

College Students with Disabilities: Increasing Opportunities for Student Success.

Abstract: This article explores the growing number of students with disabilities enrolled in postsecondary educational settings and the need for faculty to reconsider the format of the traditional lecture by utilizing learning strategies and interventions that have proven successful in the literature. Research studies and literature reviews have investigated the needs of students with disabilities. Our goal was to select examples of three strategies (guided notes, response cards, and think-pair-share) that can be blended purposefully in lectures in different academic disciplines to increase the opportunities for student success.

Keywords: learning strategies, interactive lecture, guided-notes, response cards, think-pair-share

Introduction

Research shows that a significant number of students with disabilities are attending postsecondary education and that number continues to increase. Henderson (1999) reported that 10% of college students included students with disabilities. More recently, Newman, Wagner, Cameto, and Knokey (2009) reported estimates of up to 26% of students with disabilities attending four-year colleges. However, despite more students with disabilities having access to postsecondary education institutions, it is not clear if this increase in access actually leads to successful degree completion (Shaw, 2009). In fact, it has been reported that many of these students do not succeed in completing their education by earning a degree, and instead choose to leave college early (Quick,

Lehmann, & Deniston, 2003; U.S. Department of Education, 2012).

For many students, gaining acceptance into a postsecondary education program is a significant milestone. However, without adequate support, this could be the first step in the process of what could be a most difficult and disappointing experience. Some students need varying levels of support to be successful, and students with disabilities often need more purposeful and intentional support from faculty members who are very important in the overall strategy of how each institution provides support to students. However, when faculty members are notified of needed accommodations during the first class session or first week of a new semester, adequate preparation for students presents specific challenges. Research studies and literature reviews have investigated and identified the needs of students who chose to pursue postsecondary education. This article summarizes and examines the legislative and support differences that impact students with disabilities as they transition from high school to postsecondary education settings and presents examples of three strategies (think-pair-share, guided notes, and response cards) that can be blended purposefully in lectures in different academic disciplines to increase opportunities for student success. The purpose of this article is to identify learning strategies that will address the needs and increase the possibility of success for college students with disabilities.

Literature Review

Legal framework ensuring access for students with disabilities.

United States Public schools in K-12 settings are legally mandated to follow a specific process to identify, assess, and plan for determining services to ensure access to education for students with disabilities. While in school, K-12 students with disabilities

are protected under the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004). IDEA mandates that students with disabilities be provided a free and appropriate education in their least restrictive environment. Therefore, students with disabilities are provided special education services that are documented by a joint professional and parent approved document called the individualized education program (IEP). IDEA requires that continuous review of the IEP occurs each year, and a more in-depth review occur every three years. However, once these students graduate from high school, they are considered adults and the legal protection that they had as children still exist, but resides under different legislation. At the postsecondary education level, parents are no longer involved in a collaborative agreement with professionals in the educational arena. Additionally, there is no binding document that must be reviewed on a continuous basis. Instead, students with disabilities at the postsecondary education level must now prevail themselves to institutions informing them that they have a disability and would like to take advantage of the services unique to individuals with disabilities.

There are several laws that do protect students with disabilities from being denied access to an equal education at the college level (see table 1). The most well known laws are Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. According to both legislative actions, a disability is defined as a physical or mental condition that substantially limits major life activities, such as hearing, mobility, vision, learning, or communication. Furthermore, there is a record of the impairments, or the person is regarded as having an impairment. Two and four-year institutions of higher education are mandated to provide accommodations for the rising number of students with disabilities they accept. These

laws provide protection from discrimination and provision of reasonable accommodations for students who qualify for services. Rusch, Hughes, Agran, Martin, and Johnson (2009) state that although clear legislative mandates exist, the promised postsecondary outcomes have not yet been fulfilled. Although, these laws provide guidance for institutions working with individuals with disabilities on campus, they are not enough. For K-12 school settings, a prescribed set of procedures are in place to determine which students qualify for special services from the point of assessment to the IEP, which is implemented in the classroom setting. Although similar procedures exist at the postsecondary education level, they are more institution-specific in higher education settings. For example, a typical process might include the following:

1. Student notes on admissions application that he/she has a disability
2. Student seeks support from a disability services office
3. Student provides documentation of a disability
4. Disability services center reviews and prepares letter of accommodations
5. Student presents letter to all instructors
6. Faculty member honors accommodations noted in the letter

While this process is a good one, the missing link is the faculty members who are ultimately charged to honor the noted accommodations despite the fact they could be unaware of the needs while planning for their courses. Because faculty are not involved with this process, they rarely become familiar with the issues facing their students with disabilities until after students are enrolled in courses and the semester unfolds (Lechtenberger, Barnard-Brak, Sokolosky & McCrary, 2012).

Lechtenberger, et al., (2012) assert that of those students with disabilities who

choose to enter postsecondary education institutions, their experiences are primarily influenced by the interaction with faculty, staff, and other students, in addition to the other experiences gained by the time spent on a college campus. Yet, in all the connections, perhaps the most important is the interaction and relationship students form with their professors. However, even with the best of intentions and proactive actions, providing accommodations should not be the sole responsibility of the faculty. Brinckerhoff, McGuire and Shaw (2002) emphasized the need for postsecondary institutions to improve their efforts to help students bridge the gap between secondary and postsecondary education. McGuire (2010) emphasized that one of the most important attributes for students with disabilities attending 2-or 4-year institutions is the ability to function independently. For example, while well-intentioned parents often manage key aspects of a successful educational experience (studying, seeking the assistance of faculty and staff, self-disclosing, advocating for accommodations, and decision making) when students transition to postsecondary education, the students, as adults, are responsible for the management of these important variables. In addition, upon entrance into postsecondary education, students are faced with one of the most important terms affecting how services are provided. The concept of *reasonable accommodations* is real and because of the subjective nature of this terminology, an open dialogue that includes the student is critical to the determination of the kinds and levels of support that is needed. In other words, students' voices are important. However, what about the actions of faculty members?

Although several explanations have been suggested as being responsible for the dismal trend for this population, perhaps the most relevant as noted earlier is the

interaction between student and faculty and the issues related to this variable. More specifically, Greenbaum, Graham, and Scales (1995) have noted, "the most common institutional barrier cited by students with disabilities was lack of understanding and cooperation from faculty and administrators..." (p. 468). This lack of acceptance and understanding felt by students has impeded how students integrate into collegiate environments and has also reinforced the stereotypical beliefs and discriminatory practices often displayed by both professors and fellow students (Gmelch, 1998; Lechtenberger, et al., 2012).

Broadbent, Dorow, & Fisch (2006) summarized recommendations from research that faculty could consider adopting as they prepare and deliver courses at postsecondary education institutions. Common accommodations for students with disabilities include: extended time, audiotaping lectures, note-taker or making the instructors' note available to students, allowing exams to be typed, read aloud, or dictated, adapting text material, permitting multiple methods of assessment, and allowing course substitutions. Additionally, **learning strategies** such as cooperative learning, peer tutoring, guided notes, response cards in conjunction with purposeful management of the classroom environment could contribute positively to student success. **Given the challenges that are inherent in navigating postsecondary education settings, it is plausible for students to be anxious about the education process and the challenges in achieving success.** However, failure is not the only option. **Perhaps if faculty purposefully incorporates** strategies as they teach and facilitate instruction, the potential for successful outcomes for college students with disabilities and their peers would be immense.

Method

To ascertain the strategies that faculty could include in their teaching repertoire, the authors conducted a content analysis of articles that reflected teaching strategies and interventions that are inexpensive, easy to use, and have proven to be successful for students with disabilities. Content analysis is a specific and methodical investigation of a specific body of information that is gathered to identify patterns or themes (Leedy&Omrod, 2001). The authors did not endeavor to include literature sources from every available source. Instead, the articles selected were those that targeted wide readerships and consisted of representative literature (i.e., interventions, postsecondary education, college students, learning strategies). The authors also reviewed content needs expressed by students with disabilities who completed a survey at a mid-sized university.

A search for reviews of literature about college students with disabilities was completed. Additionally, articles about focus groups, surveys, interventions, and interviews were located by searching the ERIC database from 1995-2014. The descriptors used were postsecondary education, college students with disabilities, needs, interventions, learning strategies, faculty support, and college needs. Finally, the references and the following journals were hand searched: *American Secondary Education*, *Exceptional Children*, *Interventions in School and Clinic*, *Journal of Applied Behavior Analysis*, *Journal of Intellectual & Developmental Disability*, and *Journal of Positive Behavior Interventions*. The authors were able to identify strategies that are relatively inexpensive, easy to use, and have proven to be successful for students with disabilities by triangulating the information from the aforementioned sources. These strategies included: (a) think-pair-share, (b) guided-notes, and (c) response cards and are summarized below.

Recommended strategies

Think-pair-share. In delivering a repertoire of evidence-based comprehension strategies in the context of a first-year university course, Parr and Woloshyn (2013) highlighted the need for faculty to engage in comprehension strategy instruction at the postsecondary level. Findings (Parr & Woloshyn, 2013) suggest that age-appropriate instruction that is explicit yet flexible can be integrated within existing course content successfully. Cooperative interactions among peers have proven to be effective ways for students to gain and demonstrate mastery of content knowledge (Kagan & Kagan, 2009). These interactions are age-appropriate, flexible, and are not content-specific. Although various definitions appear in the literature related to cooperative learning, the main premise is that cooperative learning relies on active student-centered engagement, instead of relying on passive instructor-directed lectures. In other words, students learn more when they participate in the learning process. Furthermore the instructor generates the problem or task at hand, however, the engagement between the students is what drives the internalization of critical content. Incorporating instructional approaches that support cooperative interactions among students enhance their ability to strengthen their higher order thinking skills. Researchers have examined the use of various thinking structures (Barkley, Major, & Cross, 2014; Cooper & Robinson, 2011; Cretu, 2014; Johnson, Johnson, & Smith, 2006; Kagan & Kagan, 2009) that engage learners in working through information together to master content. Think-Pair-Share is an example of a common and easy to incorporate cooperative learning structure that has been successfully used with a variety of learners (Kagan & Kagan, 2009; Kalman, 2007; Millis, 2010). This learning structure is a great benefit for students in general, because not only do students with

disabilities struggle with various content across college campuses, so do students who are not identified with any specific learning limitations. By engaging in cooperative structures like Think-Pair-Share, faculty can develop more opportunities with student-centered learning that could meet the learning needs of all the students in their courses.

Think-Pair-Share engages students with material on an individual level, in pairs, and finally as a large group. In this four-step process, students share their understanding of the material at hand. The steps are as follow: First, the instructor poses a problem, and students are asked to think to themselves about the problem, in a specified amount of time. Second, they are instructed to write, or draw their responses. Third, students are asked to pair-up with at least one other student, preferably someone sitting near them, and share their responses. While sharing, students are asked to examine similarities and differences in their responses, and to note what part of the problem is still unclear. Fourth, the instructor calls on pairs to briefly summarize their thoughts to the entire class. In this way, students observe the various perspectives of approaching a problem, while the instructor then provides corrective information needed to ensure proper solutions to the proposed problem. Strategies like this provide learners with a bridge to better internalize their learning through social engagement and group problem solving. This is extremely beneficial for many students with processing difficulties who oftentimes have immature metacognitive strategies in thinking about their learning, and remembering key information in any given course context. Kagan&Kagan (2009) offers variations of the Think-Pair-Share. One variation in particular has students work in teams similar to the Think-Pair-Share, but it is referred to as Think-Pair-Square. This approach includes students working in teams following the same aforementioned steps. At the pairing step,

teams come together. Kagan and Kagan (2009) discern this as a more powerful structure because it increases the opportunities for participation and accountability.

Guided notes. Guided notes were originally introduced for students who had problems learning and recalling information and were based on the perception that if students take good notes and attend to them later, they will perform better on tests than students who only read the material, or listened to the instructor's lecture (Williams, Weil, & Porter, 2012). Guided notes can be defined as "teacher-prepared handouts that 'guide' a student through a lecture/discussion with standard cues and prepared spaces in which students can write the key facts, concepts, and/or relationships" (Heward, 1994, p. 304). Because note-taking can be a difficult task for some students, particularly those with learning or physical disabilities, the use of guided notes can give students a standard set of notes for future reference (e.g., tests and quizzes) as well as eliminate the possible frustration, lack of motivation, and off-task behaviors that may exist due to poor note-taking skills (Anderson, Yilmaz & Wasburn-Moses, 2004; Patterson, 2005). Guided notes are fairly easy for faculty to utilize in their instructional settings. Boyle (2001) asserts that note taking served two purposes for students: (a) notes aid student understanding of lecture information, and (b) notes serve as reference material for later study. Overall and quite broadly, when partially completed notes are made available to students, they provide a foundational instructional guide for students to follow. Students do not have to feel compelled to write, listen, and comprehend the instructor's lecture and understand how the concepts fit into the larger contexts of learning all at the same time. Moreover, research on the use of guided notes shows that when guided notes have been used,

students were observed listening and being attentive to instruction while taking notes. In addition, their notes had more accuracy, were more completed, and their scores improved on quizzes and tests (Patterson, 2005). In fact, Peper and Mayer (1986) found a positive correlation between the amounts of notes taken and test scores.

Response cards. Response cards (RC) are cards, signs, or items that students hold up simultaneously to display their responses to each question or problem presented by the teacher (Heward, Gardner, Cavanaugh, Courson, Grossi, & Barbetta, 1996). Typically, students are given a small (9"x 11") write-on board and dry erase marker and are asked to write and hold up simultaneously their responses to each teacher question or problem. In postsecondary education settings, a small card or single sheet of paper can be utilized. Maheady, Michielli-Pendl, Mallette, and Harper (2002) posit that the obvious advantages to this procedure are that all pupils can respond to each teacher question, the teacher can visually assess all pupils' understanding of questions/problems, and the activity itself (writing on a dry erase board) may be more fun than simply raising one's hand. The effects of response cards on elementary and secondary students' active response rates, academic performance on daily and weekly quizzes, and general satisfaction with instructional procedures have been examined and the findings show that when RC are used, students: (a) make significantly more academic responses, (b) score higher on daily and next day quizzes, as well as on review tests, and (c) generally prefer RC over more traditional teaching conditions (Cavanaugh, Heward, & Donelson, 1996). Armendariz and Umbreit (1999) also found that the use of RC significantly decreased the amount of disruptive behavior in a general education classroom. More recently, RC were found to

be an effective intervention strategy for decreasing off-task behaviors while improving academic performance and positive outcomes for students with emotional and behavioral disorders (Patterson, 2008). RC were also found to be effective in increasing academic responding, opportunities to respond, and correct academic responses of students with mild intellectual disability (Cakiroglu, 2014). There are some significant advantages to the use of response cards in instructional settings. For example, everyone participates when response cards are in effect. In addition, because each student response on the card faces the instructor, the instructor is usually the only person (with the exception of the student) who can view the student's answer on the card. Without unnecessary (and unwanted) attention, the instructor can confirm or clarify concepts and continue teaching while students continue to participate in ways that are highly interactional and safe from ridicule or embarrassment.

Implications for Teachers

Teaching and learning strategies have unique implications for teachers. Think-Pair-Share is an active teaching- learning strategy that not only fosters students' engagement in their own learning but also motivates students to think first and share their thoughts with their peers. This process serves to develop and validate the critical thinking process so students can gain further knowledge from many perspectives (Robertson, 2006). Marzano and Pickering (2005) emphasized the following advantages for teachers and students when the Think-Pair-Share strategy is utilized: It is quick; preparation time is minimal; the personal interaction motivates many students with little intrinsic interest in the topic; the teacher can ask many different questions; and it engages the entire class and allows quiet-students to answer questions without having to stand out from their

classmates (Kaddoura, 2013). Furthermore, students could be more willing to participate because the pressure to respond in front of the whole class is removed (McKeachie&Svinicki, 2010).

According to Boyle (2001), Guided notes involve the use of teacher prepared handouts that provides an outline with information about the lesson. It also involves cues from the teacher so students will know which information is important. This process requires both teachers and students to be active participants in the learning process. Careful planning for instruction with emphasis on the sequence of concepts to be presented and the organization of the material is important in engaging students over the duration of the lesson when using Guided notes. It is more likely that because students are not forced to write continuously, they will then be able to listen, comprehend, and participate more meaningfully to achieve successful outcomes in their college courses.

As with other instructional strategies, incorporating Response cards routinely into postsecondary education settings will necessitate forethought so the strategy is implemented intentionally with the learners and their specific needs in mind. These planned cues provide structure and should prompt simultaneous responses from all students. This allows the lesson to flow at a brisk pace and encourages students to maintain engagement in the lesson with unnecessary disruptions (Duchaine, Green, &Jolivette, 2010).

Having access to postsecondary education is clearly not enough for many college students with disabilities. Even with access, students with disabilities struggle to succeed at any substantive level in the most basic of college courses. The Think-Pair-Share, Guided notes, and Response cards strategies are viable alternatives for increasing

academic engagement of students. Furthermore, systematic and careful use of these strategies could potentially lead to increased academic gains for students as well.

Discussion and Conclusion

The purpose of this article was to identify effective learning strategies that would address the needs and increase the possibility of success for college students with disabilities. Effective teaching and learning strategies are effective because they work in a variety of settings, for the majority of learners with multiple and varied learning styles, and across varying age and grade levels. Instructional strategies and interventions like think-pair-share, guided notes, and response cards have proven to be effective for learners with disabilities and they can be easily adapted and modified for learners in postsecondary education settings to achieve similar results. These strategies also provide learners with a bridge to better internalize their learning through social engagement and group problem solving. In addition to a focus on instruction, equally important to academic preparation is the knowledge about the ongoing evaluation of accommodations that assist students in maximizing their full potential (Webb, Patterson, Syverud, & Seabrooks-Blackmore, 2008). In other words, faculty can help fill the gaps that exist for students who are not aware of how to best to have their needs met or how to go about advocating for themselves during their college years and beyond. It is important to note, however, such programming is not delivered without effort by the instructor. Lectures are traditional and convenient in delivering content managed solely by the instructor to a large number of students irrespective of the academic discipline. It is a traditional and comfortable approach utilized for many faculty. This approach, however, is passive and

has little regard for differences in abilities and learning styles, age, cultural and linguistic diversity, and or disabilities.

Given the rising number of students with disabilities who are choosing to enroll in postsecondary education institutions, faculty members have to reconsider how best to help students achieve success. Postsecondary educational settings today are not as traditional as they once were. Therefore, faculty members are encouraged to consider other approaches such as guided notes, response cards, and think-pair-share. These strategies will allow all students to interact with each other, to increase an awareness and understanding of their own metacognitive processes, and to be active and successful participants in the learning process.

References

- American with Disabilities Act Amendments Act (ADAAA) of 2008. Pub. L. No. 110-325 (2008).
- Anderson, S., Yilmaz, O., & Wasburn-Moses, L. (2004). Middle and high school students with learning disabilities: Practical academic interventions for general education teachers – A review of the literature. *American Secondary Education*, 32, 19-38.
- Armendariz, F., & Umbreit, J. (1999). Using active responding to reduce disruptive behavior in a general education classroom. *Journal of Positive Behavior Interventions*, 1, 152-158.
- Barkley, E., F., Major, C. H., & Cross, K. P., (2014). *Collaborative learning techniques:*

- 346 *A resource for college faculty* (2nd ed.). San Francisco, CA: Jossey-Bass.
- 347 Boyle, J. R. (2001). Enhancing the note-taking skills of students with mild
- 348 disabilities. *Intervention in School and Clinic*, 36, 221–224.doi:
- 349 10.1177/105345120103600405
- 350 Brinckerhoff, L. C, McGuire, J. M. & Shaw, S. F. (2002). *Postsecondary education and*
- 351 *transition for students with learning disabilities* (2nd ed.). Austin, TX: Pro-Ed.
- 352 Broadbent, G., Dorow, L. G., & Fisch, L. A. (2006). College Syllabi: Providing Support
- 353 for Students with Disabilities. *Educational Forum*, 71, 71-80.
- 354 Cakiroglu, O. (2014). Effects of preprinted response cards on rates of academic response,
- 355 opportunities to respond, and correct academic responses of students with mild
- 356 intellectual disability. *Journal Of Intellectual & Developmental Disability*, 39, 73-
- 357 85.
- 358 Cavanaugh, R. A., Heward, W. L., & Donelson, F. (1996). Effects of response cards
- 359 during lesson closure on the academic performance of secondary students in an
- 360 earth science course. *Journal of Applied Behavior Analysis*, 29, 403-406.
- 361 Cooper, J. L., & Robinson, P. (2011). *Small group learning in higher education:*
- 362 *Research and practice*. Stillwater, OK: New Forums Press.
- 363 Cretu, D. (2014). Integrating active learning methods during university lectures. *Journal*
- 364 *Plus Education / Educatia Plus*, 10, 166-172.
- 365 Duchaine, E. L., Green, K. B., & Jolivet, K. (2010). Using response cards as a class-
- 366 wide intervention to decrease challenging behavior. *Beyond Behavior*, 20, 2-10.
- 367 Gmelch, S. B. (1998). *Gender on campus: Issues for college women*. New Brunswick,
- 368 NJ: Rutgers University Press.

- 369 Greenbaum, B. Graham, S., & Scales, W. (1995). Adults with learning disabilities:
 370 Educational and social experiences during college. *Exceptional Children*, 61, 460-
 371 472.
- 372 Henderson, C. (1999). *College freshmen with disabilities*. Washington, DC: American
 373 Council on Education/HEATH Resource Center.
- 374 Heward, W. L., Gardner III, R., Cavanaugh, R. A., Courson, F. H., Grossi, T. A., &
 375 Barbetta, P. M. (1996). Everyone participates in this class. *Teaching Exceptional*
 376 *Children*, 28, 4-10.
- 377 Individuals with Disabilities Education Improvement Act of 2004, 20 U. S. C. § 1400 et
 378 seq. (2004).
- 379 Johnson, D. W., Johnson, R. T., & Smith, K. A. (2006). *Active learning: Cooperation in*
 380 *the college classroom*. Edina, MN: Interaction.
- 381 Kaddoura, M. (2013). Think pair share: A teaching learning strategy to enhance
 382 students' critical thinking. *Educational Research Quarterly*, 36, 3-24.
- 383 Kagan, S., & Kagan, M. (2009). *Kagan cooperative learning*. San Clemente, CA: Kagan
 384 Publishing.
- 385 Kalman, C. S. (2007). *Successful science and engineering teaching in colleges and*
 386 *universities*. Bolton, MA: Anker.
- 387 Lechtenberger, D., Brak, L., Sokolosky, S., & McCrary, D. (2012). Using wraparound to
 388 support students with developmental disabilities in higher education. *College*
 389 *Student Journal*, 46, 856-866.
- 390 Leedy, P. D., & Ormrod, J. E. (2001). *Practical research: planning and design*. Upper
 391 Saddle River, N.J. : Merrill Prentice Hall, 2001

- 392 Maheady, L., Michielli-Pendl, J., Mallette, B., & Harper, G. F. (2002). A collaborative
 393 research project to improve the academic performance of a diverse sixth grade
 394 science class. *Teacher Education and Special Education*, 25, 55-70.
- 395 Marzano, R.J. & Pickering, D.J. (2005). *Building academic vocabulary*. VA: Association
 396 for Supervision and Curriculum Deve.
- 397 McGuire, J. M. (2010). Considerations for the transition to college. In S. F. Shaw, J. W.
 398 Madaus, & L. L. Dukes, *Preparing students with disabilities for college success:
 399 A practical guide for transition planning* (pp. 7-35). Baltimore: Brookes.
- 400 Millis, B. J. (Ed.) (2010). *Cooperative learning in higher education*. Sterling, VA: Stylus.
- 401 Newman, L., Wagner, M., Cameto, R., & Knokey, A.M. (2009). *The post high school
 402 outcomes of youth with disabilities up to 4 years after high school. A report of
 403 findings from the National Longitudinal Transition Study-2 (NLTS2) (NCSE
 404 2009-2017)*. Menlo Park, CA. SRI International.
- 405 Parr, C., & Woloshyn, V. (2013). Reading comprehension strategy instruction in a first-
 406 year course: An instructor's self-study. *Canadian Journal For The Scholarship Of
 407 Teaching & Learning*, 4, 1-19. doi:10.5206/cjsotl-rcacea.2013.2.3
- 408 Patterson, K. B. (2005). Increasing positive outcomes for African American males
 409 in special education with the use of guided notes. *The Journal of Negro
 410 Education*, 74, 311-320.
- 411 Patterson, K. B. (2008). The effects of response cards on off-tasks behavior
 412 and academic performance of African American boys with emotional and
 413 behavioral disorders. *Journal of Multiculturalism in Education*.
 414 <http://www.multiculturaljournal.com/issues/>

- 415 Peper, R. J., & Mayer, R. E. (1986). Generative effects of note-taking during
 416 science lectures. *Journal of Educational Psychology*, 78, 34-38.
- 417 Quiek, D., Lehmann, J., & Deniston, T. (2003). Opening doors for students with
 418 disabilities on community college campuses: What have we learned? What do we
 419 still need to know? *Community College Journal of Research and Practice*, 27,
 420 815-827.
- 421 Rusch, F. R., Hughes, C, Agran, M., Martin, J. E., & Johnson, J. R. (2009). Toward self-
 422 directed learning, post-high school placement and coordinated support. *Career*
 423 *Development and Exceptional Individuals*, 32, 53-59.
- 424 Robertson, K. (2006). *Increase student interaction with "Think- Pair-Shares" and "Circle*
 425 *Chats"*. Colorin: Colorado. Retrieved from [http://www.colorincolorado.org/](http://www.colorincolorado.org/article/13346)
 426 [article/13346](http://www.colorincolorado.org/article/13346)
- 427 Shaw, S. F. (2009). Transition to postsecondary education. *Focus On Exceptional*
 428 *Children*, 42, 1-16
- 429 U. S. Department of Education, National Center for Education Statistics, (2012). *The*
 430 *Condition of Education 2011* (NCES 2012-045), Indicator 45.
- 431 Webb, K. W., Patterson, K. B., Syverud, S. M., & Seabrooks-Blackmore, J. J. (2008).
 432 Evidenced based practices that promote transition to postsecondary education:
 433 Listening to a decade of expert voices. *Exceptionality*, 16, 192-206.
- 434 Whimbey, A. & Lochhead, J. (1986). *Problem solving and comprehension*. Englewood
 435 Cliffs, NJ: Lawrence Erlbaum.
- 436 Williams, W., Weil, T. M., & Porter, J. K. (2012). The relative effects of traditional
 437 lectures and guided notes lectures on university student test scores. *Behavior*

438 *Analyst Today*, 13, 12-16.

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440 Table 1

441 *Laws Protecting the Rights of Students with Disabilities in Postsecondary Settings*

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Law	Year	Provisions
Vocational Education Act (PL 88-210) and	1963	Provided for workforce education to include basic grants to states for vocational education.
Latest Amendment: The Carl D. Perkins Career and Technical Education Act of 2006, PL 109-270	2006	Developed stronger linkages between secondary and postsecondary programs such as tech-prep programs which integrate academic content
The Higher Education Act (PL 89-329)	1965	Provided funding for improving building capacity to serve extension and continuing education students.
Latest Amendment: Higher Education Opportunity Act of 2008, PL 105-244	2008	Provided funding for demonstration projects to ensure that students with disabilities receive a quality higher education; Created a National Center for Information and Technical Support for Postsecondary Students with Disabilities.
Section 504 of the Rehabilitation Act (PL 93-112)	1973	Applies to public and private institutions that accept federal funding; programs must be accessible and reasonable accommodations must be made for students to participate.
Latest Amendment: The Workforce Innovation and Opportunity Act	2014	Aimed at increasing opportunities for individuals with disabilities who face barriers to employment, and to invest in the important connection between education and career preparation.
Americans with Disabilities Act (PL 101-336);	1990	Prohibits discrimination against individuals with disabilities in a variety of public and private settings.
Latest Amendment: American with Disabilities Act Amendments Act (ADAAA) of 2008, PL 110-325	2008	Expanded “major life activities” by recognizing activities such as reading, bending, and communicating.

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