

I. What is the topic of your action research?

This action research investigates the impact of virtual learning on engagement and academic outcomes for special education students. Many students with disabilities face difficulties staying focused and completing assignments in an online environment. This study aims to identify strategies that support student engagement and improve learning outcomes through the use of virtual instruction, observations, and performance data. As Porter (2021) explain, “The failure of schools and teachers to engage students with disabilities successfully in virtual learning settings is clearly documented...these obstacles are firmly entrenched in school systems that favor neuro-homogeneity over neurodiversity and have merely been transferred to virtual teaching spaces” (p. 48).

II. What is the purpose of your study

The purpose of this study is to examine how virtual learning affects engagement and academic performance for special education students. Many students with disabilities face unique challenges in online learning environments, including maintaining focus, completing assignments, and accessing appropriate support. This study seeks to identify strategies and practices that can enhance student engagement, support learning, and improve overall academic outcomes. By exploring these factors, the research aims to provide insights for educators and administrators to better tailor virtual instruction to meet the needs of special education students. Porter (2021) note that “even in homes where technology and Internet services were adequate for online instruction, student absences and truancy skyrocketed after public schools converted to online learning formats during the pandemic...especially [for] students with disabilities” (p. 47).

III. What is your research question?

What is the impact of virtual learning on the academic performance of special education students?

IV. What is your research design (Qualitative, Quantitative, or Mixed Methods)

This study will use a mixed-methods research design, combining both quantitative and qualitative approaches. Quantitative data will be collected through measures such as assignment completion rates, assessment scores, and attendance records to evaluate academic performance. Qualitative data will be gathered through teacher observations, student interviews, and surveys to gain insights into student engagement, experiences, and challenges in the virtual learning environment. By using both types of data, the study aims to provide a comprehensive understanding of how virtual learning affects special education students and which strategies are most effective in supporting their success. According to Mertler (2025) both quantitative and qualitative approaches to conduct educational research are guided by several sets of philosophical assumptions, (p. 11).

a. Why did you choose this design

A mixed-methods design was chosen because it allows for a comprehensive understanding of the impact of virtual learning on special education students. Quantitative data, such as assignment completion and assessment scores, will provide measurable evidence of academic performance, while qualitative data, such as teacher observations and student feedback, will give insight into engagement, experiences, and challenges that numbers alone cannot capture. Combining both methods ensures that the study addresses not only what is happening academically, but also why certain outcomes occur, making it possible to identify effective strategies to support student success in virtual learning environments.

V. What data will you collect?

This study will collect both quantitative and qualitative data. Quantitative data will include assignment completion rates, assessment scores, attendance records, and participation metrics to measure academic performance and engagement. Qualitative data will include teacher observations, student interviews, and surveys to gather insights into students' experiences, challenges, and perceptions of virtual learning. Collecting both types of data will provide a comprehensive view of how virtual instruction affects special education students and help identify strategies to support their success.

VI. What types of measurement will you use?

This study will use a combination of quantitative and qualitative measurements. Quantitative measurements will include:

- Assignment completion rates to track task engagement,
- Assessment scores to measure academic performance,
- Attendance and participation records to monitor consistency and involvement in virtual classes.

Qualitative measurements will include:

- Teacher observations to note student engagement, participation, and behavior,
- Student interviews or surveys to capture perceptions, challenges, and self-reported experiences in the virtual learning environment.

Using these measurements will allow the study to capture both objective data on academic outcomes and subjective data on student engagement and experiences.

VII. What is the focus of your lit review?

The focus of the literature review is on understanding the effects of virtual learning on special education students, particularly regarding engagement, academic performance, and instructional strategies that support success. It will examine existing research on online learning environments, challenges faced by students with disabilities, and best

practices for virtual instruction. Additionally, the review will explore studies on technology-supported interventions, accommodations, and strategies that promote student motivation, participation, and achievement in online learning settings. The goal is to identify gaps in the current research and provide a foundation for implementing effective practices in virtual classrooms for special education students. Research shows that students with disabilities “have a right to accessible educational materials and assistive technology from the start” rather than waiting for retrofitted solutions (Center on Inclusive Technology & Education Systems [CITES], 2020, p. 5). Similarly, global survey findings indicate that the COVID-19 pandemic disrupted the delivery of assistive technology services, highlighting the need for stronger accessibility systems and resilient instructional strategies in online learning (Smith et al., 2020).

Reference:

- Center on Inclusive Technology & Education Systems (CITES). (2020). *Virtual learning considerations for students with disabilities*. CAST. <https://cites.cast.org/>
- Mertler, C. A. (2025). *Action research: Improving schools and empowering educators* (7th ed.). Sage Publications
- Porter, S. G., Greene, K., & Esposito, M. C. K. (2021). Access and inclusion of students with disabilities in virtual learning environments: Implications for post-pandemic teaching. *International Journal of Multicultural Education*, 23(3), 43–61.
- Smith, E. M., Hernandez, M. L. T., Ebuonyi, I., Syurina, E. V., Barbareschi, G., Best, K. L., ... MacLachlan, M. (2020). Assistive technology use and provision during COVID-19: Results from a rapid global survey. *International Journal of Health Policy and Management*, 10(7), 1–12. <https://doi.org/10.34172/ijhpm.2020.130>