The Xavier University Assistive Technology Learning Center (ATLC)

The project was developed by faculty in the departments of Occupational Therapy and Secondary Education; the Learning Assistance Center; Instructional Design and Digital Media; and the University Library.

Applicants:

Lynn Beirl, Associate Director, Instructional Design and Digital Media
Deb Castiglione, Instructional Designer, Instructional Design and Digital Media
Amy Ensor, Director, University Instructional Design and Digital Media
Cassandra Jones, Assistant Director, Disability Services, LAC
Claire Morress, Clinical Faculty, Occupational Therapy
Victoria Zascavage, Associate Professor, Secondary Education (Graduate)

Proposal for Women of Excellence Grant
February 2013
Amount Requested: $9,975.95

Abstract:
We propose to develop a prototype lab equipped with hardware and software intended to assist students with disabilities. The lab will be designed to reduce common barriers to learning in order to improve student research, reading, writing and productivity for greater success in the academic curriculum. A secondary goal is to provide a center for Xavier’s Occupational Therapy and Education students, so they can explore technology available for individuals with learning disabilities to better prepare them for their professional practice. Through documenting use and surveying users, we will better meet the needs of our students with disabilities.

The long-term vision is to build from the success of this year-long pilot to expand the lab through securing a subsequent grant(s). The expanded center would be open to the wider Cincinnati community, providing individuals with disabilities, students, faculty, and professionals the opportunity to explore assistive technologies that may enhance learning, and independence.

Approvals:

Carol Scheerer  
Chair/Associate Professor, Occupational Therapy

Mark Meyers  
Dean, College of Social Sciences, Health and Education

"The great aim of education is not knowledge, but action." - Herbert Spencer
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Estimated Cost</th>
<th>Quantity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dell PCs</td>
<td>Xavier In-Kind</td>
<td>3 - 5</td>
<td>$0.00</td>
</tr>
<tr>
<td>Large external monitors</td>
<td>Xavier In-Kind</td>
<td>2 - 3</td>
<td>$0.00</td>
</tr>
<tr>
<td>Software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read &amp; Write Gold (Mobile) – assists with text reading, voice dictation, research aides, and teaching tools</td>
<td>$645.00</td>
<td>2</td>
<td>$1290.00</td>
</tr>
<tr>
<td>Dragon Professional – speech recognition and auto-transcription</td>
<td>$599.00</td>
<td>1</td>
<td>$599.00</td>
</tr>
<tr>
<td>Accessibility apps for iPads/iPod – (various, TBD. Total cost not to exceed $300)</td>
<td>$300.00</td>
<td></td>
<td>$300.00</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Intern/GA of LAC (20 hours per week. Duties: Caption/Transcribe/Edit Video; Train on Accessibility Software; Monitor Center)</td>
<td>$8.75/hour</td>
<td>700</td>
<td>$6,125.00</td>
</tr>
<tr>
<td>Hardware/Peripherals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPad Mini – 7&quot;</td>
<td>$329.00</td>
<td>1</td>
<td>$329.00</td>
</tr>
<tr>
<td>iPod Touch</td>
<td>$399.00</td>
<td>1</td>
<td>$399.00</td>
</tr>
<tr>
<td>iPad – 10&quot; 4th generation</td>
<td>$499.00</td>
<td>1</td>
<td>$499.00</td>
</tr>
<tr>
<td>Cases for iPads/iPod</td>
<td>$199.00</td>
<td>2</td>
<td>$199.00</td>
</tr>
<tr>
<td>Sky Wifi Smart Pen (4gb) - Record everything you write and hear. Tap anywhere on your notes to replay the audio from that moment in time.</td>
<td>$199.95</td>
<td>1</td>
<td>$199.95</td>
</tr>
<tr>
<td>Livescribe Smart pens (older tech)</td>
<td>Xavier In-Kind</td>
<td>10</td>
<td>$0.00</td>
</tr>
<tr>
<td>Notebook Paper Refills</td>
<td>$9.00</td>
<td>4</td>
<td>$36.00</td>
</tr>
<tr>
<td>Access to B/W &amp; Color Printer</td>
<td>Xavier In-Kind</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$9,975.95</td>
</tr>
</tbody>
</table>
Justification

Equipment
Del PCS – Xavier in-kind (letter attached)
Justification – Three to five computers are needed to establish the lab and to be able to make available the software programs the Student Intern will use for training. Having more than one will allow training to occur and still have open computers for students to explore the various software programs independently.

Large External Monitors- Xavier in-kind (letter attached)
Justification – Two to three large external monitors are needed to allow demonstrations of the software programs to be large enough for more than one person to view. Large monitors will also be helpful for students with low vision who use screen magnification.

Software
Read & Write Gold (Mobile) – assists with text reading, voice dictation, research aides, and teaching tools.
Justification – The majority of students using accommodations have either a learning disability or attention deficit hyperactivity disorder with the functional impact being in the areas of reading (fluency, rate, comprehension), writing, and processing to name a few. The cross functionality of this program provides tools for students to have print materials read to them which can improve their ability to comprehend the material; allows the student to read multiple chapters in a timely manner and has writing tools to guide students through the writing process. Most students with either a learning disability or attention deficit hyperactivity disorder have not been exposed to assistive technology and are unaware of its benefits. Since the majority of students will fall into one of these disability groups and will be referred to the center to learn about Read & Write Gold and all it has to offer for reading, writing, and studying, two copies are needed.

Dragon Professional – speech recognition and auto-transcription
Justification – This program will allow students with learning disabilities in writing or students with physical disabilities that impact writing to use a speech to text program for writing. This program will allow students to dictate and have the program translate it into text. Through speech, one can manage multiple computer applications such as e-mail, document creation, etc. For students with disorders of written expression who struggle with transferring their thoughts to paper, they can use this program to verbally complete writing assignments. For students with limited hand dexterity or inability to use a traditional keyboard, this program allows the student to access the computer.

Accessibility apps for iPads/iPod – various, TBD
Justification – As the accessibility of Apple devices continue to increase, more companies are creating apps that allow individuals with disabilities to have portable access to the printed word, dictation programs, organizational assistance, and the ability to communicate, to name a few, through the use of their Apple device. It is important that we begin investigating available accessible apps to share with students who could benefit.

Services
Student Intern/GA of LAC (20 hours per week) Duties: Caption/Transcribe/Edit Video; Train on Accessibility Software; Monitor Center
Justification - A Student Intern/GA is needed to train the students who will be referred to the center on the various hardware and software tools. The Student Intern will also monitor the center and administer the evaluations to students who are referred. In addition, the student will also assist with captioning/transcribing videos for faculty.

**Hardware-Peripherals**

iPad Mini – 7"
Justification – With the increase use of Apple devices among college age students and the increase of built-in accessibility features, we can improve our knowledge of its accessibility features as well as accessible apps to demonstrate to students who use the iPad. Many individuals are unaware of the built-in accessibility features that can provide access to various tasks performed on the iPad. In addition, some providers of books in alternative formats have created accessible apps for students to access their textbooks on the iPad. For some students, depending on their disability, the smaller screen is easier to manipulate.

iPod Touch
Justification – With the increase use of Apple devices among college age students, and the increase of built-in accessibility features, we can improve our knowledge of its accessibility features as well as accessible apps to demonstrate to students who use the iPod touch. Many individuals are unaware of the built-in accessibility features that can provide access to various tasks performed on the iPod touch. Also, there are apps that are not available on the iPad but available on the iPod. In addition, some providers of books in alternative formats have created accessible apps for students to access their textbooks on their iPod touch.

iPad – 10" 4th generation
Justification – With the increase use of Apple devices among college age students, and the increase of built-in accessibility features, we can improve our knowledge of its accessibility features as well as accessible apps to demonstrate to students who use the iPad. Many individuals are unaware of the built-in accessibility features that can provide access to various tasks performed on the iPad. In addition, some providers of books in alternative formats have created accessible apps for students to access their textbooks on the iPad.

**Cases for iPads/iPod**
Justification – Since these devices will be handled regularly by numerous students, faculty, and staff, it is necessary to protect our investment. The screens on the devices are sensitive and we want to protect them from scratches, dents, etc. The case is designed to protect the entire device in the event it is dropped.

**Sky Wifi Smart Pen (4gb)** - Record everything you write and hear. Tap anywhere on your notes to replay the audio from that moment in time.
Justification - This would allow students who have difficulty with note taking to be able to be more independent. The student would be able to take notes and audio record simultaneously. For example, if the student doesn't understand or is not able to write quickly enough, when reviewing, he/she can tap on the notes and the audio recording will begin at that point of the lecture. This would allow the student to listen to that particular portion of the lecture and complete his/her notes. Many students whose disability impacts their ability to process information (attention deficit hyperactivity disorders or learning disabilities) or whose disability is physical and impedes their ability to write could benefit from...
this product by allowing them to concentrate on the lecture and not worry about taking the notes during the class and allowing them to access the lecture at a later time.

Livescribe Smart Pens (older tech) – Xavier in-kind (letter attached)
Justification – Currently Disability Services has ten older Livescribe Smart Pens that are loaned to students. Several will be shared with the lab to allow the Student Intern to learn how to use the older technology and be able to demonstrate the use to students as they check them out for the semester.

Notebook Paper Refills
Justification – The Sky Wifi Smart Pen and the Livescribe Smart Pens require special notebook paper to allow the audio recording to correspond to the written notes.

Access to B/W and color printer – Xavier in-kind (letter attached)
Justification – This is needed to allow printing of the training materials that will be used with students, faculty, or staff.
The Xavier University Assistive Technology Learning Center (ATLC)

Mission-Centered
The overarching mission of Xavier University is to “educate each student intellectually, morally, and spiritually” and to “support students as they cultivate lives of reflection, compassion and informed action”. Students enrich the Xavier learning community by bringing diverse skills, abilities and learning styles to the classroom; however, for some students (especially those with disabilities) these styles may actually pose a barrier to learning and education. This is particularly true when courses rely heavily on traditional teaching methods and paper-based curricular materials. Contemporary technologies and digital formats can provide a more flexible and accessible learning environment. Thus, we seek funds for this collaborative, co-curricular initiative, which aims to build a learning environment based on the principles of accessibility and Universal Design for Learning to fully engage all of our students regardless of learning style. In order to do this, we are proposing a pilot project to investigate software tools that can address the learning styles and needs of Xavier University as a whole, enabling all to perform to the best of their abilities.

Through this pilot we hope to begin to create opportunities for both men and women at Xavier, with and without disabilities, to have greater access to a Xavier education where they can grow to become organizational and philanthropic leaders. It also will demonstrate interdepartmental/cross-functional collaboration of staff and faculty, working as philanthropic leaders in the Xavier community, modeling and encouraging others, as this is only the beginning of what we hope to develop, having significant impact on the future of the University, its students, faculty, and staff.

Importance of the Project
- “About 15% of the world’s population lives with some form of disability, 2-4% with significant difficulties in functioning” - World Health Organization 2011 World Report on Disabilities
- In 2009, 11% of students in higher education were reported to have a documented disability – U.S. Government Accountability Office 2009 Report on Higher Education and Disability

Assistive technology provides individuals with disabilities the opportunity to overcome barriers and participate more fully in school, work, and community activities. Mainstream technology is increasingly available; however, it is still difficult for individuals with disabilities to acquire what they need. This is largely due to:
- Difficulty getting information on available assistive technology;
- Lack of opportunity for consumers to handle and experience assistive technology devices prior to purchase; and
- Lack of knowledge and in selecting and using current assistive technology.

This prototype lab will provide students with disabilities information and training on available assistive technologies, as well as the opportunity to handle and try out the technologies of their choice. Additionally, the lab will be used for training occupational therapy and special education students to prepare them for professional practice in the Greater Cincinnati community.

The long-term vision is to build from the success of this pilot to expand the prototype lab through securing larger and more comprehensive federal, state and/or private grant(s) beyond the initial WCX grant. The prototype would be developed into a larger, one-of-a-kind center, open to the community, to provide individuals with disabilities, students, faculty, educators, and professionals from the Greater Cincinnati area the opportunity to explore technology and to increase awareness of, access to, and dissemination of assistive technology. We envision the lab would eventually provide revenue-generating professional development and training to area professionals.
The Xavier University Assistive Technology Learning Center (ATLC)

Specific Aims and Expectations
1) Develop and pilot-test a student learning center equipped with software and hardware designed to reduce common barriers to learning such as reading and handling print materials, writing, study skills, note taking, and organizational abilities.
2) Develop and pilot-test self-paced instructional modules that will allow students with disabilities to explore and try out the available hardware and software.
3) Provide an assistive technology lab for pre-professional training of occupational therapy and special education students to familiarize them with the technology available for individuals with learning disabilities.
4) Determine the accessibility-related equipment and assistive technology needs most widely requested by Xavier University students with learning disabilities.

This grant would also cover the costs of hiring a part-time student intern to provide assistance and training to students, as well as captioning and transcription services to enable Xavier to provide accessible multimedia for just-in-time access by all.

Level of Xavier Engagement
Our proposal supports access and accessibility to meet the needs of the growing population of students with disabilities in both the face-to-face classroom and online learning environment. Approximately 231 students enrolled at Xavier this semester have a documented disability. The majority has either attention deficit hyperactivity disorder (ADHD) (89) or a learning disability (LD) (82). Other disabilities include physical/medical (25), psychological (20), cognitive (4), sensory (5), and autism/Asperger's (5). In addition, there are 125 veterans enrolled at Xavier with VA benefits. Of those, 26 are noted as having been injured during service. The extent of those injuries is unknown at this point. In addition to assisting Xavier students with disabilities (whether the disabilities are documented or not), the Center will directly impact students and faculty in many departments, including 50-60 Occupational Therapy and Education graduate students yearly. Furthermore, the lab will be open to all faculty and students who request information and wish to explore the technology.

Program Outcome Measures
1. Assistive Technology Learning Center User Survey – students with LAC-generated accommodations will be invited to explore and try out the software and hardware in the lab. All those who choose to participate will be invited to complete an anonymous user survey to identify the perceived effectiveness of the lab, the technology and the training modules, as well as to identify any unmet learning needs.
2. OT/EDSP Student Assignment – the ATLC will be linked to two academic programs-occupational therapy and special education. Student learning outcomes will be assessed through completion of assignments as specified in the respective course syllabi (MOCT 605, EDSP 560, and EDSP 570).
3. Assistive Technology Needs Survey – this electronic survey will be sent to all Xavier University students to determine the general need at the university level for technologies designed to increase access to course content and enhance student learning and study-related skills.

Recognizing the WOX Giving Circle
If the WOX decide to award grant money to fund the proposed pilot project, they will be acknowledged in all marketing materials created, on a plaque to hang within the center, and in future support requests (e.g., space, funding, equipment, etc.), as the initial funders that enabled our vision to be built.

Thank you for considering us in our desire to build A Better Education for a Better World.
February 26, 2013

Dear Women of Excellence Giving Circle,

I hereby express commitment on behalf of Xavier's Infrastructure and Technology Support Department to provide at least 3 in-kind (used and supported) PCs and monitors for the proposed Xavier University Assistive Technology Learning Center (ATLC), a grant proposal submitted by faculty in the departments of Occupational Therapy and Secondary Education; the Learning Assistance Center; Instructional Design and Digital Media; and the University Library.

Sincerely,

Judy Molnar
Executive Director, Infrastructure and Technology Support
Information Technologies
513-745-1905
molnari@xavier.edu
February 27, 2013

Alana Nodell
Women of Excellence
Xavier University
3800 Victory Parkway; ML 5460
Cincinnati, OH 45207

Dear Alana:

I am writing to the Women of Excellence in support of the Women of Excellence grant submission for the Xavier University Assistive Technology Learning Center (ATLC). I am aware that the group currently has not been able to solidify a space for the proposed Center. I have encouraged the group to go ahead with their grant submission and I will support the group in identifying and obtaining temporary and/or longer term space in an accessible and centrally located part of campus.

Thank you for considering their proposal.

Best regards,

[Signature]

Steven T. Herbert
Associate Provost for Academic Affairs and
Dean of the Graduate School
Professor of Physics
Xavier University
February 28, 2012

Dear Women of Excellence Giving Circle,

I wish to affirm my commitment on behalf of Xavier’s Disability Services, Learning Assistance Center, to provide at least five used Livescribe Smart Pens for the proposed Xavier University Assistive Technology Learning Center. This is a grant proposal submitted by faculty and staff in the departments of Secondary Education and Occupational Therapy; the Learning Assistance Center; Instructional Design and Digital Media; and the University Library.

Sincerely,

Cassandra Jones, MRC, CRC
Assistant Director, Disability Services