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Assistive Technology Lab for an HBCU: Bringing the Center for Assistive Technology Initiative (CATI) Lab to Life

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Abstracts

This review discusses how teacher knowledge of assistive technology significantly impacts student success with assistive technology and that many teachers enter the field feeling unprepared to implement these technologies with students. This article explores the University of Arkansas at Pine Bluff's process in setting up an assistive technology laboratory for students to explore. Historically Black Colleges and Universities (HBCU) are currently working harder since the COVID-19 pandemic to address challenges within their communities with accessing updated technology. As well as engaging students and the communities through increasing knowledge about digital and assistive technology by utilizing hands-on techniques. Such experiential learning opportunities are vital to the success of rehabilitation counseling professionals and educators. This paper explores how the lab is set up and the engagement activities to provide a foundation for those looking to develop a comparable lab.

Keywords: Student success, access, experiential, engagement, educators

Introduction

The U.S. Department of Education, Office of Special Education reported that 5,944,241 students ages 5–21 were provided special education services under the Individuals with Disabilities Education Act [1], Part B in 2016. Individual education program (IEP) teams for each of these students must consider their need for Assistive Technology (AT) in order to access the curriculum. Due to this need for teacher preparation regarding AT, an Assistive Technology Lab was started at University of Arkansas at Pine Bluff (UAPB) through a self -funded, collaborative effort. In addition to providing resources for students in the rehabilitation services program, it also provides resources for students in teacher preparation programs, and the lab eventually hopes to allow access to families from the community.

If nothing else, the COVID-19 pandemic has shown the world the educating of our students is not a one-way street. However, marginalized communities continued to face challenges in the technology arena. Connectivity and access issues are at the forefront. The Minority Broadband Initiative has been actively engaging with Historically Black College and University [2] presidents, chancellors, and students on Digital Economy related issues since its launch November 2019. Mainly, the focus has been on building and maintaining conversations with key stakeholders has been instrumental in understanding and exploring options for leveraging HBCU broadband infrastructure to connect neighboring communities of vulnerable populations, especially during the outbreak of COVID-19 [2]. Though, within those issues, education and access to assistive technology for students with disabilities and educators is as vitally important.

Given the importance of promoting knowledge of AT in order to foster academic knowledge and student success, especially at HBCUs and marginalized communities, this article will describe the lab creation process, the setup of the lab, and AT curriculum proposed certificate program up for review. As the AT Lab at UAPB provides learning experiences to benefit students with disabilities and students working with individuals with disabilities and serves as a conceivable ideal for future labs with similar aims, the information provided is intended to provide a frame of reference for those pursuing to launch AT experiences.

Groundwork

The lab is a joint venture between the Department of Curriculum and Instruction and School of Education at UAPB. In preparation to start the lab, the CATI lead visited Increasing Capabilities Access Network [3] at Arkansas Rehabilitation Services [4], where clients and residents of Arkansas can access a wide range of AT devices. Because the project lead wanted to capitalize on inter-departmental utilization of the lab (i.e., Department of Curriculum and Instruction, Department of Psychology, Counseling, and Special Education, and Agricultural Education), it was determined that the campus library would make a good central location for the lab. In addition, there was an existing Teacher Resource Center that the lab

could be located in proximity to, there is access to the lab via an accessible elevator, and the library offers the best accessibility to families and community members.

CATI Lab Organization

Due to space constraints, the UAPB CATI Lab had to be intentionally arranged. Each area focuses on a specific type of disability range recognized by IDEA. The areas feature software/hardware (ranging from low to high-tech), apps, activities, and information on each type of disability. Additionally, wall features QR codes linked to pertinent websites, apps, and books/resources with further information.

CATI Lab Activities

As aligning the undergraduate and/or graduate curriculum to support a course in AT takes planning and time, currently the lab is being utilized to aide in the embedding of AT information in existing courses. UAPB students' visit the lab at a professor's request or come to the lab with a class. This is done as a requirement for a course or as part of a program. In addition to reaching out to students in rehabilitation and education, the CATI lead has also reached out the Addiction Studies program and the Health, Physical Education and Recreation program, all of who expressed interest in their students utilizing the lab. Additionally, the activities are tailored to fit the needs of the group to promote multiple visits to the lab.

By allowing for students to interact in multiple ways with the AT, students can gain more knowledge and comfort with it. For those who only attend once, the activities are designed to provide a wide exposure to establish a stronger knowledge base. The activities that professors can require are having students to identify an AT that would be helpful for a student given a specific need and/or students bringing case studies from their classes into the lab to develop a better understanding of what resources are available to help their specific case. Lastly, because research suggests that interaction with people with disabilities is likely vital to changing attitudes or behavior, whenever possible, we attempt to expose UAPB students to individuals who actually benefit from some of the technologies.

Courses Attached to AT/CATI Lab

UAPB's multidisciplinary Center for Assistive Technology Initiative (CATI) will additionally prepare individuals to provide accessibility to persons with disabilities, including deaf, blind, and persons with special education needs through initial and advance certificate programs. The certificate program will be a standalone program but can also be added to other programs as a track (i.e., Education, Rehabilitation Services, Addiction Studies, Nursing). Our graduates are encouraged to pursue the National RESNA - Assistive Technology Professional Certification to obtain ATP credentials. The courses from the initial and graduate will include courses from the current undergraduate Rehabilitation Services program and prospective graduate program in Rehabilitation Counseling.

For the initial certificate, the courses below can be completed with undergraduate level courses. There is also an advanced certificate for graduate or above. This certificate can also be utilized in conjunction for professional development requirements.

Initial

The courses proposed for the initial certificate program are: Intro to Rehabilitation Counseling, Assistive Technology, Assistive Technology Design, Technology and Instruction and Seminar in Rehabilitation.

Graduate Certificate

The courses proposed for the graduate certificate program are: Theories of Counseling, Medical Aspects of Disability, Trauma Counseling/Intervention, Governance and Administration of Assistive Technology and Capstone in Assistive Technology

Discussion

There is still a disability divide, particularly within marginalized communities. The tech industry has been working on the digital divide for years, mainly focusing on connectivity and ensuring that people from all walks of life have equal access to the tools of the modern world [5]. HBCUs can utilize programming, resources like Minority Broadband Initiative and similar organizations to bring tools and access to the community. An assistive technology lab is just the beginning for collaborating not only outside of the university setting but internally. There are gaps for students with disabilities across all academic programs. In addition, it is important that not only students with disabilities know and utilize assistive technology but educators and communities as well. Technology is for all people.

An area to mention not discussed earlier was to make sure there is incorporation of training on the technology. Inclusiveness should not stop at being connected – it's also about applications and skills. Therefore, we need more applications which need to meet the unique needs of different groups of people, communities, and industries so we can bring everyone into the fold [5]. In addition, technology should ensure that all people can actually use them.

Competing Interests: The authors declare that they have no competing interests.

References

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