

Universal Learning Support Design: Maximizing Learning Beyond the Classroom

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Abstract

This chapter was originally published in The Learning Assistance Review in 2006 and is reprinted verbatim with permission. The movement for adapting Universal Design (UD), a concept from architecture, to higher education has yielded guiding principles for implementing UD in classroom and online instruction. In order to address all of the environments on college campuses, members of the Pedagogy and Student Services for Institutional Transformation (PASS IT) Institute, which met recently in Minneapolis, identified the need to adapt UD principles to the administration of learning support services. In response to this need, we propose 7 principles of Universal Learning Support Design (ULSD) that are distinct from—and yet complement—principles of Universal Instructional Design (UID). In addition, we provide a definition of learning support, a rationale for ULSD, a strategy for implementation, and future directions for dissemination.

Originally developed for use in architectural design, the principles of Universal Design (UD) have positively impacted postsecondary settings through the collaborative work of dedicated advocates. Adapting the seven principles articulated by the Center for Universal Design (CUD) at North Carolina State University under architect Ron Mace's leadership (Center for Universal Design, 1997), postsecondary educators now have useful sets of guidelines for implementing UD in instruction (Bowe, 2000; Burgstahler, 2002; Fox & Johnson, 2000; Scott, McGuire & Shaw, 2003; Silver, Bourke & Strehorn, 1998). The need now exists to adapt UD principles to the myriad campus services that support students' classroom and online learning. Scholars in Disability Services and related areas have already called attention to the leading role that student services can play in supporting the retention and academic achievement of students with disabilities (Block, 1993; English, 1993; Hall & Belch, 2000; Hart, Zafft & Zimbrich, 2001; Kroeger & Schuck, 1993; Weir, 2004). But, as Burgstahler (2005) has noted, "Few published articles have focused on accessible or universal design of student services" (p. 23). Despite this dearth in scholarship, student services often demonstrate UD "because they provide multiple means of facilitating the acquisition of knowledge" (Higbee & Eaton, 2003, p. 233). Training and dissemination projects such as the University of Washington's Disabilities, Opportunities, Internetworking, and Technology (DO-IT), University of Minnesota's Pedagogy and Student Services for Institutional Transformation (PASS IT), and DePaul University's Productive Learning Strategies (PLuS) have led recent efforts to translate UD in areas of

learning support (DePaul University, 2006b; University of Minnesota, 2006; University of Washington, 2006; U.S. Department of Education, 2006). Yet practitioners and administrators still lack a clear statement of principles that parallel what is already available for instruction. To address this situation, in this article we offer seven principles of Universal Learning Support Design (ULSD) inspired by our discussions with participants of the first summer institute of PASS IT held at the University of Minnesota August 2–4, 2006.

We begin by offering a rationale for the need and then proceed to outline seven guiding principles inspired by the principles of Universal Instructional Design (UID). We will also define “learning support” and illustrate the range of programs, resources and services that fall within its domain. We conclude with strategies for successful implementation in one key area of learning support, the campus learning center, and suggest further directions for this critical work.

Rationale

Mace (1988) and the Center for Universal Design (1997) at North Carolina State University have inspired three distinct adaptations of UD principles to instruction that are often cited in the higher education literature. Because the instructional principles provide clues for how UD may be adapted to learning support, it will first be useful to review the instructional adaptations of UD.

Concerned with assistive technologies, the Center for Applied Special Technology (CAST), a Massachusetts-based nonprofit organization, adopted three principles of Universal Design for Learning (UDL) that attend to three essential facets of learning (i.e., recognition, strategy, and affect) that are mapped to distinct brain networks (Rose, 2001; Rose & Meyer, 2000). These principles may be summarized as “multiple means of representation,” “multiple means of support,” and “multiple means of engagement” (Center for Applied Special Technology, 2006). Nearly simultaneously with CAST’s development, two faculty teams, funded by grants from the U.S. Department of Education’s Office of Postsecondary Education, developed new sets of principles by considering the relationship of UD to Chickering and Gamson’s (1987) “seven principles for good practice in undergraduate education” (Fox & Johnson, 2000, p. 43; Fox, Hatfield & Collins, 2003, p. 26; Scott, McGuire & Shaw, 2003, pp. 374–376). One team, at the University of Connecticut’s Center for Postsecondary Education and Disability, developed “Universal Design for Instruction” (UDI; Scott, McGuire & Shaw, 2001). UDI consists of nine principles—seven of which are the principles stated by CUD—with supplementary definitions and examples that clarify the relevance for instruction. Ultimately, a second team at University of Minnesota’s Curriculum Transformation and Disability (CTAD) collaborative, developed eight principles of “Universal Instructional Design” (UID)—a term coined by Silver, Bourke, and Strehorn (1998)—that provide a truly original synthesis of CUD’s principles and Chickering and Gamson’s principles. In proposing UID principles, the CTAD members attempted to make the relevance of UD to instruction easily applicable (see Figure 1). Among these three versions of principles, a fundamental theme persists: universally-designed instructional environments foster equitable and multimodal

means by which students possessing the broadest range of characteristics can engage with instructors and curricular materials, and thus minimize barriers to students' learning. It is important to remember this fundamental commonality because the growing number of instructional adaptations of the principles of UD can seem confusing.

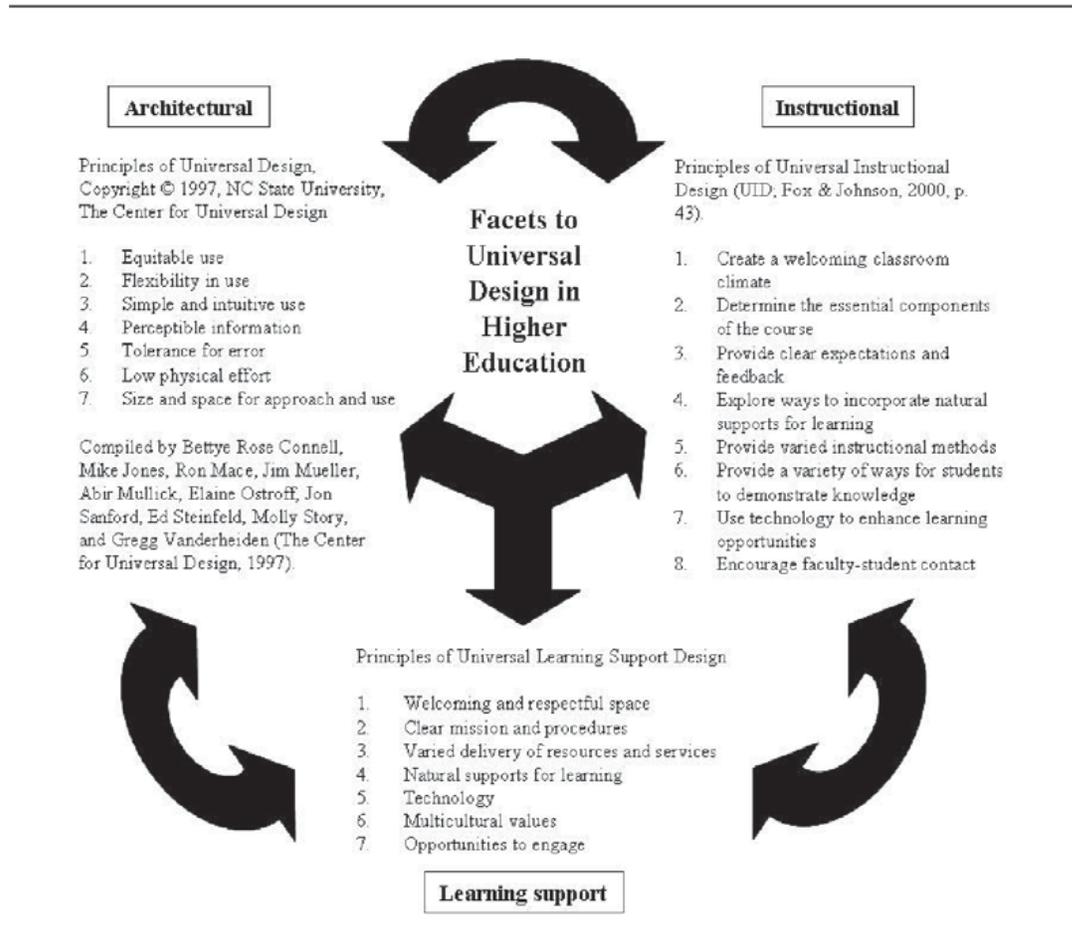
Although postsecondary educators have made significant headway in disseminating and implementing adaptations of UD principles in instruction, their focus on the classroom does not account for the entire range of students' college learning experiences and environments (Chism & Bickford, 2002; Keeling, 2004; Terenzini, Pascarella, & Blimling, 1996). Clearly, if we intend to minimize barriers and maximize students' access to learning more holistically, we must ensure that the wide range of learning support offices, programs and services also support UD principles. As in the case of instruction, practitioners can benefit from a set of guiding principles and strategies for implementation. Some have already used UD, UDI, and UID to guide their efforts, but we wonder whether lock-stock-and-barrel applications of architectural or instructional principles are sufficient or even appropriate for all areas of learning support. To take an example, instruction-specific language, like CTAD's second UID principle—"determine the essential components of the course" (Fox & Johnson, 2000, p. 43)—may not always translate to services like a learning commons dedicated to supporting students' self-directed study as opposed to achieving a course-specific learning outcome. Other UID principles bring similar challenges for their application to areas of learning support. Here we need to reconsider, then, the relevant principles that apply to the design of learning supports.

Seven Principles of Universal Learning Support Design (ULSD)

We must bear in mind that CUD's seven principles undergird all design considerations. Particularly where the resource is physical space, administrators and staff must, in our opinion, first attend to architectural design before other aspects. To return to our earlier example, the dominant feature of the learning commons—an innovative design integrating many traditionally distinct services—is its highly multipurpose space. Although staff members may be present to offer a variety of support and consultation, access to key learning resources is integrated into the commons' physical design: the layout of study carrels, tables, and computer workstations intended for various kinds of study activity and often self-service access to online resources and assistive technology. However, attention must then be given to nonphysical and ephemeral features of the commons like social interactions between students and staff, printed and online information, and administrative functions that take place behind the commons' public space.

In our discussion with colleagues at the PASS IT summer institute, we arrived at a set of principles that, for us, enhances the application of architectural and pedagogical concepts to learning support functions and environments. We developed these principles further by taking into consideration Blimling, Whitt, and Associates' (1999) principles of good practice in student affairs. We view these principles as "works in progress" to be adapted in ways appropriate for the distinctiveness of individual programs and services (see Figure 1):

Figure 1. Diagram showing three sets of complementary principles of Universal Design, Universal Instructional Design, and Universal Learning Support Design



Note: The application of the Principles of Universal Design, which were conceived and developed by the Center for Universal Design at North Carolina State University, to instruction and learning support does not constitute or imply acceptance or endorsement by the Center for Universal Design.

1. Welcoming and respectful space: Features of the spaces, resources, and services are welcoming, respectful, and comfortable to students having the widest range of characteristics and abilities. All representations of the spaces are welcoming and respectful.

2. Clear mission and procedures: The purpose of resources is clear and the procedures for their use are easy to follow regardless of the students' experience, knowledge, language skills, and abilities.

3. Varied delivery of resources and services: Varied, nonstigmatizing means of delivering resources and services foster equitable and flexible use by students. Varied delivery meets the needs and interests of students having the widest range of experiences, characteristics, and abilities.

4. Natural supports for learning: Resources and services foster students' holistic learning and engagement in a developmental manner. Staff members are trained to accommodate

the diverse learning styles of students. Services empower the students using them.

5. Technology: Technology resources enhance opportunities for all students to be engaged and learn. Technology assists in implementing other ULSD principles.

6. Multicultural values: All aspects of learning support embrace the broadest characteristics, backgrounds, and interests of students. Students' knowledge and experience are incorporated into design elements and improvements.

7. Opportunities to engage: Space, resources, and services promote students, regardless of their characteristics, to be engaged in learning. Positive interactions among students and staff are fostered by resources, services, and programming.

What Is “Learning Support”?

Now that we have proposed a set of guiding principles, to which spaces, programs, and activities do they apply? We intentionally designate the target of these principles as learning support. We believe that doing so avoids the artificial dichotomization of *academic learning* and *student development* and embraces the spirit of Keeling's (2004) holistic definition of transformative learning. We also escape pinning learning support services to a particular institutional division like student affairs or academic affairs, an important strategy amid the diversity of organizational homes that maintain the range of activities we have in mind. In essence, these activities include the many ways and many places in which instruction and student services can be coupled within and beyond classrooms. It is important to adopt a fluid definition as institutions increasingly embrace innovative, integrated, and holistic approaches to student learning, as learning communities demonstrate. Where instruction is concerned, UID should be considered in addition to ULSD.

We outline here nine broad areas of learning support and provide examples of the types of services that may be included within each area. This list is a beginning. In providing it we hope that student service professionals and administrators will recognize their particular programs and services and work to adopt ULSD at *both* the programmatic *and* institution-wide levels.

1. Core Administrative Services: Learning support can include the widest range of campus services that deal with the very logistics of being a student on campus: admissions, student records, financial aid, accounts receivable, registration, transcripts, and degree conferral. Indeed, if these core administrative services maximize students' sense of welcome, access, and engagement, they can only promote students' satisfaction, sense of belonging on campus, and, ultimately, their academic achievement. Campus administrators are increasingly recognizing how simplifying their delivery of services positively impacts the quality of students' learning experience. Let's take two examples. The University of Minnesota, a large public institution, brought together registration, transcript, financial aid, and related services within a comprehensive “OneStop” identity having both online and on-site presences that reduces the bureaucracy in administering these services (University of Minnesota, 2005). Similarly, DePaul University, a large private institution, recently opened “DePaul Central” to carry out the mission: “Here, at DePaul Central, we promise to help you take care of the core administrative details (student records, financial aid, student accounts) so you can get on with your core business—learning at DePaul!”

(DePaul University, 2006a).

2. **Transition Programs and Services:** Another growing trend in learning support often straddles the division between student affairs and academic affairs in efforts to promote students' successful transition to college life and expectations. First-year experience programming, for example, may include a variety of welcoming activities, summer bridge programs, orientation, convocation ceremonies, Web-based communities and portals, and freshman seminars. A growing recognition of transfer and adult students' unique needs has led to tailored services for these distinct cohorts. Institutions are also increasingly attending to student transitions within and beyond their degree programs. Sophomore seminars, upper-division seminars, weekly departmental colloquia, and learning communities all embody this trend.

3. **Academic Skills Development:** A panoply of programs and resources that focuses on developing students' academic skills constitutes another core area of learning support: subject-based tutoring, writing consultation, Supplemental Instruction, skills workshops, library workshops, testing and assessment, learning centers, printed and Web-based resources, professional clubs, leadership programs, and student research opportunities. Increasingly, institutions are approaching academic skills development in more integrated and holistic ways through across-the-curriculum approaches to writing and mathematics instruction, learning communities, and curricula that purposefully integrate skills development and content (Higbee, Lundell & Arendale, 2005).

4. **Career and Community Learning:** Increasingly important for post-graduation survival, career and community learning programs provide students with opportunities and resources to connect their classroom learning to the "real world." These opportunities take on a wide variety of formats: career counseling and workshops; career centers; community and service learning centers; internship, cooperative, and "externship" programs; volunteer placement; teaching and research apprenticeships; and graduate school preparation workshops. In the context of adult, neighborhood-based and online degree programs, career and community learning may also occur through satellite campus programs and resources located within students' own workplaces and communities.

5. **Engagement, Social Community and Living:** Regardless of whether students live on campus, commute, or learn online, and regardless of students' abilities, research has demonstrated that a sense of connection to campus on both academic and social levels is critical to student retention (Astin, 1993; English, 1993; National Survey of Student Engagement, 2006; Tinto, 1993). In response to national recognition of this fact, universities have instituted offices and centers devoted to student engagement. Other significant providers and partners in this work are residential life offices and the wide array of student communities, cultural centers, and organizations often supported by student affairs personnel.

6. **Health and Recreation:** By promoting students' physical, emotional, and spiritual health, campus health services, crisis centers, counseling services, and ministry offices constitute a further closely-related set of learning supports. In addition, intercollegiate and intramural sports, recreation centers, and recreational clubs all foster students' physical health and engagement.

7. **Advising:** Academic advising and a variety of other advising activities are critical

supports to students' learning and development. Three predominant models for academic advising are (a) advising performed by a professionally-trained staff within distinct units; (b) advising performed by tenured and tenure-track faculty members; and (c) a blend of both—for example, advising that begins with a professional staff advisor and concludes with a faculty advisor or mentor. Other types of advising may include roles for peer mentors, student affairs personnel, research supervisors, and alumni.

8. Disability Services: Traditionally, campuses have had at least one staff member designated as the campus consultant for students with disabilities. Large universities may have a department of staff. Disability services can be housed in any number of campus divisions or offices. One place that disability expertise can be found with greater frequency is within a learning center, learning commons, or academic skills center. Emerging models of service provision situate disability services personnel as consultants to the entire campus and partners in efforts to implement UD strategies in settings for instruction and learning support (Block, 2006).

9. Holistic Learning Communities: A variety of offices and programs do not fall neatly into one or another category because of the comprehensiveness of their programming and resources and close partnerships with curriculum. Examples include some campus women's centers, multicultural centers, honors colleges, and living and learning communities.

Practitioners and administrators have the benefit of several excellent books that address the wide range of learning support services and programs highlighted here. They offer further guidance for the administration and development of these services and give some perspective on the importance of learning support work in the broader context of higher education. See especially Barr, Desler, and Associates (2000); Blimling, Whitt, and Associates (1999); Kuh, Schuh, and Whitt (1991); and Sandeen and Barr (2006).

Strategies for Implementation

To illustrate how ULSD may be implemented within particular learning support services, we will focus on one common type of learning support: the learning center. We offer the following scenario as an impressionistic window for viewing how a universally-designed learning center might appear from a student's perspective. The scenario, although idealized, is inspired by a student's real experience at the University of Minnesota's Academic Resource Center, currently affiliated with the Department of Postsecondary Teaching and Learning (Opitz & Hartley, 2005).

A Model of ULSD-Based Practice

Katrina, a 28-year old transfer student who is blind, enrolled in a college algebra course needed as a prerequisite for upper-division courses in her major, international business. Although she liked math in elementary school, negative experiences in her high school algebra class dissuaded her from continuing her math study. Given her prior negative experiences, her 15-year break from math, and the disability accommodations she will need, she is worried about falling behind in the class and failing. Dan, her disability specialist, assures Katrina that all arrangements for her accommodations have been made, including advance electronic copies of lecture notes that are in a format compatible with

her laptop's screen reader. But Dan also encourages Katrina to take advantage of peer math tutoring available at her college's learning center. Fortunately, her math instructor took the class on a mini-field trip to the learning center, creating a natural opportunity for her to become acclimated to the space and services of the center. During this visit, Katrina learned that the center offered scheduled appointments with tutors and other helpful resources like wireless access to the Internet. She found the center's space easy to navigate and the student staff welcoming. The following week she returned to sign up for a weekly appointment with a tutor who was also a business major. A receptionist made the appointment and explained further resources available to her, including after-hours online tutoring and software on the center's computers that provided supplementary instruction and practice problems in an audio format. For the remainder of the semester, Katrina worked regularly with her assigned tutor, Cindy, with whom Katrina developed a good friendship. Sometimes she came with a student scribe, assigned by her disability specialist, but other times she simply dropped into the center to access the Internet, among other things, to download her class notes, or simply study. She especially liked the convenience and accessibility of the online tutoring, which she often used from home. She sometimes joined classmates at the center's study tables to review for exams. At the end of the semester, after her final, Katrina dropped by the center to share the news of her success—she got a B. She asked the tutors on-duty for their perspective on the instructor teaching her next math class, business calculus.

We chose the perspective of a student with a physical disability, but many of the center's design features implied here would benefit all students regardless of their abilities. Particularly where math learning assistance is concerned, the learning center must be welcoming and respectful so that students who already possess negative predispositions or "math anxiety" will feel comfortable. As in this scenario, centers can accommodate class visits to ensure that all students are introduced to the learning resources, a strategy that circumvents the intimidation students often feel when faced with making their initial visits alone. Design considerations for the physical space reinforce a sense of welcome and foster equitable access: bright lighting, sound absorbers like carpeting and acoustic ceiling tiles, wide aisles between tables to enable ease of movement, table heights and chairs that are suitable for the widest range of users, seating options that meet students' needs for individual or group study, a perceptible layout of resources, and a reception area. The center's mission, procedures and policies are posted and made available in a variety of formats. Staff members explain procedures to newcomers and regularly monitor whether students are getting what they need during their visits. Specific resources and services are offered through a variety of means. Here, tutoring is available online, on a drop-in basis, and by appointment. Individualized and group-study options exist. Ideally, the hours and places of service also vary by students' needs. Technology enhances this flexibility and students' opportunities to learn by offering interactive service online, ancillary learning software, and assistive technology. The space and staff promote group study and other opportunities for students to interact and be engaged in their learning. In on-going training and staff development opportunities, peer tutors learn about self-directed learning, developmental education, varied instructional approaches and learning styles, multicultural and disability

issues, active listening, positive reinforcement, welcoming and respectful behavior—i.e., strategies that provide natural supports for student learning. Multicultural values infuse all dimensions of the center: tutoring pedagogy, diversity of staff, interior design features, media and communications, and student-staff interactions. Based on student feedback and periodic program assessment, the design and administration of the center is further developed to ensure that all students' needs are being met and that their holistic learning is supported most effectively.

Many of these features may indeed already characterize much of learning center practice (Higbee & Eaton, 2003). ULSD provides a framework within which to name and assess such characteristics and to guide further program development. Checklists can help in the planning and assessment process (University of Washington, 2006).

Conclusion: Future Directions

We intend our conceptualization of ULSD, as presented in this article, to begin a conversation around issues of postsecondary learning that are intertwined with curriculum and extend beyond the classroom. A starting point is simply to identify a set of UD principles as they apply to learning support (i.e., ULSD), what constitutes learning support, and what a demonstration of ULSD may look like. We have offered the seven principles of Universal Learning Support Design as fluid guidelines that we hope others will interpret and develop in ways relevant to their own programs and institutions.

Moving forward, the need exists to further illustrate the applicability of these principles, share best practices, and assess the impact on student learning. To a certain degree, ULSD may very well be “just good practice” and therefore intrinsically rewarding to both practitioners and students who are engaged in holistic learning on campus.

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