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ACT--Get Your ACT Together

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ABSTRACT: Ball State University has been a statewide leader in welcoming students and staff personnel with special needs requirements. The Office of Disabled Student Development has provided a full time coordinator who was charged with the responsibility of removing architectural barriers and to assist in providing the best possible learning environment for all persons attending the University regardless of individual disabilities. Through these efforts the University has been recognized at both the state and national level for initiatives in this area.
GAINING CAMPUS SUPPORT

Ball State University has been a statewide leader in welcoming students and staff personnel with special needs requirements. The Office of Disabled Student Development has provided a full time coordinator who was charged with the responsibility of removing architectural barriers and to assist in providing the best possible learning environment for all persons attending the University regardless of individual disabilities. Through these efforts the University has been recognized at both the state and national level for initiatives in this area.

During the mid 80's Ball State University began a computer competency program aimed at producing a graduating student population which was both knowledgeable and competent in the use of computing technology in their major area. During this period a concentrated effort was made to include all students, faculty, and staff including those with disabilities. As the program advanced it became evident that a full time coordinator of Adaptive Technology would be needed to deal with grant funding, affirmative action for potential employees with disabilities, special student needs in the area of technology and other legal requirements. This was, as most of you know, a time when the state legislatures were not interested in funding new positions, and our President was not in favor of adding professional staff. This, then, is how Ball State University funded a new full time position and established the Adaptive Technology Program as it exists today.

When President George Bush signed the Americans with Disabilities Act [1], he said "Let the shameful wall of exclusion finally come tumbling down". The legislation took effect on January 20, 1992 and afforded Ball State University the opportunity to focus on the issues of providing proper support in the attempt to provide accessibility to our disabled students, faculty, and staff. Having previously dealt with the problem of architectural barriers Ball State was in a position to concentrate on the technology portion of the issue and how best to meet the needs of the University population. A small coalition including the directors of computing, disabled student development and affirmative action decided to leverage this high interest level into a program of enhanced services and technological infrastructure.

The Rehabilitation Act of 1973 prohibits discrimination against the handicapped within any institution that receives or benefits from federal funds. Being handicapped was defined as "one who has a physical or mental impairment which substantially limits one or more major life activities, has a record of such impairment, or is regarded as having such impairment." Major life activities include: self-care, social life, education, transportation, housing and employment.[2] With regard to higher education, a qualified handicapped person is defined as one "who meets the academic and technical standards requisite to admission or participation in the recipient's program or activity." [3] An institution of higher education receiving such funds "shall take such steps as are necessary to ensure that no handicapped student is denied the benefits of, excluded from participation in, or otherwise subjected to discrimination under the education program or activity operated by the recipient because of the absence of auxiliary aids for students with impaired sensory, manual, or speaking skills."[4] The Americans with Disability Act further required that each service, program or activity conducted by a public entity "when viewed in its entirety" be readily accessible and usable by disabled individuals.[5] This provision specifically dealt with printed materials whether in syllabus form, supplementary reading lists, and tests which must be made available to students in a format which allows the student to display their ability and to allow
for an evaluation which centers on ability and not disability. Braille and electronic reproduction are frequently given the foremost consideration.

Educom has estimated that over 10% of all college students have some form of disability. Current estimates place the number of Americans with some form of disability at 43 million. This includes the 4.5 million students currently in our school systems. These include 40% with some form of visual impairment, and 26% with some form of hearing disability.[6] As employment opportunities for persons with disabilities we can expect an even greater number to be attending the nation's colleges and universities in the future.

The refocusing of issues caused by the ADA gave the University the opportunity to make "formal" a program previously staffed by volunteers. The timing and synergy generated allowed the establishment of a program budget supported by funds from the offices of the Provost, President, and V.P. for Student affairs. This budget allowed the university to hire the first full time coordinator of adaptive technology. The University Computing Services budget provided funds for the hardware, software, and supplies to start the Adaptive Computer Program (ACT) and this in turn has generated grants and other gifts which permitted a significant leveraging of the initial investment.

**BUDGETING AND RESOURCES**

In the university structure this program is unique in having multiple offices sharing the fiscal responsibility. The newly appointed coordinator was allowed to select the hardware and software and these items, in addition to the several items previously purchased by the departments of Computer Science and University Computing Services comprised the beginnings of the new program. The coordinator provides a yearly request for hardware and software which is prioritized by areas of need. Most of these purchases are taken from the University Computing Services budget but it is not uncommon for special needs to arise during the year which are unanticipated and which are supported by other university departments.

The position taken by the University is that providing access to technology is a University function and as such should be funded cooperatively by the areas affected. We feel that this willingness to share resources among departments sets Ball State University apart somewhat from the norm. The ADA specifies that certain accesses shall be provided by the university and so the university funds certain of these through the central administration. Other requirements made during the academic year might be funded by a department or through a cooperative sharing of resources. This sharing precludes the need to "own" the service or technology provided. It is just such willingness to provide rather than to own which has made the program so successful.

Under normal circumstances it is within the purview of the Purchasing department to secure pricing and negotiate with vendors, however, due to the extensive background and knowledge base of the director a great deal of latitude has been granted in this area. By virtue of having an extensive technical background the Coordinator has been able to request and obtain certain configurations of hardware and software which have been particularly successful in solving problems with providing access to University technology. In some cases vendors have willingly given discounts on items which were used in special applications in exchange for the feedback generated. This has turned out to be a win-win situation for both the vendor and the University.
We still continue to do Beta testing for both hardware and software vendors. This cooperation has resulted in a number of applications which are currently being used and refined and which benefit both the vendor and the user as these refinements result in more sophisticated solutions to accessibility problems. The main recipients of the benefits thus created have been the students which have gained a degree of accessibility that might have otherwise been unavailable to them.

All of this is a reflection of the attitude of the University in responding to the needs of the students. Money and space are two items which are normally held sacred to a budgetary unit within the University. Ball State has been successful in breaking down this tradition with the attitude of sharing and cooperation. This has allowed us to not only follow the letter of the law but to exceed its expectation to the benefit of the students and faculty.

ACT PROGRAM SPECIFICS

The pervasiveness of computers and electronic information systems which has developed within the last few years has been met with a degree of apprehension by the "technophobes" within the general population. Much of the disabled population has, however, embraced the new technology as a means of increasing their independence and functionality. The integration of hardware and software systems which are designed to meet the needs of those individuals with disabilities is the crux of the adaptive computer technology program. Screen reading and optical character recognition software combined with voice synthesizers and scanners allow visually impaired individuals freedom of access to texts, journals, and other documents that permeate the collegiate atmosphere. Keyboards which are specifically designed for students with disabilities combined with voice recognition technology and artificially intelligent word processing software help mobility impaired students prepare their class assignments, term papers, and other requirements for the successful completion of their course work. Intelligent communications software enables the hearing impaired individuals to converse with others through the telephone without the need for interpreters. These adaptive technologies continue to break down the logistic and time barriers which persons with disabilities face on a daily basis.

Close cooperation and a clear sense of direction are required if the program is to be implemented successfully. The ACT program at Ball State University is directly involved with fulfilling the goals and mission of not only University Computing Services, but those of the University in general. The ACT coordinator works closely with the heads of the academic units to ensure that the departmental educational objectives are facilitated for students with disabilities within specific major areas of study. Technological resources provided by Media Services, University Libraries, and other non-academic areas are utilized as required to provide effective access to the information necessary for a successful educational experience.

The University mission statement charges that we produce graduates who are "able to analyze information, think critically, solve problems, communicate effectively, and demonstrate competency with computers."[7] Students with disabilities are continuously faced with informational access barriers. The ACT program facilitates access to information, thus allowing the students to play an active role in planning and implementing specific adaptive measures which target individual needs. The ACT training further provides students with a foundation in computer literacy as well as advanced usage techniques. Access to documentation resources allows students
to become both knowledgeable and independent. This program also provides disabled students with the knowledge and ability to solve information access problems that translates directly to employment situations which will be faced after graduation.

"BALL STATE UNIVERSITY 2000" is a list of goals and objectives with which the ACT program is also concerned. This list was prepared by the University faculty and administrative staff to launch the University into the twentieth century. The ACT program is actively involved in producing graduates which are sought by employers and graduate and professional schools by providing them with the tools necessary for effective access to information and technology. Work experience opportunities are provided through the ACT lab assistant and management positions. The program Coordinator consults with employers who provide internships which address and resolve accessibility issues. The ACT Coordinator consults with faculty to devise strategies which will ensure access to course materials. Emerging adaptive technologies are continually investigated and evaluated so that we can provide the most effective access possible. Students are encouraged to take responsibility for their education and to work with adaptive technology as a means to pursue their individual educational goals.

Through consultation with primary and secondary educational institutions programs are designed that ensure a proper foundation in basic technique is provided for students with disabilities who plan to continue with post secondary education. Accessibility issues concerning distance learning opportunities provided by the University are also addressed by the ACT program. Participation in recruitment, orientation, and preparation of prospective students has made Ball State University a leading provider of accessible educational opportunities to persons with disabilities.

This program is a direct extension of University Computing Services. UCS is charged with "offering a wide range of computing and systems services to students, faculty, and staff. University Computing Services strives to provide those within Ball State University with the equipment and services required to complete their respective objectives." [8] The program exists to provide access for disabled students to the general services provided by UCS. The program further allows access to the mainframe system, as well as resources provided by individual department computer labs. Internet services are also facilitated by adaptive technology. UCS provides the services while the program gives students with disabilities access to the services.

Specifically, the program's mission is to provide "equal access to computing services to all persons with disabilities at Ball State University." This is accomplished by direct education of students as well as faculty development efforts aimed toward making course work accessible for disabled students. The program provides reasonable accommodation for students, faculty, and staff with a wide array of equipment and supportive services by enhancing existing academic and computing facilities. This is done in accordance with the University mission, computing Services mission, Public Law 504 and the Americans with Disabilities Act. The mission of the Adaptive Computer Technology Program at Ball State University is, therefore, a synthesis of all these missions. The University provides the philosophical impetus, while UCS provides the technological base.

The Adaptive Computer Technology committee was established in 1990 to facilitate the communication between various units of the campus which were involved with disability issues as well as faculty, staff and students with disabilities. Membership includes, but is not limited to, the Directors of University Computing Services and Disabled Student Development, Coordinators
of University Computer Labs, University College Learning Center and Adaptive Computer Technology, Assistant Dean of University Libraries, Chairperson of the Computer Science Department, Media Services personnel, Indiana Vocational Rehabilitation regional management, and a representative from each of the four predominant disability populations on campus. Members are responsible for long-range planning, unit requests for services, budget proposals, and dissemination information to individual campus units. Although the ACT committee is considered an ad hoc delegation, the University-wide Americans with Disabilities (ADA) committee has been kept apprised of proceedings and developments. The ACT committee has six meetings a year with impromptu meetings as needed to insure continued commitment to the ACT mission.

The ACT coordinator is responsible for maintaining the adaptive hardware and software which is located in various labs throughout Ball State University and for those faculty and staff who have adaptive technology allocations. Requests for adaptive services are directed to the Coordinator, and equipment and resource allocation decisions and logistics are supervised by the ACT Coordinator. The Coordinator is also responsible for resolving all information accessibility issues which occur at Ball State University.

Familiarity with advances in the field is another important aspect of this position. The ACT Coordinator anticipates the needs of clientele with disabilities and is responsible for acquiring and implementing new technology, configuring and integrating new technology with existing systems, authoring grant proposals, beta testing products and studying the feasibility of new adaptations. Training sessions and workshops are routinely conducted to ensure the equipment and software is used properly and knowledgeably by the target population.

The primary ACT facility on campus is centrally located adjacent to the twenty-four hour access computer lab and is staffed 72 hours per week. Lab assistants are recruited from the disabled student population. These assistants are trained in basic computer use through the University Computer Lab training program and also receive adaptive technology instruction through a peer training program. Peer training provides the facility with student employees who are familiar with the adaptive equipment in the lab and who respond to service requests in an empathetic manner.

The primary ACT lab also serves as an assessment and training center. Persons with disabilities are encouraged to experiment with various adaptations. Exposure to a range of modifications, from varying price ranges, students are much better prepared to compete in the job market upon graduation. The experience with various pieces of equipment allows students to be more articulate in defining their needs in interviews with prospective employers.

The primary lab is open to University personnel for visitations to foster an understanding of what equipment is available and how its use can improve and enhance the teaching experience. Workshops are also conducted in the lab to assist incoming students in the use of appropriate adaptations and as preparation for required computer literacy course work.

Lab usage data has been compiled since 1991. Approximately 250 usages per semester were logged during the first year of existence. As new equipment was obtained and new adaptations were created the lab hours were extended and a full-time Coordinator position was created. Since that time the use of the primary facility has grown to approximately 1,500 usages per semester.
With approximately 450 students with disabilities registered for support services, an estimated 85% of the target population is currently served by the ACT program.

This increased demand for services necessitated the distribution of adaptive equipment to other University Computer Labs and Departmental facilities. Our program currently has adaptive resources in five additional UCL computer labs with equipment available upon request into other UCL facilities. Adaptive equipment is also currently available in three University library locations, the Office of Disabled Student Development, Students Services computer lab, two computer science departmental labs, two English departmental labs and the Business department.

Another crucial aspect of the ACT program is inservice training. Fundamental training for University personnel in facilities with distributed adaptive equipment is provided by the ACT Coordinator. Knowledgeable staff provide a resource for the users, as well as the Coordinator, and serve as contacts in the event of equipment malfunction.

Adaptive technology products are provided through a short-term loan program. This program has proven beneficial for students who need a product for a specific course and occasionally for those who may not have immediate funding available for their own equipment. The individual loaner program also serves as a vehicle for off-campus agencies to determine if a specific adaptation is appropriate for a client before a purchase is made. Adaptive equipment can also be loaned to academic departments exhibiting a temporary need. Short term distribution of equipment allows adaptations to be placed in an area of need only for the term of the need. Keeping the equipment in areas of need helps conserve campus resources and keeps a balance of adaptive inventory available.

The ACT program is part of the Academic Support Services group of University Computing Services. Consultation is provided for all campus units which includes recommendations for planning and purchasing. These recommendations are then sent to the University President's office, offices of the Provost and involved department chairs, Americans with Disabilities committee, and the Affirmative Action Office.

The ACT program also assists campus units to comply with requests for alternative media by individuals with disabilities. This includes braille, large print and electronic formats for pre-admissions information, syllabi, course handouts etc. The ACT Program is also involved in a full-scale effort to provide all University publications in electronic format for easy access via the mainframe computer systems. Course offerings and scheduling, campus phone directories and information, as well as student newspapers and employee publications are also included in this effort. The Coordinator also pursues information sharing and problem resolution by participation in various associations concerned with disability issues, i.e. National and State Associations of Higher Education and Disability, Equal Access to Software and Instruction, and the International Committee for Accessible Document Design, to stay abreast of current legal and ethical trends.

In order to anticipate and correct access limitations, the Coordinator meets regularly with the offices of Affirmative Action, Disabled Student Development, as well as the Americans with Disabilities Act committee, collegiate deans and departmental chairpersons, University Libraries, University College Learning Center, Media Services, and Facilities Planning personnel.

Membership on the ACT, Campus Wide Information System, Indiana Higher Education
Television System, Indiana Association on Higher Education and Disability, Vocational Rehabilitation, and Office of Services for the Blind, as well as search and selection committees gives the Coordinator direct participation in establishing and implementing disability policy across the campus and the state.

The ACT coordinator enhances public relations and promotes the program through presentations at state, national, and international conferences, publishes articles about the program and adaptive technology, consultations with other education institutions and governmental agencies, guest lectures to undergraduate and graduate classes, as well as ACT program documentation.

Ball State University is committed to compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990. Based on the National Institute of Disability (NID) publication, "The Impact of Exemplary Technology-Support Programs on Students with Disabilities," Ball State developed a checklist of services to be provided. All applicable categories of service are being addressed or implemented by the ACT program. Additional services, not specified by the NID report, are also being provided to individuals with disabilities. The "Checklist for Implementing Accessibility in Computer Laboratories at Colleges and Universities," published by the Trace Research & Development Center, is also followed by the ACT Program Coordinator. Nearly all of the recommendations listed have been implemented and the remaining applicable items have been addressed in the new ACT budget. With this leadership and focus, the program assures enhanced electronic accessibility for students with visual, mobility, hearing and learning disabilities at Ball State University.

NOTES

[2] Section 504, Rehabilitation Act of 1973, Regulation Section 104.3 (j)(1)
[3] Ibid, Section 104.3 (K)(3)
[4] Ibid, Section 104.44 (D)
[5] Americans with Disability Act, Title II, Section 35.151A
[7] From Ball State University Mission Statement
[8] From University Computing Services Mission Statement