

Designing Research of Consequence for Students with Disability

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Teachers of students with and with disability monitor student progress and undertake informal research every day as they assess student knowledge and skill, interpret results, design and implement programs, and evaluate learning and development (Forbes et al., 2011). Although education researchers may conduct more formal and complex research, informal teacher research can be formalised through investigations that aim to improve knowledge and practice that result in positive outcomes for students and schools (Hendricks, 2006). Regardless of the research being conducted, any investigation that involves students with disabilities requires some careful decisions to be made in the planning and design in order to ensure the generation of valid and useful outcomes. Among these decisions are: selecting socially valid treatment measures, considering the whole person, and making appropriate methodological choices.

Selecting socially valid treatment measures

The selection of socially valid treatment measures that demonstrate a positive effect on a young person's social function, competence, and adaption within society has long been considered an important feature of intervention studies (Gresham, 1998). de Leeuw et al. (2018) emphasised the important role of including student voice when designing research that is socially valid and useful. Young people with disability have unique strengths, interests, and needs; and all students have the right to participate in discussions that concern them. Where possible, some form of consultation with each student should be standard practice when determining individualised goals, supports, and research plans. Although providing opportunities for students to share their perspectives and preferences is important, we must also use their voice to actively inform our decision making.

In a recent report, titled *The Voices of Children and Young People With Disability*, released by the *Office of the NSW Advocate for Children and Young People*, the consultation process with 372 children and young people with disability about several aspects of their lives was shared. Aspects included education, access and inclusion, and voice and participation. Across all three of these aspects, young people emphasised the benefits of including them directly in decision making about their education, the concerns that they had when only a parent/carer was consulted, and disappointment when decisions were made on their behalf. It was also reported that young people enjoyed having opportunities to learn life skills that could be generalised to authentic community contexts. These findings demonstrate how important it is to include students in making decisions concerning their education and to target skills that can be generalised and remain purposeful beyond the school setting.

For school-based research that involves students with disability, the treatment measure options should be carefully considered and interventions selected that are going to encourage generalisation of behaviour across multiple contexts (i.e., tasks, materials, social partners, and settings). There are several strategies that can be used to promote generalisation during intervention, including delivery diversity, the use of natural consequences, and the incorporation of mediators (Cowan & Allen, 2007). These strategies can enhance generalisability of behaviour; however, selecting measures that can be easily transferred is essential. One way of achieving this is to select treatment measures and instructional strategies that have been paired in effective research involving students with disability in the past (Browder et al., 2014). To identify practices, and their commonly associated independent variables, teachers and researchers should rely on advice from leading organisations in the field (e.g., CEC's High Leverage Practices for Students with Disabilities) and high-quality research papers and systematic reviews published in peer-reviewed special education journals.

Considering the whole person

When making research decisions that consider the whole person, the student's wellbeing, safety, rights, and inclusion

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need to be evaluated and protected. This can be achieved through identifying, recognising, and involving the environmental supports available to the student. One of the most influential of these environmental supports is the family and their involvement in the education of their child (Australian Research Alliance for Children and Youth [ARACY], 2016). Families not only inform decisions surrounding strategies, interventions, and treatment measures, but also play a critical role in ensuring the success of intervention implementation and generalisation (Cook et al., 2012).

The academic development of students with disability is often a priority when conducting classroom research; however, the important role that social inclusion and student wellbeing play in achieving the goals of inclusive education is increasingly recognised (Little et al., 2020). Unfortunately, many young people with disability experience higher rates of bullying and victimisation than their peers without disability. This is commonly associated with the lack of social support that they receive in response to their, often, 'different' social skills (Moffat et al., 2019). Research that is designed to support social inclusion, acceptance, and even friendship, remains underrepresented within the field of special education (Moffat et al., 2019).

One well known and evidence-based practice that can be embedded within classroom research to promote awareness, social inclusion, and acceptance, is peer-mediated instruction and interventions [PMII] (Wong et al., 2015). There are many ways that peer-mediation can be embedded within the classroom, including the use of: peer tutoring, peer coaching, peer modelling, and peer prompting and reinforcement. The flexible nature of peer-mediated intervention allows for it to be easily included as part of a suite of supports offered to students (Alnahdi, 2015). Peer-mediated approaches take some of the pressure away from the student with disability and support trained peers to develop a greater understanding of diversity, be more accepting of differences, and take the initiative to preserve the inclusion of others (Brain & Mirenda, 2019). While there is convincing evidence of the social and academic benefits of peer-mediated instruction for students with disability, these benefits are also true for the typically-developing peers acting as interventionalists (McDonnell et al., 2001).

Making appropriate methodological choices

With the *Nationally Consistent Collection of Data* process, there is increased pressure for schools and teachers to collect data on the progress of students with disability. Therefore, methodological decisions made by special educators need to be based on efficiency and practicality. In the past, many have reported not having enough time to collect data and that data collection interferes with their instruction (Alberto & Troutman, 2009). There are several ways to combat these barriers when collecting data, including the selection of methods that can be simply embedded within the typical classroom routine and collaborating with others (e.g., use of a teaching assistant to observe and measure student behaviour) to efficiently manage data collection (Lingo et al., 2011).

From a traditional perspective, educational research relies on the demonstration of relationships between cause and effect (Cook & Cook, 2016). Although studies with large sample sizes involving random assignment and controlled trials may produce statistically significant findings, teachers are often interested in the effects on their individual students and their progress towards individualised goals (Zanuttini, 2020). This is particularly true of special educators, who work with some of the most diverse student populations within our schools.

Students' achievements are influenced by their context, and the way that different students respond to these contexts means that the results of traditional group measurement cannot often be applied to address individual student needs (Forbes et al., 2011). When working with a diverse student population, there is a need to consider alternate approaches to measure student progress and achievement, approaches that honour individuality, diversity, and personal growth. One way to do this is to use single subject designs.

Regardless of whether you are a researcher or an educator, there are benefits to employing single-subject designs when

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working with students with disability. Single-subject designs allow for the frequent measurement of student performance through simple methods of data collection and analysis (Forbes et al., 2011). In contrast to traditional group designs that use a control group, single-subject designs rely on the individual student acting as their own control across various settings or conditions (Cook & Cook, 2016). The ongoing and increased use of single-subject designs in special education is supported by the need for relatively few participants, the inclusion of participants with unique characteristics from low incidence populations, and the ease of implementation in authentic settings (Pustejovsky & Ferron, 2017).

The ways in which students with disability are involved in research concerning them continues to evolve. Historically, research involving individuals with disability was conducted without their direct involvement (Barnes, 2003). With the move to an inclusive research approach after the introduction of the socio-political interpretation of disability, researchers have found ways to include those with disability in the design process and have had to think more carefully about selecting important treatment measures, honouring the whole person, and adapting research methods and designs (Barnes, 2003; Jenkin et al., 2015).

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