

## Raising the Bar: Student Self-Determination + Good Teaching = Success

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### Abstract

*There is a recognizable gap between the skills of the emerging work force and the demands of the 21<sup>st</sup> century labor market. To meet this demand, the educational system must raise the bar for all students, including students with disabilities. Through focus group and survey research techniques, we found that to raise the bar for students with disabilities, faculty and students must play separate but complimentary roles in the educational process. Students must be able to advocate for themselves in order to coordinate accommodations and gain access to the instructional content they need to enter high-skill careers. Educators must apply the principles of Universal Design for Learning by incorporating a variety of instructional strategies, including the use of technology, so that all students have ample opportunity to learn the content. Also, educators must assist students with disabilities in developing self-determination skills to ensure that they have the skills needed to gain access to course materials and transition to postsecondary education and/or the workforce.*

### Raising the Bar: Student Self-Determination + Good Teaching = Success

*We are preparing too few students to meet world-class standards in core academic subjects, and too many students are leaving high school unprepared for productive work and effective citizenship. Our economic security – and our ability to flourish as a democratic society – demand a generation of high school and college graduates with the knowledge and know-how to succeed in the 21<sup>st</sup> century (Ohio Department of Education, 1998, p.1).*

The United States has benefited from an industrial economy for the majority of the 20<sup>th</sup> century, offering secure employment and good wages to vast numbers of high school graduates as well as those who did not complete high school. However, the labor market is changing. Sweeping changes in the workplace characterized by technological advances, intense competition, and high standards of productivity and innovation have created a gap between the skill demands of our nation's workplaces and the skills of the emerging labor force (Ohio Department of Education, 1998; Stodden & Dowrick, 2000). Our educational system must meet this challenge by raising the bar for all students, including students with disabilities and members of other at-risk populations.

Federal legislation has emphasized the need for higher

academic standards and better school-to-work connections, including those for students with disabilities. The Individuals with Disabilities Education Act of 1997 (IDEA of 1997) states that "improving educational results for children with disabilities is an essential element of our national policy, of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities," (PL 105-17; 111 STAT.38). IDEA of 1997 mandates that the Individual Education Program (IEP) for students with disabilities must include a statement indicating how the student's disability affects their involvement and progress in the general curricula. Oftentimes, students are not involved with their educational planning and are not aware of how their disability affects their learning, nor are their interests and preferences included in the transition services components of their IEP. Even when the students are physically present, they are not usually active participants (Thoma, Baker, & Saddler, 2002; Thoma, Rogan, & Baker, 2001). These practices prevent students from learning how their disability affects their progress and how accommodations can be used to compensate for their disability.

The Carl D. Perkins Vocational Education Act of 1990 states that federal funds must be used to integrate academic and vocational skills and to meet the education and career counseling needs of students with disabilities and other special populations. The School-to-Work Opportunities Act of 1994

(STWOA) recognizes the need to create a high-quality school-to-work transition system that enables all students to successfully enter the workplace. STWOA suggests that each state/local community establish industry-standard benchmarks and develop education and training standards that ensure proper education is received so students are prepared to enter high-skills, high-wage careers (Lindstrom & Benz, 2002). Research has shown career-related work experience and completion of student-identified transition goals were highly associated with improved graduation and employment outcomes (Benz, Lindstrom, & Yovanoff, 2000).

The Goals 2000: Educate America Act, PL 103-227, and the Improving America's Schools Act of 1994, PL 103-382, provide funds for schools to initiate educational reform so ALL students can meet the standards needed to participate fully in society. Finally, the No Child Left Behind Act of 2001 (PL 107-110) requires states to implement statewide accountability systems that include annual testing for all students in grades 3 – 8, and annual statewide progress checks ensuring all groups of students reach proficiency within 12 years. Assessment results and state progress objectives must be broken out by poverty, race, ethnicity, disability and limited English proficiency to ensure no group is left behind but will meet the high academic standards as other students ([www.ed.gov/offices/OESE/-esea/execsumm.html](http://www.ed.gov/offices/OESE/-esea/execsumm.html)).

Despite the emphasis on higher academic standards and improved connections between school and work in the legislation, and in spite of demands from the employment community, many youth with disabilities are leaving public education without the skills needed to en-

ter postsecondary education and navigate the labor market (Benz, Doren, & Yovanoff, 1998; Blackorby & Wagner, 1996; Izzo, Cartledge, Miller, Growick, & Rutkowski, 2000; Janiga & Costenbader, 2002). Moreover, research shows people with disabilities often lack the maturity and personal flexibility needed to be successful in the 21st century (Ochs & Roessler, 2001). For example, students with learning disabilities often hold unrealistic employment expectations and are not aware of their own strengths and weaknesses and how these characteristics may affect educational and employment outcomes (Levinson & Ohler, 1998; Ohler, Levinson, & Barker, 1996).

### Promising Practices to Improve Student Outcomes

Researchers have firmly established that statistically significant relationships exist among disability, level of education, and employment outcomes (Benz, Doren & Yovanoff, 1998; Gilson, 1996; Stodden, 1998). Postsecondary education clearly improves the ability of persons with disabilities to secure employment. For example, only 15% of persons with disabilities with less than a high school diploma currently participate in today's labor force. However, this participation doubles to 30% for those who have completed high school, triples to 45% for those with some postsecondary education, and climbs to 50% for persons with disabilities with a four-year college degree (Gajar, 1992, 1998). Given that the number of postsecondary students reporting a disability has dramatically increased, climbing from 2.6% in 1978 to nearly 19% in 1996 (Blackorby & Wagner, 1996; Gajar, 1998; Stodden, 1998), access to post-

secondary education clearly improves employment outcomes.

Yet, students with disabilities often experience barriers to gaining the supports and services they need to be successful within the postsecondary setting. Many students with disabilities are not fully aware of their strengths, limitations and needs. They have difficulty self-advocating and coordinating the necessary accommodations, services and supports to accomplish their goals. In a survey of college service coordinators, Janiga & Costenbader (2002) reported that service coordinators are most concerned with the

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inadequate self-advocacy skills that students with learning disabilities possess when they arrive at college. They recommended that career counseling, social skills training, and developing self-awareness and self-advocacy skills need to be part of every transition plan for students with learning disabilities who plan to attend college. Using self-management strategies, making decisions, and evaluating their own performance are skills students need to successfully complete college and enter into and maintain employment. These skills are often described as self-determination.

Self-determination is defined as a combination of skills, knowledge and beliefs that enables a person to engage in goal-directed self-regulated behavior (Field, Martin, Miller, Ward, & Wehmeyer, 1998). According to Wehmeyer and Schwartz (1995), students who obtain self-determination skills while attending school have a greater chance for success than students who do

not acquire these skills. Self-determination skills consist of six components: self-awareness, self-advocacy, decision making, independent performance, self-evaluation and adjustment. Although each component of self-determination is essential for lifelong success, self-advocacy is a critical skill for students with disabilities who enroll in post-secondary education and take classes from teachers who may not have had the opportunity to

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learn about diverse teaching strategies, disabilities, and accommodations. When students with disabilities enter classroom settings where teachers are not familiar with certain accommodations, then students need to provide an overview of why certain accommodations, modifications and teaching methods enhance their academic achievement. Teaching students with disabilities to recognize their individual needs, utilize alternative learning strategies, and advocate for needed accommodations improves the teaching-learning climate for both educators and students and ultimately improves student academic achievement (Izzo, Hertzfeld, Simmons-Reed, & Aaron, 2001).

## Method

The purpose of this study is to examine the climate for students with disabilities within postsecondary education from the perspectives of students and the faculty who teach and support them. Two strategies were used: (1) a quantitative survey as-

essed the experiences of faculty and students across the campus, and (2) in-depth focus groups gained the perspectives of faculty, students with disabilities, and students without disabilities within select departments that teach the majority of freshman students. The research questions explored the as following areas:

- (1) What are the college experiences of students with disabilities at a large Midwestern university, from both the student and faculty members' perspectives?
- (2) What recommendations are suggested by students and faculty to improve the quality of education and teaching climate for both faculty and students?

Both quantitative and qualitative data were collected and analyzed to explore the experiences and perceptions of students with disabilities, their nondisabled peers, and the faculty who teach them.

## Survey Participants

The climate of the entire university campus is assessed through an annual omnibus survey conducted by the Center for Survey Research (CSR) at a large midwestern campus. Campus members were divided into four populations: (1) the current undergraduate student population; (2) the current graduate and professional student population; (3) the nonemeritus faculty population; and (4) the current staff population. The sampling pools were drawn from databases provided by the University Registrar and Human Resources Department. These data files were reviewed to ensure that a random selection was conducted on only those cases in which the student, staff or faculty member was involved on the Columbus campus and that contact information existed. For the purposes of this study, questions were

designed for only the current undergraduate student population and the faculty population in the years 1999-2000.

A total of 600 randomly selected names and contact information were sampled from the undergraduate student population of 34,887 and used for the undergraduate student survey. Of the 359 completed student surveys, 181 were completed through a web site, and the remaining 178 completed surveys were conducted by telephone interview. A total of 600 randomly selected names and contact information were sampled from the faculty population of 2,862 and used for the faculty survey. Of the 306 completions obtained from this sample, 234 were completed through a web site and the remaining 72 completed surveys were conducted by telephone interview.

## Focus Group Participants

During 1999-2000, project staff identified five academic departments on campus that teach large numbers of freshman, including English, Psychology, Biology, Chemistry, and Human Ecology. Once permission from the department chairperson was obtained, project staff recruited faculty, teaching assistants, and students to participate in three types of focus groups: 1) faculty focus groups involving faculty and/or teaching assistants, 2) students with disabilities who have taken at least two courses within the department, and 3) students without disabilities who have taken at least two courses within the department. All faculty members participated on a voluntary basis and all students were reimbursed \$25 for their time. Students with disabilities were required to be registered with the Disability Services Office to assure that they had a documented disability.

### Procedures

The primary purpose of the survey was to provide a platform for university departments/units to have "strategic planning" data gathered for their use in developing and assessing their programs. Prospective respondents were first solicited through their e-mail address. They were asked to click onto a website where respondents could complete the survey on-line. Follow-up reminder e-mails were sent if respondents did not reply within

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a three-week period. Following this web-based collection period, attempts were made to contact nonrespondents by telephone. Telephone interviews were conducted during February and March, 1999.

The qualitative research method of focus groups was used to explore and discover the climate of the department towards disability issues from three perspectives, as noted above: faculty members and teaching assistants, students with disabilities, and students without disabilities. Focus group questions for each target audience were prepared to explore the following four areas: types of accommodations requested by students and provided by faculty and/or disability service providers; specific learning styles and teaching strategies used; experiences with students disclosing their disability and/or requesting accommodations; suggestions and recommendations for improving the quality of education within the department and across the campus. Pilot focus groups were conducted and

audiotaped to refine the questions and focus group procedures. Approximately 8–12 participants were recruited for each focus group. Recruitment strategies included meetings with department chairpersons to request faculty attendance at faculty focus groups, e-mail announcements to student list serves, passing out fliers, and making announcements in classes and lab settings. Once all focus groups were completed within a given department, a participatory action team (PAT) consisting of faculty and students reviewed the transcripts and developed action steps that addressed the issues raised by focus group participants. The purpose of the action plan was to respond to issues raised during the focus groups and to ultimately improve the quality of education for students within that department. Focus groups and action plans were conducted from January, 2000 through May, 2001.

### Data Analysis

Data obtained from the survey were analyzed by the Center for Survey Research using the SPSSx program. Inferential statistics, such as percentages, means, and standard deviations, were used to summarize the survey data. The focus group notes were analyzed using systematic procedures. First, the focus groups were electronically recorded, audiotaped, and transcribed to assure the transcripts captured the participant's wording. Second, participant verification was obtained by gaining the agreement from several of the focus group participants who reviewed the notes for accuracy. Third, the notes were coded and sorted by similar themes, such as self-advocacy, teaching methods, disclosure, positive experiences of faculty, positive experiences of students and negative experiences

of faculty and/or students. Fourth, each department's PAT reviewed and interpreted the focus group notes and developed action steps that addressed the issues raised by focus group participants. This final step validated the accuracy and utility of the focus group transcripts.

### Results

Using a quantitative survey, a representative sample of 665 faculty and students at a large midwestern university were asked a variety of questions to assess their attitudes towards, and experiences with, students with disabilities. Focus groups were also conducted with 33 students and 24 faculty across five departments to explore attitudes and experiences in more depth. The results are presented according to method of inquiry and to address the research questions under investigation.

### Survey

Five questions on disability were included in the annual survey in 1999-2000. Each question is presented with a summary of the faculty and student responses.

1. How often do you have students with disabilities in your classes?

A total of 665 persons, 306 faculty members and 359 undergraduate students responded to this question. Over 35% of faculty respondents indicated they frequently or sometimes have students with disabilities in their classes. Conversely, over 50% of undergraduate students reported rarely or never having students with disabilities in their classrooms (see Table 1).

2. Rate your experiences with students with disabilities in your classes.

Almost two-thirds of faculty respondents (62.3%) reported positive experiences with students with disabilities while less

than 5% reported negative experiences. Roughly half of the undergraduate respondents (52.5%) reported neutral experiences (see Table 2).

3. What would be most helpful to you to teach and accommodate students with disabilities?

Only faculty members were asked this question and responses were received from 288 people. The most frequent faculty response (31.8%) was specific information on how to handle each disability. Another common answer (9.1%) was better information about available resources. Several faculty members suggested that the Disability Services Office should serve as the main source of this type of information.

4. Do you include a statement on your syllabi about accommodating students with disabilities?

Only 21.2% of the respondents indicated they do have an accommodation statement on their syllabi. Conversely, over three-quarters of the faculty respondents do not provide notice to students that accommodations are available for students who have disabilities.

5. Do you think faculty members have higher, lower, or the same expectations of those students with disabilities?

The majority of faculty (74.5%) and undergraduates (61.6%) reported that they feel that faculty have the same expectations for students with disabilities as they do for students without disabilities. Approximately 12% of both respondent groups reported having lower expectations for students with disabilities (see Table 3).

### Focus Groups

Focus groups were conducted with faculty and students within

How often do you have students with disabilities in your classes?	Faculty n=306	Undergraduates n=359	Total n=665
Frequently	10.5	2.8	6.3
Sometimes	24.8	17.0	20.6
Seldom	18.6	20.9	19.8
Rarely	29.7	35.1	32.6
Never	14.1	21.2	17.9
Don't know	2.3	3.1	2.7
Total	100.0	100.0	100.0

Rate your experiences with students with disabilities in your classes	Faculty n=263	Undergraduates n=284	Total n=547
Very positive	12.9%	13.4%	13.2%
Positive	49.4%	31.3%	40.0%
Neutral	32.2%	52.5%	42.8%
Negative	4.6%	1.1%	2.7%
Not applicable	.8%	1.8%	1.3%
Total	100.0%	100.0%	100.0%

five main campus departments to determine attitudes towards students with disabilities and the current status of educational supports within entry-level courses in that department. Structured questions were asked of students with and without disabilities and faculty. From both faculty and student perspectives, a number of strategies were implemented that improve the teaching-learning climate. For example, faculty and students reported that select faculty:

- assess students' learning styles and then teach to the most common learning styles;
- publish lecture notes on-line through the web or through a local print shop;
- provide statements on course syllabi about the faculty's willingness to provide reasonable accommodations;
- use a variety of teaching strategies to meet the diverse learning styles of all students – "I think the student should have to hear it, read it, and say it" (Human Ecology fac-

**Table 3**  
**Expectations for students with disabilities**

Do you think that faculty have higher, lower or the same expectations of those students with disabilities?	Faculty n=306	Undergraduates n=359	Total n=665
Higher expectations	.3%	1.4%	.9%
Lower expectations	11.8%	12.5%	12.2%
Same expectations	74.5%	61.6%	67.5%
Don't know	13.4%	24.5%	19.4%
Total	100.0%	100.0%	100.0%

ulty member, personal communication, February 29, 2000);

- meet with students individually to coordinate accommodations;
- send tests to the Disability Services Office so students can receive approved testing accommodations;
- encourage students. For example, one student with a disability reported she feels like she is making good progress when faculty encourage her.

Notably, students who advocated for themselves reported having more positive experiences. One student commented “The key to the proctor sheets [a form to coordinate accommodations] is getting them in early and giving teachers time. I even sit down with them [faculty] and help them fill it out. I try not to make them feel rushed” (student with a disability, personal communication, February 9, 2000). Another student added, “I give my teachers a choice of how the proctor sheets are turned in. I tell them that I will do whatever works best for them. I will ask them if they have any suggestions as to who can take notes

for me” (student with a disability, personal communication, February 29, 2000).

During the faculty focus groups, a number of comments revealed that there is a lot of confusion about the process of accommodating students with disabilities. For example, one faculty commented, “I feel as faculty we are left in the dark. At the other school where I taught, the students were required to reach every faculty member teaching one of their classes by the first week in the semester. That way, the teachers knew what they were dealing with. That is one thing that I do not see happening here. This topic of disability has never really been discussed” (faculty member, personal communication, February 29, 2000). Another faculty commented, “People respond to disability in different ways. That is why some students try to get through classes without saying anything to you. All they need is one bad experience and they are going to try to avoid saying anything to you. I think it goes back to the trust we put in the students” (faculty member, personal communication, February 29, 2000).

One faculty member commented “I have three to seven students that are registered with Disability Services. They want things like alternate testing times and sites. I also had an after-the-fact presentation of the proctor sheet. I have noticed inconsistencies with students’ approaches, which raises an eyebrow” (Faculty member, personal communication, February 29, 2000). Another faculty member agreed, “To me it makes a big difference when they come to you at the beginning of the quarter and they are registered with Disability Services. In general, students need to be able to approach you. They also need to be an advocate for themselves”

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Finally, action plans were developed for each department using a PAT model, consisting of faculty, students with disabilities and Disability Services staff. The PAT was responsible for developing an action plan that addressed the issues and concerns of both faculty and students. Many of the action plan activities focused on improving communication among faculty members, the students, and Disability Services. For example, establishing a department liaison to the Disability Services office and providing students with brochures to hand out to faculty were two strategies specified in several action plans. All of the PATs from participating depart-

ments decided to add the approved disability statement to all faculty syllabi. Many of the departments received training on web accessibility and assistive technology (AT) and equipped at least one computer with AT devices for students to use at the department's computer stations.

## Discussion

The results of this study indicate that students with disabilities can successfully navigate postsecondary education when certain conditions are present. The majority of faculty responded that they have had positive experiences with stu-

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dents with disabilities through the survey and focus group discussions (see Table 2). Two themes that repeatedly appeared in many of the focus group transcripts that contributed to creating positive experiences were: (1) the concept of self-determination and self-advocacy – that is, students who approached faculty early in the quarter to explain why they needed accommodations and how to coordinate them, and (2) the principles of Universal Design for Learning – that is, faculty who incorporated a variety of teaching methods and strategies into their instruction to meet diverse learning styles across the student population.

### *Self-determination*

Many faculty and students agree that open, honest communication between students and faculty is essential to creating a positive learning climate in the classroom. Yet many students revealed in the focus groups that they are not comfortable disclos-

ing they have a disability to faculty. However, it is through disclosure that students can help faculty understand the nature of their disability, its affects on their progress in the course, and how accommodations will assist the student in learning. Students themselves can be the most powerful training resource to improve the quality of education that faculty and teaching assistants deliver within postsecondary settings. When students approach faculty with a clear statement of why they need certain accommodations along with appropriate documentation to verify their accommodation (i.e. a letter from Disability Services), they generally obtain the academic supports needed while simultaneously educating the faculty on disability awareness.

Communication is the key to being a successful advocate. In order for students to develop effective communication skills, they must be able to explain their disability and/or needed accommodations in a positive manner. Students need to practice “I” statements about their strengths and weaknesses so that the weaknesses do not define the person. Personal awareness of strengths and weaknesses helps students to better understand and articulate their goals, limitations, and learning needs to faculty. Self-advocacy skills should be taught and practiced early in a person's life. Educators, special education coordinators, and disability specialists can all assist students in developing the knowledge, attitudes, and skills needed to advocate for the services and supports they need to be successful in college and beyond.

Yet, sometimes students are their own worst enemy by not disclosing their needs, by hoping no one finds out, or by thinking that no one else needs to know. These pitfalls set some

students up for failure. One of the biggest downfalls of not learning the art of advocating is letting emotions take over. Emotions can create barriers to communication. The students who get caught in an emotional response often are still grieving their disability. They have not accepted the disability as part of their human experience. Thus, students may focus on a negative feeling or particular incident and become too upset to discuss current issues in an assertive manner. Faculty can help foster disclosure by creating a welcoming climate for students by putting a disability statement on their syllabi, a statement indicating the faculty member's willingness to discuss and help coordinate appropriate learning accommodations, and announcing the statement in class. In other words, faculty can provide encouragement and support to the students by patiently empathizing with the student's situation and reinforcing that the

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student can master the course content with the necessary accommodations, services, and supports. Also, faculty can suggest some strategies to learn difficult content. Faculty can brainstorm some customized learning strategies with the student such as special learning word associations to remember key concepts from a lecture or a method of organizing material by color-coding topics.

When self-determination and self-advocacy skills are taught and reinforced, students will develop lasting survival skills. These may be just as im-

portant as the content taught by faculty – whether it be English, Biology, Chemistry or Psychology. Teaching and encouraging students to take responsibility for self-advocacy is necessary to prepare students for the work force and to truly “raise the bar” so students are prepared to meet world-class standards.

## Universal Design for Learning

Another important aspect of raising the bar and adequately preparing students is making essential course content accessible to all students. At a focus

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group a student commented, “I liked Physics because of the variety of ways the professor taught. No matter how many different people there were in the class, he would make sure that everyone understood, even if it meant teaching the same thing one hundred different ways” (college student with a disability, personal communication, 01/19/00). Though the student was unaware, he was describing an instructor employing the principles of Universal Design for Learning.

Instructors who design courses that incorporate a variety of methods and strategies to deliver content and assess student performance are teaching courses that have been Universally Designed – that is, courses that are designed for all students to maximize learning, regardless of disability or learning style. According to the Center for Applied Special Technology (CAST), Universally Designed course curriculum embodies three essential qualities: various

methods of representation, various methods of expression, and various methods of engagement (www.cast.org, June 7, 2002). Many faculty are not aware of the extensive services and supports that are available or how to implement Universal Design principles to meet the needs of the ever-increasing diverse student populations (Mellard, 1994; Minskoff, 1994). Of course good teaching practices enhance all students’ learning, but for students with disabilities, good teaching is the link to independence, achievement, and self-confidence (Hodge & Preston-Sabin, 1997). Knowledge of Universal Design practices can help educators equip students with the academic and self-determination skills needed to navigate both postsecondary and employment settings.

It is important to note that Universal Design does not remove academic challenges, it only removes barriers to access. Simply stated, Universal Design

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is just good teaching. For example, course notes on the web allow students to gain information in two ways: auditorily through the lecture and visually by reading the course notes. Many students benefit from receiving information visually, auditorily, and kinesthetically. Teaching methods that stimulate the widest variety of senses will generally be the most effective instructionally.

A critical component of Universal Design is instructor flexibility – allowing students with disabilities to express themselves in alternate ways based on their individual strengths. For example, students with visual impairments and/or learn-

ing disabilities can use adaptive technology as a reasonable accommodation to gain access to course content. Students with dyslexia, for instance, can use a screen reader to listen to the text, instead of decoding the print materials. Students who have difficulty writing often use the text-to-speech software programs to listen to their papers and catch errors that they might miss if they were proofing their papers visually. Alternate methods of expression allow the student multiple means of demonstrating mastery of the material. Likewise, students with a speech impediment may be unable to present the information orally while students with a fine motor disability may have difficulty taking a written exam. Therefore, alternate methods of demonstrating knowledge could include writing a paper or doing an oral presentation.

The University of Minnesota’s Curriculum Transformation and Disability Project (#P333A990015) offers instructional guidelines on Universal Design implementation. For example, faculty need to determine and identify the components of the course that must be attained for successful completion and provide instructions and feedback in a clear and direct manner. It is also helpful for faculty to integrate natural supports for learning (i.e., use resources already found in the environment such as study buddy). Finally, faculty should encourage student contact by inviting students to meet individually to discuss needed accommodations and supports. Students with disabilities are a diverse group with diverse needs and experiences. Just as the teacher is an authority in the course content, the student is an authority in their needs and learning style.

The following teaching guidelines for infusing the principles

**Figure 1**  
**Common Teaching Methods\***

	Strengths	Limitations	Preparation
Lecture	<ul style="list-style-type: none"> <li>• Ensures dissemination of specific facts</li> <li>• Class size is not an issue</li> </ul>	<ul style="list-style-type: none"> <li>• Little, if any, student participation</li> <li>• Only learn from one source</li> </ul>	<ul style="list-style-type: none"> <li>• Information to be learned needs to be clearly indicated</li> <li>• Course instructor should allot adequate time for content to be presented</li> </ul>
Class Discussion	<ul style="list-style-type: none"> <li>• Information and ideas drawn from multiple people</li> <li>• Student's attention easily maintained</li> </ul>	<ul style="list-style-type: none"> <li>• Only practical with small classroom</li> <li>• Some students will monopolize the conversation while others will not engage in discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Course instructor needs to guide discussion and keep group from going "off-track"</li> <li>• Discussion topics/questions should be prepared before class</li> </ul>
Role Playing	<ul style="list-style-type: none"> <li>• Can be very impacting</li> <li>• Students are able to test concepts and techniques presented in class</li> </ul>	<ul style="list-style-type: none"> <li>• Students may feel "put on the spot"</li> <li>• Only practical for small classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Course instructor needs to identify rules, situation and roles</li> </ul>
Guest Speaker	<ul style="list-style-type: none"> <li>• Provides a real-life example</li> <li>• Gives students contacts in the field</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of speaker may be poor</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and schedule appropriate speakers</li> <li>• Provide introduction and background of speaker</li> </ul>
Panel of Experts	<ul style="list-style-type: none"> <li>• Allows for multiple expert opinions and ideas on a topic</li> <li>• May capture more students' attention</li> </ul>	<ul style="list-style-type: none"> <li>• Speakers may be poor quality</li> <li>• Competition among experts</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and schedule experts</li> <li>• Provide introduction and background of experts</li> </ul>
Videotapes	<ul style="list-style-type: none"> <li>• Allows for alternate means of representation</li> <li>• Keeps student's attention</li> </ul>	<ul style="list-style-type: none"> <li>• Students do not have to actively participate</li> <li>• Unable to control what students learn from video</li> </ul>	<ul style="list-style-type: none"> <li>• Required to operate equipment</li> <li>• Prepare questions for discussion after video</li> </ul>

\* This figure has been adapted from Honolulu Community College's Common Teaching Methods

of Universal Design into the classroom are recommended (University of Minnesota, 2000). In addition, Figure 1 presents strengths, limitations, and the preparation needed for some common instructional methods.

In all cases, the chosen methods should be appropriate for both instructors and students as determined by ongoing and open communication:

- Put course content on websites to allow students to learn material that might have been missed in lecture.
- Use peer mentoring, group discussions, and cooperative learning situations rather than strictly lecture.
- Use guided notes, skeleton outlines that contain the main idea and related concepts of learning situations rather than strictly lecture.
- Use guided notes, skeleton outlines containing the main idea and related concepts of lecture with designated spaces for students to complete during lecture. Guided notes enable students to listen for concepts without the distraction of copying notes off the overhead.
- Update course materials based on current events and student demands.
- Provide a comprehensive syllabus with clearly identified course requirements, an accommodations statement, and due dates.
- Vary instructional methods, provide illustrations, and use handouts, auditory, and visual aids.
- Clarify any feedback or instructions, ask for questions, and use multiple examples.
- Relate a new topic to one already learned or use a real-life example.
- Secure a note taker or allow the student to tape record the lecture or provide him/her

with a copy of your notes.

- Allow the student to demonstrate knowledge of the subject through alternate means.
- Permit and encourage the use of adaptive technology.
- Develop study guides.
- Give shorter exams more frequently.

Preparing all students to meet the demands of the 21<sup>st</sup> century requires instructors to use technology and diverse teaching strategies that deliver the critical content so students leave high school and college with the skills needed for productive work and effective citizenship. Students can and will learn if the content is delivered with the services and supports students need to achieve mutually developed goals.

## Conclusion

Today more students with disabilities are entering postsecondary education, but they are not graduating at the same rate as their nondisabled peers, nor are they entering the high skill/high wage jobs that their nondisabled peers are obtaining. To raise the bar for students with disabilities, several promising practices should be implemented. First, educators and service providers should help students develop self-determination and self-advocacy skills and give students numerous opportunities to practice these skills within school and community settings. Second, faculty should be trained on how to create a positive climate for disclosure and learning within their classroom through open communication and Universal Design. Lastly, as underscored by the present study, it is important for academic departments to assess their strengths and weaknesses in teaching students with disabilities (as through surveys, meetings, focus groups, etc.)

and to revise their teaching practices accordingly. When faculty work to create a learning environment that encourages learning and self-determination (e.g., willingness to discuss learning needs, incorporation of available adaptive technology and principles of Universal Design into classroom instruction), both students with and without disabilities will gain the skills needed to achieve success.

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