP meetings, assessments, and communication with caregivers, all while ensuring they are providing direct instruction to their students.

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