



Tips for Organizing a Dyslexia Simulation Workshop for Pre-Service Teachers

Kimberly A. Davidson

Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA

Sarah Williams

Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA

Emily Lin

Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA

Annmarie Jackson

Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA

Paula Tench

Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA

ABSTRACT

The impact of dyslexia on literacy has gained much attention in recent years, resulting in the need for additional training for teachers at all levels of the educational system. Therefore, the purpose of this paper is to provide tips on how to organize a dyslexia simulation. Authors recount their experiences building a team, identifying participants, selecting a simulation, planning, organizing, setting up, and implementing a dyslexia simulation workshop for pre-service elementary and special education teachers. Initial expectations, challenges, and successes are highlighted. Final reflections, lessons learned, tips, and resources (Table 3) are shared. Overall, the facilitators and participants found the experience beneficial.

KEYWORDS

educator
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dyslexia;
experiential
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Dyslexia is the most identified specific learning disability, affecting anywhere between four to twenty percent of children (Riddick et al., 2012). At its most basic, dyslexia is defined as a word-level reading impairment in individuals with normal intelligence. However, dyslexia is a complex disorder that can vary in presentation and severity in different individuals (Miles & Miles, 1999). Elliot (2020) contends there are four distinct conceptions of dyslexia, including: (a) students identified within the lowest end of the normal range of reading, (b) a neurobiological disorder affecting decoding, spelling, and word recognition, (c) a persistent reading disability that does not improve with academic interventions, and (d) a pervasive neurodiverse disorder that adversely affects working memory, processing speed, concentration, time management, self-organization, and verbal expression in addition to reading difficulties. With such a variety of ideas circulating about dyslexia, it is understandable that preservice and novice

CONTACT Dr. Kimberly A. Davidson, Associate Professor of Literacy, Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA; email kimberly.davidson@ung.edu. Dr. Sarah Williams, Associate Professor, Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA; email sarah.williams@ung.edu. Dr. Emily Lin, Professor, Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA; email emily.lin@ung.edu. Dr. Annmarie Jackson, Associate Professor, Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA; email annmarie.jackson@ung.edu. Dr. Paula Tench, Associate Professor, Department of Elementary and Special Education, University of North Georgia, Dahlonega, GA; email paula.tench@ung.edu.

teachers would have difficulty recognizing and addressing the needs of students with this condition. Further, it comes as little surprise that there is an abundance of myths and stereotypes about dyslexia as well.

Myths and Stereotypes

To ensure students with dyslexia (SWD) are provided with the required education to become literate and succeed, educators must be properly trained to identify (a) the signs of the disability, (b) the effects on student learning, and (c) the proper methods to address learning needs. This has been a daunting task due to the aforementioned lack of a cohesive definition of dyslexia as well as persistent misconceptions about the nature of the syndrome. For example, a myth persists that the main characteristic of dyslexia is that students see words and letters backwards (Riddick, 1995). Gonzalez (2021) found that stereotypes continue to proliferate linking dyslexia to a specific gender, intelligence level, and socioeconomic status despite their repeated refutation. Similarly, Gonzalez (2021) reported that some educators mistakenly believe students can “grow out of” dyslexia, or that interventions such as diet and exercise, colored overlays for reading, eye tracking exercises, or medications are effective approaches to treating dyslexia.

To address these misconceptions, in the last 5 years, multiple states, including Georgia, have passed bills codifying the characteristics, methods of identification, and selection of scientifically researched methods and curricula to appropriately educate SWD. The Georgia Department of Education officially adopted the definition of dyslexia endorsed by the International Dyslexia Association:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (IDA, 2002)

Further, the legislation in Georgia specifies that educator preparation programs (EPPs) such as ours provide specific training in dyslexia to our preservice teachers (PSTs) to combat misinformation and cultivate competence (S.B.48, 2019). As part of our efforts to meet this mandate, we conducted a simulation activity with our PSTs in the Department of Elementary and Special Education (ESE).

Theoretical Framework

Kolb’s experiential learning theory highlights the significance of experience in the learning process. This theory is not separate and positioned as a stand-alone from previous theories such as behaviorism. Instead, the experiential theory is viewed as a complement to other learning theories to provide a comprehensive perspective (Kolb, 1984). Most importantly, Kolb posits that learning is a process that is regenerative and not fixed. To that end, the dyslexia simulations offered our PSTs multiple opportunities for teaching and learning.

Context

The EPP at our University utilizes a Professional Development Community (PDC) model. Our students are assigned to a cohort and typically take the same classes together. Classroom instruction takes place two days a week and may be delivered using face-to-face, online, or hybrid approaches. The other three days, our students are placed in an internship at a local public school working with a mentor teacher. PSTs in our program may work in small groups or individually with students who need additional support. Our PSTs stay in their placements for roughly 6 weeks and then move to another classroom. PSTs log approximately 120 hours in each placement. Our program provides a dual degree that can lead to certifications in Elementary and Special Education, so PSTs are placed in both general and special elementary education classrooms. At the end of every six-week placement, PSTs attend a debriefing session. These sessions cover a variety of topics to help students succeed in their education.

In response to the state mandate in 2022, ESE faculty members in our College of Education created four dyslexia modules for teacher candidates to complete at their own pace, before embarking on student teaching in the spring. The modules cover the characteristics, accommodations, development of instruction, and intervention support for SWD. Students complete a quiz at the end of each module, with an 80% passing score requirement. However, to provide a more active learning experience for our students, we decided to embed the dyslexia simulation in a debriefing session.

Steps to Implement a Dyslexia Simulation

To comply with the new legislation, we chose The Experience Dyslexia simulation because it provides hands-on experiences that simulate the challenges faced by SWD (International Dyslexia Association of North Carolina [IDANC], 2018). We expected that the simulation would help decrease stereotypes, increase empathy and awareness, and support students in developing lesson plans that accommodate SWD. Therefore, we began organizing and preparing our simulation. We outline the steps for implementing a simulation below:

Step 1: Build Your Team and Identify Participants

First, find colleagues who are willing to help organize and facilitate the simulation activity. Because we are organized in PDCs, it was natural for us to work as a team. Ensure all team members know their initial roles and responsibilities. Then, identify participants. We decided to focus on our approximately 50 seniors because they would soon be graduating.

Step 2: Select Simulation

Next, research available programs and simulations and examine the scope and focus to determine a fit for your program. When deciding, examine costs and available resources. The Experience Dyslexia simulation is low-cost and includes background information, detailed directions, and sample reflection questions.

Step 3: Plan and Organize

Next, enlist any additional facilitators needed for the simulation. You may want to involve both faculty and internship supervisors to ensure there is one facilitator for each of the six stations. Allow facilitators to choose which station they would like to manage. The stations simulate

challenges typically experienced by individuals with dyslexia such as foundational reading, auditory, visual, and motor skills. Stations are listed in Table 1.

Table 1: Simulation Stations

Station Number	Station Name	Purpose of the Station
1	Learn to Read	Simulates a beginning reading problem
2	Listen to Me	Simulates an auditory figure-ground problem
3	Write with Mirrors	Simulates a visual-motor and writing problem
4	Name That Letter	Simulates a letter-word identification problem
5	Write or Left	Simulates a copying and writing problem
6	Hear and Spell	Simulates an auditory discrimination problem

Then, meet with all facilitators to discuss the materials needed, decide what outcomes you would like students to experience as a result of participating in the workshop, and make a plan to measure the outcomes. We incorporated some of the post-station reflection questions provided in the Dyslexia Simulation kit. Additionally, we created our own post-simulation reflection questions for students to complete when the entire simulation was finished. Questions are presented in Table 2.

Table 2: Reflection Questions

Post-Station Reflection Questions
How did the activity make you feel?
Did the activity give you any insights about the experiences of students with dyslexia?
As a result of this activity, how likely are you to change your teaching approach?
How might you use your experience from this activity to inform your teaching?
Post-Simulation Reflection Questions
The Simulation Workshop improved my awareness and knowledge of students with dyslexia.
I have developed increased empathy and perspectives for students with dyslexia through this simulation workshop.
This Simulation Workshop decreased my stereotypes toward students with dyslexia.
This Simulation Workshop increased my interest in wanting to learn more about students with dyslexia.
Based on your experience in the Simulation Workshop, what practical strategies (accommodations) could you use to facilitate the learning of students with dyslexia or to decrease their challenges?

Questions included open-ended responses and Likert-scale response options. Students accessed and answered the reflection questions through QR codes we generated and linked to Google Forms. These questions provide insights into students' perceptions and conceptions of the simulation experience overall.

Step 4: Set Up Materials and Space

Next, locate a space that is large enough to hold all the students and allow for movement between stations. Select a room supplied with tables, chairs, and (if possible) technology such as a public address system, computer, interactive whiteboard, and Wi-Fi, to support the facilitation of the simulation event. Reserve the space for at least ninety minutes, to ensure plenty of time.

Then, print and organize the materials needed for the stations. Materials consist of templates and directions provided with the simulation. At Stations 2 and 6, devices to play audio are needed (Table 1). In addition, mirrors or other means of reflecting written text backward are required for activities at two Stations 3 and 5 (Table 1). We brought laptops to play audio and a combination of mirrors and cell phones for "mirror writing" activities.

Step 5: Implement Simulation

Finally, set up and implement the simulation. Arrange six tables with seating, label the stations, and provide enough materials for each group. Describe the simulation and its purpose to the participants. Explain that they will have a predetermined amount of time at each station to complete activities, access and answer reflection questions, and transition to the next station. We recommend allotting at least 10 minutes for each rotation. Let participants know that there are questions to complete and a final group discussion after the simulation. Set a timer and begin the simulation. After the post-simulation discussion with participants, plan to meet with facilitators to debrief and reflect upon the outcomes of the event.

Reflection and Debriefing

Soon after the simulation, the facilitators should meet to debrief and reflect on the simulation and review the students' feedback and reflections. We determined that the active participation of students was a key achievement. Although most facilitators indicated that the students appeared confused, stressed, and unsure when addressing certain tasks, PSTs maintained their positivity by smiling, assisting one another, and working together to overcome the challenges. Some of our students reflected that the noises in the room posed challenges for them to complete and focus on tasks. Others indicated that the rotations through the stations made them feel overwhelmed. However, we explained to PSTs that this was precisely the purpose of the exercise: to simulate the real-life environmental challenges of a typical classroom, where students must adapt to varying levels of stimulation and dissonant sounds while managing transitions and attending to instruction.

Table 3: Resources About Dyslexia

Title of Resource	Link to Resource
Dyslexia Facts & Myths Handout	education.ufl.edu/ufl/files/2019/09/Dyslexia-Myths-and-Facts.pdf
GADOE Dyslexia Resources	gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Pages/Dyslexia.aspx

UFLI Dyslexia Resource Hub	education.ufl.edu/uflri/dyslexia-resources/
Understood.org	What is dyslexia? understood.org/en/articles/what-is-dyslexia Skills that can be affected by dyslexia understood.org/en/articles/skills-that-can-be-affected-by-dyslexia Signs of dyslexia at different ages understood.org/en/articles/checklist-signs-of-dyslexia-at-different-ages

We encountered several challenges while facilitating the workshop. First, we did not have sufficient time to give the students an overview of the activities and provide them with essential background information about dyslexia at the beginning of the workshop. This lack of information left some students feeling confused and embarrassed as they struggled to grasp the instructions. The takeaway is that at the beginning of the workshop, it is critical to provide students with a comprehensive introduction, including an overview of all planned activities and what is expected of them. This approach will enable them to comprehend the purpose of the workshop and prepare for the tasks they will encounter later. Another challenge was that in the writing station, where the students were requested to write with their dominant hand while looking in the mirror to complete three tasks, some students expressed their difficulty in finding the right angle to view their own handwriting by using their camera in the smartphone. Using a small self-standing mirror as a more practical alternative to a smartphone is suggested.

In the future, we would pair this simulation activity directly with the dyslexia modules to provide additional information addressing facts and myths about dyslexia. Additionally, we would highlight not just the academic impact of dyslexia but the social, emotional, and behavioral components. To achieve these goals, we would prioritize debriefing and reflection throughout the simulation, encouraging PSTs to make explicit connections between simulation activities and real-world applications. The simulation provided a concrete way to better understand SWD and with more context and debriefing PSTs will be better prepared to meet these students' needs. A final suggestion is to implement this simulation with juniors so they can build knowledge and experience earlier. See Table 3 above for additional resources on dyslexia.

Overall, we felt that the simulation provided PSTs with insights into what it is like to be a student with dyslexia. Despite the initial frustration, stress, and confusion expressed by our students during the activities, it became evident that this simulation activity ultimately provided them with valuable and positive experiences. During the reflection activity, PSTs indicated a reduction in stereotypes, development of empathy, and increased awareness of SWD, and their ability to generate appropriate accommodation strategies to meet the needs of these students.

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CORRESPONDENCE

Inquiries and other correspondence concerning this article should be addressed to Dr. Kimberly A. Davidson, Department of Elementary & Special Education, 122 Oakwood Building, 3820 Mundy Mill Rd., Gainesville, GA 30566, United States; email: kimberly.davidson@ung.edu.