

## **Background and Research Question**

Two-thirds of the world's disabled population resides in developing countries.<sup>1</sup> Disability in such regions often carries social stigma, restricting access to healthcare and education that would improve quality of life and functional capabilities of individuals.<sup>1,2,7,10</sup> In September 2013, Joyce Banda, president of Malawi, partnered with Special Olympics and Clinton Global Initiative to commit to working with leaders of developing countries in Africa in order to create inclusive communities and accessible social programs for individuals with disabilities.<sup>9</sup> Zambia is a southern African country that has been identified as 'low-development' by the United Nations and shares a border and cultural, economic and political similarities with Malawi.<sup>11,15</sup> Special Hope Network (SHN) is a Zambian organization already committed to the same goals as those of President Banda. The organization serves children with moderate to severe intellectual disabilities from impoverished families in Lusaka, Zambia, providing free education and physical, speech and occupational therapy. Zambian high school graduates trained by SHN implement these services. These teachers are eager to provide high quality care, but require further development in some essential skills, especially those related to organizing lessons that match the children's most significant needs.

More than 80% of children with disabilities in the United States, regardless of disability category, struggle with reading.<sup>14</sup> This issue is exacerbated in other countries; only 3% of individuals with disabilities across the globe are considered literate.<sup>4</sup> In Zambia, only 2% of schools are equipped to meet the needs of students needing special education.<sup>8</sup> Thus, children with disabilities are three times less likely than typically developing peers to attend school and learn to read.<sup>2</sup> Yet, literacy in individuals with disabilities improves communication abilities and acceptance by peers, and is bi-directionally correlated with improved health, employment, and socioeconomic outcomes.<sup>3</sup> Improved literacy skills contribute to peace by empowering individuals to attain individual freedoms and develop a better understanding of the world, ultimately preventing or resolving conflict, like social stigmas against people with disabilities, by promoting understanding, tolerance, and respect.<sup>12</sup>

*Ku-punzitsa apunzitsi* means 'to teach teachers' in Nyanja, a Zambian dialect.<sup>5</sup> This research project will examine whether explicit training in planning lessons on early reading skills results in improved outcomes for Zambian children. Our multidisciplinary team will seek to improve the effectiveness of SHN's teachers by establishing a sustainable, culturally fluent program to supplement training. The program will target organization and planning of literacy lessons. SHN requested help in this specific target area, and Dr. Pullen (faculty advisor) confirmed the need in an initial visit and professional development (PD) session with the teachers at SHN. New and relevant knowledge will be contributed to the study of PD in reading, planning and instruction by investigating the development of these skills in young adults in a developing country, and measuring progress of children who are receiving care from the SHN teachers.

## **Project Preparation**

The *Ku-punzitsa apunzitsi* team is sensitive to the cultural differences between Western educational practices and those in the southern regions of Africa. To prepare for this important work, we will take several steps to maintain cultural sensitivity and to improve our own knowledge of global development. In the Spring 2014 semester, Ms. Nemeč will take a course in from Global Development expert, Dr. Carol Anne Spreen, in comparative education. Dr. Spreen has also agreed to review the preliminary planning for the project and provide guidance on cultural sensitivity. The team, along with Dr. Pullen, will include a trip to visit Dr. Spreen's successful shared reading intervention project in Cape Town, South Africa. This visit is planned to occur midway through the team's time at SHN in order to enable discussion of necessary adjustments to the program in response to cultural context with Dr. Spreen. Furthermore, Dr. Pullen has made contact with Dr. David Hamer, an expert in Global Development from Boston University who currently resides in Zambia. Dr. Hamer implements a cultural sensitivity curriculum with his students who work in Zambia and has agreed to help the team to develop

modules that will be completed in Spring 2014 before the trip to Zambia. Finally, Dr. Rebecca Scharf is an expert in Global Health and will be integrally involved in the development of the project.

### **Methodology**

SHN leaders specifically identified the need for improved instructional planning to increase employee independence and effectiveness, promoting stronger education and therapy services to children. We will create a pretest/posttest model to study planning and organizational skills in 30 young adult teachers at SHN. A preliminary examination of the individualized education plans indicates that all of the students served by SHN have explicit reading goals, which makes the specific focus on reading a logical place to begin in organization and lesson planning skills. Lesson planning skills will be measured by examining current lesson plans. In spring 2014, we will administer a pretest to evaluate baseline lesson planning and identify specific need areas with the SHN staff. The teachers will be included in writing their own goals for the project. This needs identification will guide the generation of learning goals for SHN teachers. Training activities will be developed to address specific learning goals. The program will administer activities that *supplement* rather than supplant previous training via interactive podcasts<sup>6</sup> and direct PD. Dr. Pullen, who has already provided PD activities, will coach the team through the PD activities and be available to the student team throughout the project.

In summer 2014, in Zambia, we will first observe and interview SHN teachers and, if necessary, adjust the program to ensure sensitivity to participants' abilities and social norms.<sup>13</sup> Over the following two weeks, the program will be implemented for SHN teachers, with a treatment group receiving targeted training and a control group receiving a neutral placebo. Implementation will entail presentation of podcasts and direct training, and discussion of progress in weekly focus groups. The final week will allow follow-up with SHN teachers and administrators through interviews and participant self-assessments. During this week, the post-tests will assess if any further changes need to be established to ensure the sustainability of the program. We will examine lesson plans at posttest for characteristics of effective lesson planning, and again 3 months later to determine the maintenance. Results will be analyzed statistically, examining Cohen's *d* effect size to determine treatment outcomes. Success will be gauged by positive effect size. Progress will be further monitored through examination of teachers' lesson plans to determine the training's impact on the lessons for the children with disabilities.

The limitations of this research are the small sample size and short length of stay in Lusaka. Sample size is limited due to the number of SHN employees. However, if a positive effect size is established from data analysis, we hope to evaluate the program in other settings with larger sample sizes. Though the four week time frame will allow sufficient time to implement the program and conduct the study, it would be ideal to have more time to observe the cultural context before implementing the program and to follow up and track subjects after the program.

### **Expected Outcomes and Implications**

Our team will develop and assess a comprehensive program in developing and organizing for reading instruction. A successful program will benefit SHN by teaching employees skills that decrease dependence on SHN's directors, increasing the organization's efficiency, and ultimately resulting in improved reading skills for children. The implemented program will improve SHN's educational services while also increasing local employees' professional independence. Children and families will benefit from teachers being better able to implement targeted reading instruction in the classrooms. The program will also be replicable and adaptable for future SHN employees, as well as other organizations that employ community members.

While developing and implementing the project, it is essential for our team to be aware of the context of the research study. We have established a strong relationship with SHN, understanding the mutual benefits of our work and the need for significant communication between the two parties. While SHN requested this project, our solution must be cognizant of SHN's existing organizational structure and cultural context. A project that is not culturally sensitive will potentially cause participants to lose trust in and respect for volunteers that visit SHN. We will follow guidelines of Community-Based Participatory Research for this project, including SHN staff and families at every step of the process.