A growing number of high school students with disabilities are planning to continue their education in postsecondary schools, including vocational and career schools, 2- and 4-year colleges, and universities (U.S. Department of Education, Office for Civil Rights, 2011). The transition from secondary settings to postsecondary settings presents unique challenges for students with language impairments and the faculty and staff serving them. To contribute to a deeper understanding of key issues in the complex postsecondary context, this article summarizes current thinking about developmental/linguistic, legal, situational, and pedagogical considerations for students with language impairments. Key words: developmental issues, language impairment, legal issues, pedagogical issues, postsecondary.
DEVELOPMENTAL/LINGUISTIC FACTORS

Historically, developmental theorists have created a wide range of paradigms for growth and development that focus on cognitive, emotional, and linguistic stages or phases (e.g., Bloom, 1970; Erikson, 1956; Piaget, 1926). These frameworks and their stages differ in age spans. It is typical to include discussions of age spans of childhood, adolescence, and adulthood, sometimes breaking them down further into “early” and “late.”

Relevant to this issue of Topics in Language Disorders, psychologists have now conceptualized “emerging adulthood” as a distinct period differing from both adolescence and young adulthood (Arnett, 2000). In industrialized countries over the past 50 years, there have been sweeping demographic changes that call for the addition of a stage of emerging adulthood. These include delays in the median age of marriage and parenthood, the lengthening of years of higher education (extended undergraduate enrollment and an increase in graduate or professional school enrollment), and prolonged job instability, with more frequent job changes (Arnett, 2014). The road from late teens to adulthood is extended into the late 20s, with the benefit of more time to explore options offset by the discomfort and anxiety of prolonged uncertainty. This has resulted in researchers, policy makers, educators, and practitioners taking a more careful look at the 18- to 29-year age group, as reflected in the creation of groups such as the multidisciplinary and international Society for the Study of Emerging Adulthood.

At the same time, researchers are expanding their understanding of language development to include the postadolescence period. The focus on language development in infancy and early childhood during the 1960s and 1970s, and the interest in adolescent language development during the 1980s, gradually expanded to an interest in language growth in adulthood (Nippold, 2007). Nonetheless, developmental research for the most part continues to emphasize the language growth of young children. This is particularly unfortunate, as a deeper awareness and understanding of linguistic development during emerging adulthood is critical if clinicians and teachers are to support the increasing number of postsecondary students with language impairments.

An examination of the language attainments of the “average” 25-year-old, based on the available research, provides an excellent measure of general expectations for students at the postsecondary level. For example, this individual knows the meanings of at least 50,000 words and produces written language with increased syntactic length and complexity when compared with adolescents. Furthermore, the 25-year-old has mastered inferential and theme comprehension, can integrate conflicting points of view, and demonstrates flexibility of thought in persuasive writing. She or he can solve analogy problems that contain difficult and abstract language, can explain complex metaphors and detailed idioms, and can manage perspective-taking and persuasion (Nippold, 2007).

In reality, of course, individuals in any age group may display differential verbal aptitude representing a range of linguistic abilities for a variety of purposes within variable home and school environments. This “linguistic individualism” also results from increased options in coursework, extracurricular activities, and social contacts (Nippold, 1995) that serve as the sources of later language development. Nonetheless, identification of the “average” language abilities for emerging adults helps build a profile of postsecondary students and the general linguistic aptitude that most higher education faculty have come to expect. This, in turn, offers a sobering contrast to the academic and social challenges of those students who have language impairments.

LEGAL CONSIDERATIONS

Students with disabilities in K–12 public school programs receive a range of services and protections that local school districts are required to provide under the Individuals
with Disabilities Education Improvement Act of 2004 (IDEA; U.S. Congress, 2004). As part of the federal law, IDEA provides federal financial assistance to states and school districts to guarantee special education and related services to eligible children with disabilities. IDEA requires that a free appropriate public education be provided to these students from birth to graduation from secondary school. School districts must identify and evaluate students with disabilities at no expense to the student or family. Furthermore, they must provide instruction in the least restrictive environment, be that the general education classroom, resource room, or special classroom. A “full educational opportunity” must be available to all children and adolescents with disabilities as described in the Individualized Education Plan developed with parental input. In addition, districts are required to include parental notification, consent, and participation at various steps in the educational process.

The transition from secondary to postsecondary settings includes a dramatic reduction in mandated services. Students with disabilities in postsecondary settings are covered by Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act Amendment Act of 2008. These Acts, part of civil rights legislation, prohibit discrimination on the basis of disability. Gone are IDEA’s federal funding, requirements for parental consent and participation, and identification/evaluation at no cost to the student or family. Postsecondary schools are only required to provide “appropriate academic adjustments as necessary” (US ED OCR, 2011) to ensure that there is no discrimination based on disability. Students have the responsibility of informing the school that they have a disability and of providing documentation showing that they have a current disability and need an academic accommodation. If a new evaluation is needed, the postsecondary school is not required to conduct or pay for it.

Clearly, the transition from the legal protections of IDEA to those of the Americans with Disabilities Act (ADA) and Section 504 has significant implications for the need for self-advocacy. These implications are discussed later in this article.

SITUATIONAL DEMANDS

For all incoming postsecondary students, the demands for independent functioning become more numerous and complex. At the same time, the legislative, academic, social, and environmental structures to support students with disabilities that had been provided by their schools and families are not in place to the same extent as they were at the secondary level. This transition can be particularly challenging for students with language impairments that impact their personal, academic, and social realms. Acknowledging and addressing these challenges are helpful at the secondary level and critical at the postsecondary level if these students are to make a successful transition and experience success in their postsecondary programs. Relevant areas include study skills, approach to learning, appropriate use of available supports, self-advocacy, and daily living.

Study skills

The academic demands of postsecondary programs are far greater than those of most high schools. The increased scope and depth of content to be mastered is compounded for students with language impairments by classmates’ advanced language skills, instructors’ higher expectations, and a reduction in mandated supports, as discussed earlier in this article. An arsenal of study skills and the knowledge of when to apply them are required—on an independent basis. Checklists such as those developed by RiseUpMS and the College Knowledge Project, initiatives of the MS (Mississippi) Institutions of Higher Learning (2015), can serve as a useful resource for students (Table 1).

Approach to learning

The way students choose to relate to others is vital to their success in college. Students choose whether to pursue their goals
Table 1. Summary of study skills students need to be successful at the postsecondary level

<table>
<thead>
<tr>
<th>Study Skill</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin to develop adequate time management skills.</td>
<td>It is important to schedule adequate time to complete your assignments on time and prepare for quizzes and tests.</td>
</tr>
<tr>
<td>Learn to study independently.</td>
<td>You must learn to study without the assistance of the resource teachers or parents.</td>
</tr>
<tr>
<td>Learn to take notes.</td>
<td>The ability to take notes is essential at the college level.</td>
</tr>
<tr>
<td>Research test-taking tips and practice taking tests.</td>
<td>Different formats include multiple choice, short answer, and essay.</td>
</tr>
<tr>
<td>Never miss class! Attendance is absolutely essential!</td>
<td>This is one of the most important things to remember in college. Each instructor will have a different policy on attendance, and missing too many class periods can cause you to fail the class, even if your grades are okay. Also, the more classes you miss, the more information you miss.</td>
</tr>
<tr>
<td>Review and keep the syllabus for each class!</td>
<td>The syllabus gives you information on course requirements, due dates, attendance policies, policies on makeup work, and information on how to contact your instructors.</td>
</tr>
<tr>
<td>Get to know your instructors!</td>
<td>Next to never missing class, knowing your instructors is the most important thing you can do for yourself once you are in college. Your instructor is the expert in his/her class. The instructor can give you information on how to study for examinations, where to find information for projects and papers, and what you can do to succeed in class. Also, if instructors know who you are, recognize your face when you are in class, and know you are sincere in wanting to succeed, they are more likely to assist you if you are struggling in class.</td>
</tr>
<tr>
<td>Use your approved classroom accommodations!</td>
<td>If you are approved to use specific classroom accommodations, USE THEM. Accommodations are provided to level the playing field and give you an equal opportunity to succeed in college. They will not benefit you if you don’t use them.</td>
</tr>
</tbody>
</table>


with relationships that can be described as dependent, codependent, independent, or interdependent (Downing, 2014). Students who choose dependent relationships may believe they cannot achieve their goals by themselves. This is the student who needs constant positive reinforcement, a situation that will not lead to academic success at the college level. When students choose codependent relationships with others, they feel they have to help others achieve their goals before they can achieve theirs. This is the student who graciously helps a friend with a paper due soon, rather than read his or her own assignments for the evening. Students who choose no relationship at all, who feel that they can get their goals met completely by themselves, have chosen independence. This is one of the milestones of maturity. However, it is critical for students to realize that there are some things they should be able to accomplish on their own (e.g., hygiene, cooking, or knowing where to get food, dressing appropriately, arriving to class and meetings on time) but some things still may require aid from others. This may be the most difficult realization for a
college student, particularly those who want to leave behind the perceived dependence of a disability and move on by themselves. Interdependence is considered by some to be the highest form of maturity (Downing, 2014). These kinds of relationships allow students to accomplish more and have a better experience because they choose to give and receive help. Interdependence for the college student is defined as "building mutually supportive relationships that help them achieve their goals and dreams (while helping others do the same)" (Downing, 2014, p. 1). For students with additional challenges, building these relationships is a critical component to academic success, social happiness, and emotional well-being. This involves seeking assistance from many different sources, some of which may not be familiar when students first transition from a high school setting. The list includes instructors, tutors, teaching assistants, study partners/groups, media specialists, research specialists, advisers, counselors, career office, financial aid, health services, and student activities.

**Appropriate use of available supports**

Postsecondary institutions offer various services and supports for students with disabilities. Some institutions have comprehensive support programs developed for students with disabilities, other institutions have a network of coordinated support, and others have a single dedicated office for students with disabilities. The structure of support can impact a student’s transition, so it is important for the student to understand what is available during the college application process and to take advantage of these supports as appropriate once enrolled. Some accommodations that are commonly issued through Section 504 plans include extended time and/or separate settings for tests, note takers, and the use of assistive technologies. Tutors and various other forms of support are resources that students should access, but these are not part of a Section 504 agreement at the postsecondary level. Depending on the individual student’s disability and needs, technology can be used for such tasks as dictation for writing assignments, reading of text books, and recording of lectures and classroom discussions. Additional supports that may be in Section 504 plans include FM (frequency modulation) amplification systems and specialized keyboards and computer desks.

**Self-advocacy skills**

The key to effective access to and use of any of these supports is self-advocacy. As a result of the shift in legislative protections from K–12 to postsecondary settings, as discussed earlier, postsecondary students with disabilities are now the ones bearing the responsibility for initiating the process of putting their academic adjustments and supports into place. Unfortunately, this comes at a time when many of them want to leave behind the special education system and the stigma of a disability, hoping to function independently without supports. Therefore, students who need and could benefit from the supports may elect not to seek them. Data show that just a quarter of students who received help for their disabilities in high school acknowledge in college that they need the same assistance (Krupnick, 2013). Sadly, the results are predictable—fewer students with disabilities complete their postsecondary programs than do their nondisabled peers (Achieve, 2013).

This suggests that the development of positive and assertive self-advocacy skills is critical if students with disabilities are to receive the supports and academic adjustments they need in order to be successful. Hopefully, attention to self-advocacy has been part of students’ transition programs at the secondary level, not only for greater success then but also in preparation for life after high school. Continued direct guidance is needed at the postsecondary level to help students recognize and voice their need for supports at this time when many do not want to admit that need. Again, checklists such as those developed by RiseUpMS and the College Knowledge Project can be helpful in highlighting specific self-advocacy skills that postsecondary students
need as they take on increased responsibility for obtaining supports guaranteed for them under the ADA and Section 504 and offered by colleges and universities (Table 2).

**Daily living**

In addition to the new responsibilities for their academic programs and adjustments, students face more responsibilities for

**Table 2. Summary of self-advocacy skills students with disabilities need at the postsecondary level**

<table>
<thead>
<tr>
<th>Self-Advocacy Skill</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept your disability.</td>
<td>Shame and embarrassment can prevent you from getting the assistance and support needed to help you succeed.</td>
</tr>
<tr>
<td>Know your specific disability.</td>
<td>Know how your disability impacts you so that you can talk about it with others if needed.</td>
</tr>
<tr>
<td>Admit your disability to others.</td>
<td>You cannot be a successful self-advocate if you hide your disability and needs from those who may be able to help you.</td>
</tr>
<tr>
<td>Understand your learning style.</td>
<td>Understanding your learning style can help you articulate your academic needs and ask for appropriate assistance.</td>
</tr>
<tr>
<td>Realize how other issues might interfere with your self-advocacy.</td>
<td>Many young people with disabilities struggle with low self-esteem, communication difficulties, shyness, and other personal self-image issues that might negatively impact the ability to be a positive self-advocate. It is important to recognize these issues so that the healing process can begin.</td>
</tr>
<tr>
<td>Know what you need.</td>
<td>Students should be able to articulate clearly what they need so that if those needs are not met, the student can advocate for more appropriate assistance.</td>
</tr>
<tr>
<td>Anticipate your needs in each class.</td>
<td>Don’t wait until later in the semester to start thinking about accommodations or other types of assistance in a class. Begin the first day of class thinking about what type of assistance you might need in each particular class and discuss those needs with your instructor.</td>
</tr>
<tr>
<td>Know your rights and responsibilities.</td>
<td>Students should be familiar with their legal rights and responsibilities. Knowing your rights and responsibilities will help you advocate appropriately for the assistance you may need.</td>
</tr>
<tr>
<td>Be willing to compromise.</td>
<td>Students should be willing to negotiate and compromise when necessary to receive the most appropriate assistance in the class. A willingness to compromise and work with an instructor will help build trust and respect.</td>
</tr>
<tr>
<td>Know where to go for support.</td>
<td>Everyone needs support occasionally, even those who can successfully advocate for themselves. Become familiar with the assistance provided by your college or university so you know where to go should you need assistance.</td>
</tr>
<tr>
<td>Plan for the future.</td>
<td>To really advocate for yourself, you need to think about where you want to be in the future. When you have a very clear plan for the future, you will be better able to see the reason for your education today.</td>
</tr>
</tbody>
</table>

navigating through daily life, particularly if they live on campus rather than at home. 

All students entering postsecondary programs need to know how to handle everyday tasks such as doing laundry, paying bills, balancing a checkbook or bank account, cooking, showering regularly, and keeping appointments. They also need to take more responsibility for their medical needs concerning medication and health issues without daily input from parents or doctors. In addition, they face more situations in which appropriate social interaction and communication are required with instructors, college staff, roommates, and peers, impacting the quality of daily living as well as academic success. For students with language impairments, these responsibilities may be particularly challenging.

PEDAGOGICAL CHALLENGES AND SOLUTIONS

Many educators and policy makers do not view the increase in the number of postsecondary students with disabilities as a short-term trend but rather as the “new normal,” thus requiring substantive changes to all coursework as well as the breadth and depth of programs offered for postsecondary students with special academic and social needs. The consequence of needing to push teaching and student support to new levels of effectiveness can be viewed as positive, as educators at all levels have found that what works well for students with disabilities in and outside of the classroom ultimately works well for all students.

An effective framework for providing postsecondary programs to students with disabilities can be viewed as threefold. First is the establishment and/or expansion of academic adjustments as required by Section 504 and the ADA as discussed earlier. Second, and parallel to the ongoing evolution of accommodations, is the building of knowledge of disability among practitioners, faculty, and staff to counter discrimination based on disability. Campuses are beginning to address the attitudinal component toward disability through focused education and a broader understanding of both diversity and ability. A 2009 study (Murray, Lombardi, Wren, & Keys, 2009) found that the faculty who had received some form of disability-focused training scored higher on survey items categorized as Willingness to Provide Exam Accommodations, Fairness and Sensitivity, General Knowledge about LD [Learning Disabilities], Willingness to Personally Invest in Students with LD, and Personal Actions such as inviting disclosure and providing accommodations. The training of the faculty and other stakeholders may be the critical key to legal compliance as well as the accessibility that many would argue to be the ethical responsibility of any higher education entity.

The question remains of how to address the third component—that is, realistically providing the classroom instruction needed by students with disabilities across all courses. A growing number of postsecondary institutions are turning to Universal Design for Learning (UDL) for a campus-wide approach to accessibility and education regarding differing abilities (Krupnick, 2013) because of its emphasis on the need to go beyond code and mere accommodations. A resource that has proved useful for postsecondary institutions is the National Center for Universal Design (CUD, 1997), a national research, information, and technical assistance center housed within the College of Design at North Carolina State University at Raleigh. Table 3 summarizes the characteristics of Universal Design as described by the Center, which provide a strong framework for education and action (North Carolina State University, 2002). Principles, guidelines, and examples of UDL can be very effective when teaching students with language impairments. (See the Appendix for detailed explanations and examples.) Under the umbrella of Universal Design, everyone on campus becomes responsible for accessibility, thereby empowering the faculty, staff, and students to become agents of social justice. As they become more aware of differing abilities and their obligation to facilitate inclusion, the community can move...
Table 3. Characteristics of Universal Design as defined by the National Center for Universal Design (CUD, 1997), a national research, information, and technical assistance center housed within the College of Design at North Carolina State University at Raleigh

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equitable use</td>
<td>The design is useful and marketable to people with diverse abilities.</td>
</tr>
<tr>
<td>Flexibility in use</td>
<td>The design accommodates a wide range of individual preferences and abilities.</td>
</tr>
<tr>
<td>Simple and intuitive use</td>
<td>Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.</td>
</tr>
<tr>
<td>Perceptible information</td>
<td>The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.</td>
</tr>
<tr>
<td>Tolerance for error</td>
<td>The design minimizes hazards and the adverse consequences of accidental or unintended actions.</td>
</tr>
<tr>
<td>Low physical effort</td>
<td>The design can be used efficiently and comfortably and with a minimum of fatigue.</td>
</tr>
<tr>
<td>Size and space for approach and use</td>
<td>Appropriate size and space are provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.</td>
</tr>
</tbody>
</table>


toward true accessibility of its physical space, the curriculum, and the cocurriculum.*

As an example, Guilford College, a small private liberal arts college in Greensboro, NC, is piloting UDL as a means of providing an effective postsecondary education to students with special learning needs. In addition, their academic support staff have chosen to work in collaboration with others on campus who address issues of diversity. Partnering with the college’s Diversity Action Committee, they have hosted Accessibility Days featuring speakers, local and national artists, students, faculty, and staff with differing abilities. They have also worked with the faculty, staff, and student organizations to win approval for a campus Accessibility Plan that emphasizes accessibility awareness and the accessibility of information, physical space, and campus policies and procedures. Their goal is to build the number of people on campus who have an awareness of accessibility and enough knowledge to implement Universal Design as they plan each class, event, meeting, space renovation, and so forth.

Unfortunately, instructors are often overwhelmed when presented with accommodation requirements because these accommodations require quickly retrofitting text equivalents and other components into a course that is already planned and under way. However, if instructors are given the resources and support to redesign current courses and design new courses using the UDL framework, these time-consuming and sometimes costly retrofits and the accompanying potential for negative feelings toward the process of supporting those with disabilities can be greatly diminished.

*According to The Glossary of Education Reform, “Cocurricular refers to activities, programs, and learning experiences that complement, in some way, what students are learning in school—that is, experiences that are connected to or mirror the academic curriculum.”
SUMMARY

Designing the curriculum and cocurriculum to facilitate the academic, social, and personal needs of all students is an increasing concern for colleges and universities. As more diverse learners seek higher education, enrolling and retaining these students will require reassessment and redesign of the learning environment and postsecondary experience. Administrators, faculty, and staff must be aware of the complex challenges facing students with disabilities—classmates with increasingly sophisticated language skills, a dramatic decrease in mandated supports and protections, the need for greater independence/interdependence in their approach to learning, and the need for effective self-advocacy for supports in all aspects of their postsecondary experience.

It is also essential to acknowledge that the faculty and staff are facing a more diverse student population than ever before. The faculty and staff must be supported in partnering with disability resources, faculty development, information technology, and others to move forward with creating environments where students with a variety of learning differences and disabilities can thrive. Finally, educators working with secondary students with language impairments could benefit greatly from a deeper understanding of the demands and challenges these students will face in postsecondary programs to help them develop the skills needed to successfully navigate this new environment.

REFERENCES


APPENDIX

Application of Universal Design for Learning (UDL) to Postsecondary Students With Language Impairments

Students with language impairments need multiple means of representation.

**UDL Principle I.** Within this principle, instructors are encouraged to “provide options for perception.” Learning is impossible if information is imperceptible to the learner and difficult when information is presented in formats that require extraordinary effort or assistance. To reduce barriers to learning, it is important to ensure that key information is equally perceptible to all learners by: (1) providing the same information through different modalities (e.g., through vision, hearing, or touch); (2) providing information in a format that will allow for adjustability by the user (e.g., text that can be enlarged, sounds that can be amplified). Such multiple representations not only ensure that information is accessible to learners with particular sensory and perceptual disabilities, but also easier to access and comprehend for many others.

Examples within UDL Principle I are especially useful for students who have difficulty processing auditory information. The UDL guidelines provide several examples:

- Use text equivalents in the form of captions or automated speech-to-text (voice recognition) for spoken language.
- Provide visual diagrams, charts, notations of music or sound.
- Provide written transcripts of videos or auditory clips.
- Provide American Sign Language (ASL) for spoken English.
- Use visual analogues to represent emphasis and prosody (e.g., emoticons, symbols, or images).
- Provide visual or tactile (e.g., vibrations) equivalents for sound effects or alerts.
- Provide visual and/or emotional description for musical interpretation.

Guideline 2 within Principle I is to “provide options for language, mathematical expressions, and symbols.” Within this guidelines, checkpoint 2.5 is particularly helpful to students with language impairments, as it encourages instructors to “illustrate through multiple media,” explaining,

Classroom materials are often dominated by information in text. But text is a weak format for presenting many concepts and for explicating most processes. Furthermore, text is a particularly weak form of presentation for learners who have text- or language-related disabilities. Providing alternatives—especially illustrations, simulations, images, or interactive graphics—can make the information in text more comprehensible for any learner and accessible for some who would find it completely inaccessible in text.

The following examples are helpful to instructors:

- Present key concepts in one form of symbolic representation (e.g., an expository text or a math equation) with an alternative form (e.g., an illustration, dance/movement, diagram, table, model, video, comic strip, storyboard, photograph, animation, physical or virtual manipulative).
- Make explicit links between information provided in texts and any accompanying representation of that information in illustrations, equations, charts, or diagrams.

The emphasis shifts to supporting comprehension in Guideline 3 of Principle I, which reminds instructors to “provide options for comprehension” in order to achieve educational goals with our students. Scaffolding is an important tool that allows diverse learners to “transform accessible information into usable knowledge.” This guideline reminds implementers that

Decades of cognitive science research have demonstrated that the capability to transform accessible information into usable knowledge is not a passive process but an active one. Constructing usable knowledge, knowledge that is accessible for future decision-making, depends not upon merely perceiving information, but upon active “information processing skills” like selective attending,
integrating new information with prior knowledge, strategic categorization, and active memorization. Individuals differ greatly in their skills in information processing and in their access to prior knowledge through which they can assimilate new information.

So, although making information accessible is an essential first step for all learners, instructors must also support students' processing of that information in a variety of ways.

**Principle II of the UDL guidelines carries us through the learning process to reexamine how we allow students to demonstrate the knowledge that they have acquired.** In addition to “provid[ing] options for physical action,” we must also “provide options for expression and communication.” The guidelines encourage instructors to incorporate tools, assistive technologies, and multiple media in order to facilitate students’ communication of their learning, while also “build[ing] fluencies with graduated levels of support for practice and performance.” Options for expression and communication are essential for those with language disorders; when these options are available for all students, multiple perspectives can emerge more clearly and strengthen, as students respond to ideas and information that may not come forward when only traditional means of expression and communication are accepted. The explosion of opinions and information via the Internet is one way that we see technology empowering “voices” that were silenced prior to this means of expression.

Within Principle II, the guidelines tackle an issue that plagues many students and instructors, executive functioning. Many of our students with language impairments also struggle in this area. The connection between executive functioning and other disorders is explained very well in Guideline 6:

"Of critical importance to educators is the fact that executive functions have very limited capacity due to working memory. This is true because executive capacity is sharply reduced when: (1) executive functioning capacity must be devoted to managing "lower level" skills and responses which are not automatic or fluent thus the capacity for "higher level" functions is taken; and (2) executive capacity itself is reduced due to some sort of higher level disability or to lack of fluency with executive strategies. The UDL framework typically involves efforts to expand executive capacity in two ways: (1) by scaffolding lower level skills so that they require less executive processing; and (2) by scaffolding higher level executive skills and strategies so that they are more effective and developed."

Scaffolding has long been emphasized in primary and secondary education; however, its intentional incorporation in higher education has only recently begun to go beyond those courses labeled as developmental. As institutions focus on student learning outcomes that require critical thinking and reflection, they find that students need support. As Coulson and Harvey (2013) describe,

"Effective reflection for learning through experience requires a high level of introspection and open-minded self-analysis, a capacity for abstract learning, and self-regulation and agency that few students in higher education innately possess. Reflection can, however, be learnt and taught through strategic interventions and careful scaffolding."

This support is necessary for neurotypical students and critical for those who must expend greater energy on lower level skills to engage in critical thinking activities, such as reflection.

Finally, all classroom teachers know that even the best presentation of information and multiple options for communication/expression are meaningless in the face of student apathy. UDL Principle III addresses the affective domain of learning through encouraging that we “provide multiple means of engagement.” Because we know that “learners differ markedly in the ways in which they can be engaged or motivated to learn,” especially in the face of learning difficulties beyond their control, “providing multiple options for engagement is essential.” The guidelines go on to give multiple examples for “recruiting interest, sustaining effort and persistence, and self-regulation.” Particularly useful components of this principle are the emphasis on supporting students’ development of autonomy, collaboration,
personal coping skills and strategies, as well as self-assessment and reflection.

**UDL Principle III** draws our attention to the affective needs of students beyond the classroom. Myers, Lindburg, and Nied (2013) explain:

College students with disabilities experience challenges similar to their peers without disabilities. However, according to some studies (Cohen, 2004; Sandler, 2008), students with disabilities may experience even more anxiety and overwhelming feelings during their transition from high school to college than their peers without disabilities . . . students with disabilities have lower retention rates (particularly during the first two years of college) than their counterparts without disabilities (Gregg, 2009). (p. 38).

To effectively support students outside of the classroom, we must not only foster an environment that accommodates their differences but also welcome them and support their self-determination. Myers, Lindburg, and Nied (2013) continue:

In a recent study, students with disabilities were asked what advocacy skills were essential to their retention in college. Four strong themes emerged from the discussion. The students indicated “seeking services from DSS . . . and college services available to all students; forming relationships with professors and instructors; developing support systems on campus with friends, support groups, and . . . DSS office; and gaining a self-awareness of understanding of themselves to persevere” (Getzel & Thoma, 2008, p. 81). (pp. 40–41)