A handbook of exemplary training activities to improve access and success in higher education for students with learning disabilities

Heidi M. McGarvey
Rowan University

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A HANDBOOK OF EXEMPLARY TRAINING ACTIVITIES TO IMPROVE
ACCESS AND SUCCESS IN HIGHER EDUCATION FOR
STUDENTS WITH LEARNING DISABILITIES

by
Heidi M. McGarvey

A THESIS

Submitted in partial fulfillment of the requirements of the Master of Arts Degree in the
Graduate Division of Rowan University of New Jersey
1998

Approved by ___________________________
Professor

Date Approved ___________________________
April 20, 1998
ABSTRACT


The number of learning disabled students attending colleges and universities has increased dramatically in the last ten to fifteen years placing greater demands on college personnel to keep abreast of effective service models and educational interventions for this population.

This project attempted to develop an exemplary model to be used by campus disability service coordinators to provide information and technical assistance to members of the postsecondary and high school community in order to enhance educational opportunities for individuals with learning disabilities.

Information for the project was compiled, analyzed, and evaluated from current literature, professional and peer practices, and the writer's own experience as director of Cumberland County College's Regional Center for College Students with Learning Disabilities. These activities resulted in the development of a three-part inservice training model: (1) A Resource to College Faculty; (2) Assisting High School Transition Teams; and (3) Training College Tutorial Staff.

In developing the inservice model, the author noted a lack of research evaluating the effectiveness of programs and specific intervention for college students with LD and recommends that future research be focused on this area.
MINI-ABSTRACT


This project developed an exemplary model to be used by campus disability service coordinators to provide information and technical assistance to members of the postsecondary and high school community in order to enhance educational opportunities for individuals with learning disabilities.

Information gathered from professional and peer practices resulted in the development of a three-part inservice training model: (1) A Resource to College Faculty; (2) Assisting High School Transition Teams; and (3) Training College Tutorial Staff.
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CHAPTER 1

INTRODUCTION

During the last ten to fifteen years, there has been a rapid increase in the number of colleges and universities offering support services for learning disabled students. In 1981, HEATH Resource Center published an article which listed only nine colleges in the United States having postsecondary programs for students with learning disabilities (Hartman, 1992). Today there are over one thousand colleges offering wide ranges of support for learning disabled students. The 1997 edition of Peterson's Colleges with Programs for Students with Learning Disabilities (Mangrum & Strichart, 1997) listed more than one thousand two and four-year colleges offering campus support services and nearly two hundred with comprehensive learning disabilities programs.

The increase in the number of colleges providing programs or services for learning disabled students can be attributed to several factors. Probably the most significant is the passage of two federal laws: The Education for All Handicapped Children Act, Public Law 94-142 (PL 94-142) and Section 504 of the Rehabilitation Act of 1973 (PL 93-112). PL 94-142 was signed into law in 1975 and pertains to school-aged children. This legislation was the first to recognize on a national basis Learning Disabilities as a handicapping condition eligible for all the services and rights available to other special education categories. It ensured the provision of a free, appropriate public education in the least restrictive environment to all children with disabilities. Emphasis on placing students with disabilities in the least restrictive environment during their elementary and secondary school years has allowed LD students better exposure to college preparatory courses. The
Individuals with Disabilities Act (IDEA) added a provision for a transition plan to help students with disabilities move into a variety of postsecondary activities. The transition plan is a set of organized activities designed to facilitate the move from high school to college for those disabled students wishing to attend college (Fairweather & Shaver, 1991). More LD students educated under the framework of PL94-142 and IDEA are graduating from high school having taken sufficient academic coursework to build skills essential for college entrance. Because of these benefits and raised expectations, there is growing pressure from students, parents, and professionals to create programs that enable LD students to succeed in higher education (Mangrum & Strichart, 1988).

The second piece of legislation, Section 504 of the Rehabilitation Act of 1973, applies to individuals of any age. This law prohibits institutions receiving federal financial assistance from discriminating against a person because of a disability. Colleges and universities must provide reasonable modifications, accommodations, or auxiliary aids which will enable qualified students to have access to, participate in, and benefit from the full range of the educational programs and activities which are offered to all students on campus. The passage of this law has prompted colleges and universities to provide accommodations and to institute programs of support services to serve this constituency (Brinckerhoff, Shaw, & McGuire, 1992; Scott, 1991). LD support programs benefit not only the LD students but also the institution of higher education by facilitating the smooth and timely delivery of academic accommodations. Postsecondary institutions that lack resources or systems to provide the accommodations mandated by Section 504 may find themselves involved in costly and time-consuming litigation.
An additional yet sometimes overlooked factor contributing to the growth of college LD programs is the use of these programs as a marketing tool. Many, if not most, colleges today are committed to enhancing opportunities for a diverse population. A vast majority of colleges seek to provide programs that enable participation by "special populations," including the economically and educationally disadvantaged, and, more and more, the disabled. Services for the learning disabled, in particular, have grown enormously in the past decade. As unusual as it might have seemed a generation or so ago, many colleges are using LD programs as marketing tools. College officials develop top-notch LD programs in an effort to attract the growing population of learning disabled students to their institutions (Mangrum & Strichart, 1988). And in a fascinating twist of fate, the growth of college LD programs has heightened public awareness that college is a viable option for many individuals with learning disabilities - which has generated a need for even better and more comprehensive college services.

While services for LD students are available on college and university campuses more than before, service delivery models vary widely. Many universities and colleges are just starting to implement programs to address the specific needs of students with learning disabilities, while others have comprehensive LD programs (Mangrum & Strichart, 1997; Bursuck, Rose, Cowen, & Yahaya, 1989). A variety of support service models are reported in the literature (Brinckerhoff, Shaw, & McGuire, 1992; Bigaj, Shaw, Cullen, McGuire, & Yost, 1995). McGuire and Shaw (1989) list a continuum of support service delivery models found at institutions across the United States ranging from no services to comprehensive programs with data-based services. Basic services, at the lower end of the
continuum, include the provision of minimal accommodations in order to comply with Section 504 and rely on existing campus resources to serve the needs of LD students. Comprehensive services, on the other hand, include a full-time learning disability director, a full range of accommodations, individualized semester plans, trained tutoring staff, diagnostic services, and data-based recordkeeping.

A college's or university's commitment to working with students with LD may be seen by the number and quality of support services offered (Bender, 1993). However, many institutions are faced with diminished funding, and comprehensive programs can be quite costly. In New Jersey, the state's Commission on Higher Education provides funding through its Special Needs Grant to support five Comprehensive Regional Centers for LD College Students. The Centers are dispersed around the state with two located at four-year universities and three at two-year county colleges. The New Jersey Regional Centers' common mission is to provide integrated, individualized direct service to students and act as technical assistance resources to other colleges in the state by developing awareness about LD in the college population, training faculty and staff, and identifying appropriate strategies for teaching and accommodating students with learning disabilities (Report of the Special Needs Advisory Group, 1996). The Regional Centers could be said to fit under Shaw & McGuire's Continuum as the most comprehensive level - Data-based Services, as they offer a full range of accommodations, individual semester plans, trained tutorial staff, diagnostic services, and detailed student record-keeping for annual reports.

**Need**

All institutions of higher education have the duty to keep abreast of "best
practices" and changes in the field of educating learning disabled college students, whether
they have the means and/or desire to house a comprehensive program or function at the
lower end of the service continuum with only minimal compliance-oriented provisions.
The director of LD services or campus LD specialist, in fact, is in a perfect position to be
the primary "gatherer" of resources and "sharer" of information. It is the mission of the
New Jersey Regional Centers to serve as a resource to students, parents, faculty and staff
on issues concerning learning disabled students. In supporting this mission, an
effective system of providing such information is crucial.

Purpose

The purpose of this project is to provide an in-service training model that
addresses the awareness of high school transition team, college faculty, and tutorial staff in
the college setting. Information will be compiled, analyzed, and evaluated from current
literature, professional and peer practices, and the writer's experience as director of
Cumberland County College's Regional Center for College Students with Learning
Disabilities.

Research Question

What are the elements of an exemplary model for providing information and
technical assistance to members of the postsecondary and high school community in order
to enhance educational and career opportunities for individuals with learning disabilities?

Overview

This project will result in three products: (1) A Resource to College
Faculty; (2) Assisting High School Transition Teams; and (3) Training College Tutorial Staff. Each section includes references to current literature, specific descriptions of activities, and sample forms. The literature reviewed to develop these products will be noted in Chapter 2. Also, the research strategy and methodology will be presented in this chapter. The products which were developed will be contained in Chapter 3. A summary, conclusion, and discussion will be contained in Chapter 4.
CHAPTER 2
RESEARCH STRATEGY

In this chapter, the research method and strategy used to develop the products included in Chapter 3 will be described.

The writer set out to examine information available, either theoretical or research-based, which could be used to develop three exemplary inservice models: Serving as a Resource to College Faculty; Training College Tutorial Staff; and Assisting High School Transition Teams. The inservice plans and resource manuals developed will be used to fulfill a key objective of the New Jersey Special Needs Regional Center for College Students with Learning Disabilities at Cumberland County College - to provide information and serve as a resource to students, faculty, and staff on LD topics.

To develop the inservice plans and resource manuals, the following activities were undertaken.

First, a literature search was conducted. The Educational Abstracts electronic database was searched for articles appearing in periodicals under the descriptors of "learning disabilities and higher education/college/postsecondary." This search yielded 67 articles (unduplicated) between 1983 and September 1997. The abstracts of these articles were then reviewed, and of the 67, 42 were selected for use in this project.

Existing reference lists from relevant books - Promoting Postsecondary Education for Students with Learning Disabilities (Brinckerhoff, Shaw, & McGuire, 1993) and Support Services for Students with Learning Disabilities in Higher Education: A
Compendium of Readings, Book 3 (AHEAD, 1996) and all identified relevant reports were searched for additional references. Also, all issues of the Journal of Learning Disabilities from 1994 to 1996 were hand-searched for additional references.

Articles selected from the search were then sorted into three categories: tutoring/learning strategies; faculty training; and transition. Those articles which described the most promising and applicable practices and resource information were chosen to provide the framework for the series of inservice sessions and resource manuals.

In addition to published literature, unpublished and/or anecdotal information was secured from the following sources: other professions in the field (via conversations, meetings, and conferences); LD students enrolled in Cumberland County College's Regional Center; materials from professional organizations, advocacy groups, and agencies.
CHAPTER 3

RESULTS

This chapter contains three products developed as a result of the research outlined in Chapter 2. Part I is titled "A Resource to College Faculty"; Part II is "Assisting High School Transition Teams"; and Part III is "Training College Tutorial Staff." Each part contains an introduction or overview of the topic, an outline for the inservice presentation, a manual or reference guide, and an inservice evaluation form. References to literature are contained at the end of each manual.
In postsecondary settings, the degree to which students with learning disabilities will receive full benefits from college depends to a great extent on the attitudes and behaviors of faculty and staff (Aksamit et al., 1987).

Merchant found the match between instructor and student to have a significant impact on the student's success in college. In his analysis, Marchant identified two key considerations: instructional methods and instructor attitudes toward students with LD and the adaptations they require (1990).

In many cases, college faculty have received little or no training in educational methods and rarely have a background in learning disabilities. A 1987 study by Aksamit et al. found college faculty and staff to have limited knowledge of learning disabilities. More importantly, the study showed that attitudes toward disabled college students were related to the level of information that faculty have - faculty with more information about learning disabled college students held more positive attitudes than those with less information (1987).

More recent surveys suggest that faculty are gradually becoming more knowledgeable about LD but still need better and more accurate information. Yocum and Coll (1995) investigated the attitudes of developmental college instructors and college counselors toward LD students and found that 71% felt that campus LD programs and services were not helpful. Additionally, their study found that only 15% of those surveyed
believed their college was able to retain their LD students.

Other surveys suggest that most faculty report comfort with providing extended time on exams for LD students (Satcher, 1992); however, concerns remain prevalent among faculty about maintaining academic integrity and standards (Nelson et al, 1996) and about fairness to non-disabled students when accommodations are made for LD students (Houck, Asselin, Troutman, 1992).

Norton (1997) surveyed faculty at San Diego County Community College and found attitudes to be generally positive and accepting regarding LD students in their classes; however, in the same study, LD students reported continued apprehensiveness about approaching faculty for accommodations.

These studies suggest an ongoing need for campus LD support personnel to develop and maintain a working relationship with faculty and to ensure timely dissemination of information to college faculty and staff about learning disabilities.

This section of Chapter 3 provides a format for the LD service provider to conduct a faculty inservice presentation on learning disability awareness. Included is a guide which can be distributed at the inservice and through interoffice mail to those who are unable to attend. The guide is written specifically for use at Cumberland County College but can be easily modified for use at other colleges.
FACULTY INSERVICE: COLLEGE STUDENTS WITH LEARNING DISABILITIES

OUTLINE

1) Introduction
   Comprehensive LD support services: NJ's Special Needs Regional Centers
   LD students on campuses - How many are there?

2) What LD is and is not

3) Section 504 and the ADA
   Implications for higher education

4) Academic accommodations

5) Campus policies

6) Suggestions for teaching strategies

7) Seminar evaluation
A GUIDE TO LEARNING DISABILITIES SERVICES AT CUMBERLAND COUNTY COLLEGE

The purpose of this guide is to provide an overview of current policies, procedures, and services for students with learning disabilities at Cumberland County College. Hopefully, it will answer some of the questions you may have about accommodating students with learning disabilities in your classroom.
CONTENTS

What is Project Assist?

What is the philosophy of Project Assist?

Where is Project Assist's location? What are its hours, staff?

What is a learning disability?

What are the laws pertaining to individuals with disabilities on college campuses?

What are accommodations?

How are accommodations decided upon?

How should students request accommodations?

Who is responsible for providing accommodations?

How are testing accommodations provided?

What is the campus policy if there is a dispute over an accommodation?

What is the procedure for referring a student who discloses a disability or requests an accommodation?

What does Project Assist do when a student is referred?

How can faculty members let students know that they are willing to help?

What can be done to prevent students from misusing tape recordings lectures?

Who is responsible for finding notetakers?

What specialized equipment is available for students with reading and/or writing disabilities?

What are some suggested strategies for helping LD students in the college classroom?

Sample Forms: Tape Recording Agreement and Accommodations Request Form

References
What is Project Assist?

Cumberland County College offers comprehensive support services for students with learning disabilities through Project Assist, one of eight New Jersey Special Needs Regional Centers sponsored by a grant from the New Jersey Commission on Higher Education. The Center's primary focus is to assist learning disabled individuals who are pursuing a college education.

Supportive services provided by the Center include:

1) Screening and referral
2) Diagnostic evaluations
3) Professional tutoring
4) Academic advisement and counseling
5) Technical support: talking spellers, voice-enhanced word processor, Arkenstone Personal Reader, 4-track tape players, Recordings for the Blind and Dyslexic, mini-cassette players, etc.
6) Specialized summer orientation
7) Learning Strategies course
8) Peer support group
9) Alternate testing arrangements
10) Individualized Service Plans

Project Assist also conducts workshops and presentations designed to heighten awareness of faculty, students, high school personnel, and community groups about issues pertaining to learning disabilities. Students who attend colleges in neighboring counties can also benefit from diagnostic and consultation services provided by the Center.

What is the philosophy of Project Assist?

At Project Assist, student success is promoted by focusing on potential rather than disabilities. The Center strives to coordinate services that will enable students with learning disabilities to act independently in a supportive atmosphere that promotes self-reliance.

What is Project Assist's location? Hours? Staff?

Project Assist is located on the second floor of the Academic Building, Room 27. Office hours are Monday through Friday 8:30-4:30. The office is also open on Tuesday evening until 7:30. Additional evening hours may be scheduled. Referrals and questions pertaining to learning disabilities and/or Project Assist services should be forwarded to Heidi McGarvey, Assistant Director of Project Assist 691-8600 ext. 282.
What is a learning disability?

According to the United States Office of Education's *Definition and Criteria for Defining Students as Learning Disabled* (1977), a specific learning disability means "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or do mathematical calculations."

A learning disability affects the manner in which individuals with normal or above normal intelligence acquire, store, and/or retrieve information.

The adult with a learning disability may have language-based and/or perceptual problems that affect reading, spelling, written language, or mathematics. For some, organization, time management, and social perceptions are also affected.

Learning disabilities are often confused with other handicapping conditions like mild forms of mental retardation and emotional disturbances. However, a learning disability does not mean the following:

1) Mental Retardation: Students who are learning disabled are not mentally retarded. They have average to above average intellectual ability. In fact, it is believed that Albert Einstein and Thomas Edison had learning disabilities.

2) Emotional Disturbances: Students who are learning disabled do not suffer from primary emotional disturbances such as schizophrenia. The emotional support LD students need is due to the frustration that mentally healthy individuals experience from having a learning disability.

3) Language Deficiency Attributable to Ethnic Background: Students who have difficulty with English because they come from a different language background are not necessarily learning disabled (Adelman & Olufs, 1992).
A learning disabled person may exhibit several or many of the following behaviors (Kahn, 1980):

Weak study habits: difficulty organizing and budgeting time; slow to start tasks; difficulty completing tasks

Discrepancy in quality of oral and written work

Poor attention span, overactivity, underactivity, or distractibility

Language problems: trouble verbalizing answers; forgetting, confusing, or misarticulating words

Poor short- and/or long-term memory for information presented in class

Difficulty following written directions, confuses oral directions

Confusing left and right sides

Motor coordination problems: unorganized; sloppy; clumsy

Problems with visual tasks: loses place easily; difficulty recalling visually presented information

Mechanical problems taking examinations: places answers in the wrong spots, makes errors in copying answers from scrap paper to answer sheet

Difficulty interpreting graphs

Problems with reading: mispronunciations; omitting or adding words; leaving endings off of words; confusing similar letters such as "b" and "d" or "p" and "q"; confusing the order of letters in words using "was" for "saw"; poor comprehension; slow reading pace

Difficulty in written expression: reverses letters, words, or phrases; written work appears sloppy and careless; spacing poor; difficulty organizing essays; poor spelling

Problems with articulation, enunciation, speech pace

Trouble listening to a lecture and taking notes at the same time

Difficulty finishing exams in the allotted time
What are the laws pertaining to individuals with disabilities on college campuses?

The fundamental principles of nondiscrimination and accommodation in academic programs were set forth in the implementing regulations for Section 504 of the Federal Rehabilitation Act of 1973 (published in the May 1980 Federal Register, p.30944); these regulations provide that:

No qualified handicapped student shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any...postsecondary education program or activity...(104.43).

[An institution]...shall make such modifications to its academic requirements as are necessary to ensure that such requirements do not discriminate or have the effect of discriminating, on the basis or handicap, against a qualified handicapped applicant or student. Academic requirements that the [institution] can demonstrate are essential to the program of instruction being pursued by such students or to any directly related licensing requirement will not be regarded as discriminatory within the meaning of this section. Modifications may include changes in the length of time permitted for the completion of degree requirements, substitution of specific courses required for the completion of degree requirements, and adaptation of the manner in which specific courses are conducted (104.44).

In essence, this statute requires institutions of higher education to be prepared to make appropriate academic adjustments and reasonable modifications to policies and practices in order to allow full participation of students with disabilities in the same programs and activities available to nondisabled students.

Learning disabled students who are "otherwise qualified," that is, able to meet all of a program's requirements in spite of the handicap, are covered by Section 504.

Section 504 applies to institutions receiving federal funding; the Americans with Disabilities Act (ADA) extends protection for students with disabilities attending private or public institutions not receiving operational funds from the federal government (Jarrow, 1992).

What are accommodations?

The academic modifications and adaptations referred to in Section 504 are often called accommodations. According to the publication Auxiliary Aids and Services for Postsecondary Students with Handicaps: Higher Education's Obligations Under Section 504 (1991), accommodations may include: tape recording lectures, utilizing a notetaker, time extension for exams, alternative administration of an exam (taped version, taped response, enlarged version, use of word processor for essay response, use of spelling aid or calculator), and alternative testing site.
Section 504 does not guarantee equal results or achievement for persons with disabilities but affords the disabled student an equal opportunity to achieve equal results. Postsecondary institutions are legally required to provide accommodations as long as they do not fundamentally alter essential elements of a particular course or curriculum or impose an undue financial or administrative burden (Brinckerhoff, Shaw, & McGuire, 1992; Scott, 1994).

How are accommodations decided upon?

Accommodations are determined on an individual basis, taking into consideration the student's type and severity of learning disability, the specific course content, and course objectives. If accommodations are recommended by Project Assist, they will be written into the student's Individualized Service Plan (ISP) which is co-formulated by a certified Learning Disabilities Consultant, the Project Assist Assistant Director and the student.

How should students request accommodations?

Students approaching faculty for accommodations based on their learning disability should present the Accommodations Request form signed by Project Assist (see forms). Accommodations should not be granted to students who have not gone through the appropriate channels on campus to have their disability verified. It is also important to note that it is the responsibility of the student to make a timely request for accommodations. Students have no legal basis for complaint if they have not given teaching faculty proper and timely notification of their need.

Who is responsible for providing accommodations?

Ultimately, it is the institution's responsibility to provide the accommodations; however, it is Project Assist's goal to assist all units of the College in meeting their mandated responsibilities.

How are testing accommodations provided?

Testing accommodations can be provided by the course instructor or the Project Assist office. If accommodations are to be given in the Project Assist office, it is the student's responsibility to remind the faculty member of the needed accommodation. The student is also required to notify Project Assist at least 24 hours in advance of the test date and time. The test will need to be dropped off by the instructor prior to the student's appointment. Students should be taking their exams at the same time as the rest of the class, unless the accommodation cannot be arranged for that time. For example, if a student's accommodation calls for extended time on an exam, and the student has a class prior to the exam and directly after the exam, it may be difficult for the student to take the exam with extended time without interfering with other classes. In this case, it may be necessary for the student to take the exam at another time. Students enrolled in Saturday or evening
classes will need to arrange to take their exams during the Project Assist hours and not their class hours if the faculty member wants Project Assist to provide the accommodations.

What is the campus policy if there is a dispute over an accommodation request?

It is expected that faculty members honor requests for accommodations presented by the College's disabilities offices. Legal experts (Heyward, Lawton, & Associates) advise that no individual faculty member make a unilateral decision to deny a required accommodation, for he or she may put the college at risk legally (1995).

If an instructor has questions concerning the appropriateness of an accommodation that has been recommended by Project Assist, the instructor should contact Project Assist immediately. If the instructor disagrees with the accommodation recommended, he or she should seek review by contacting the College's Section 504 coordinator who will attempt to resolve the matter on an informal basis. If this effort is unsuccessful, the matter will be referred to a panel chosen from administration and faculty. This panel will further investigate and recommend appropriate action to the President who will make the final determination.

Complaint procedures for students are described in the College Catalog on page 14.

What is the procedure for referring a student who discloses a disability or requests an accommodation?

Procedures for accessing services for students with disabilities are publicized in the Cumberland County College Catalog, Student Handbook, and college pamphlet entitled "Services for Students with Disabilities: A Guide to Resources, Services and Support Systems." All students with a disability, learning or otherwise, should contact the College's Disabilities Coordinator in the Student Support Services Office. An initial interview is conducted with the student and if the disability appears to be learning related, the Disabilities Coordinator will refer the student to Project Assist for further diagnostic follow-up and, if appropriate, supportive services. Written referrals by faculty or staff can be made using the pink Cumberland County College Student Referral Form.

What does Project Assist do when a student is referred?

When a student is referred to the Project Assist office, the following steps are taken:

1. Intake interview (application, screening, gathering records and previous documentation of evaluations).

2. If the student provides legitimate, up-to-date documentation of LD and meets other eligibility criteria (enrolled in college, motivated, college potential, etc.), the student is
notified of eligibility for services and an appointment is set to develop an Individualized
Service Plan (ISP).

3. If there is no valid certification of LD, the student is screened as a potential candidate
for Project Assist. If the student shows evidence of a learning problem, not caused by
hearing, visual, motor, or emotional disturbance, Project Assist can evaluate for LD. If the
diagnosis is LD, the student is notified of eligibility for services and an appointment is set
to develop the ISP.

4. Students not eligible are referred to other agencies.

How can faculty let disabled students know that they are willing to help?

Legally, students have the right not to be identified as disabled, if they so choose. If the
student wishes to disclose a disability or request accommodation, it is the student's
responsibility to identify himself and his need for accommodation to faculty, rather than
vice versa. It is not uncommon, however, for a disabled student to be hesitant about
disclosing a disability or requesting assistance. One way that a faculty member can show
his/her receptiveness to discussing a disability would be to include a brief statement on the
course syllabus such as, "If you need course accommodations because of a disability, or if
you have emergency medical information to share, please make an appointment during my
office hours." (Brinckerhoff, Shaw, & McGuire, 1993). During the meeting you can make
sure that the student is aware of procedures for accessing services and accommodations.

What can be done to prevent students from misusing tape recordings of lectures?

Included in the appendix of this guide is a sample agreement adapted from a form used at
Ball State University. You may wish to ask students who request to tape record lectures
to sign this form as a precaution against the misuse of tape recordings (e.g., plagiarism,
sharing with others, use against faculty).

Who is responsible for finding notetakers?

If this accommodation is required it will be listed on the Accommodations Request form.
The student has two options in regard to notetaking. The first is for the student to find
his/her own notetaker from the class. However, some students do not choose this option
for confidentiality purposes. Thus, the second option is for the instructor to make a
general announcement, without naming names, that a volunteer notetaker is required in the
course. The volunteer chosen can submit notes at the end of each class to the instructor
who can distribute them to the student. Project Assist can supply "carbonless note paper"
to volunteer notetakers.
What specialized equipment is available for students with reading and/or writing disabilities?

Project Assist has an Arkenstone Reader which has the ability to scan printed material and turn it into voice. The scanned material will also appear on a computer screen and can be highlighted or enlarged. The same computer has voice-enhanced word processing for students who benefit from hearing what they're typing. The program will read word-by-word, sentence-by-sentence, or paragraph-by-paragraph.

What are some suggested strategies for helping learning disabled students in the college classroom?

Encourage students to make an appointment during office hours to self-disclose.

Provide students with a detailed syllabus.

Clearly spell out expectations before course begins (e.g., grading, material to be covered, and due dates).

Start each lecture with an outline of material to be covered that period. At the conclusion of the class, briefly summarize key points.

Present new or technical vocabulary on the blackboard or use a student handout. Terms should be used in context to convey greater meaning.

Give assignments both orally and in written form to avoid confusion.

Announce reading assignments well in advance for students who are using taped materials.

If possible, select a textbook with an accompanying study guide for optional student use.

Provide adequate opportunities for questions and answers, including review sessions.

Provide, in advance, study questions for exams that illustrate the format, as well as the content of the test. Explain what constitutes a good answer and why.

Use a multisensory approach. For example, write (visual stimulus) on the chalkboard as you lecture (auditory stimulus) to provide each student with the opportunity to learn through his/her strongest modality.

When necessary, permit learning disabled students to demonstrate mastery of course content using alternative methods (e.g. extended time for tests, oral or taped exams, individually proctored exams in a separate room, etc.)
Encourage students to use campus support services (e.g., peer support groups, counseling, academic support labs, tutorial assistance).

Protect students' confidentiality. Knowledge of a student's diagnosed learning disability should not be disclosed. Arrangements for accommodations should be made in a confidential and discrete manner (AHEAD, 1991).
TAPE RECORDING AGREEMENT

I understand that, as a student of Cumberland County College who has a disability that affects my ability to take or read notes, I have the right to tape record my class lectures for use in my personal studies only. I realize that lectures taped for this reason may not be shared with other people without the written consent of the lecturer. I also understand that tape recorded lectures may not be used in any way against the faculty member, other lecturer, or students whose classroom comments are taped as part of the class activity.

I am aware that the information contained in the tape recorded lectures is protected under federal copyright laws and may not be published or quoted without the expressed consent of the lecturer and without giving proper identity and credit to the lecturer. I agree to abide by these guidelines with regard to any lectures I tape while enrolled as a student at Cumberland County College.

__________________________________________    ______________________________
Signature of Student                Date

__________________________________________
Signature of Witness

__________________________________________
Title of Witness
ACCOMMODATIONS REQUEST

___ Student Support Services
___ Educational Opportunity Fund
___ Project Assist

COURSE______________________ SECTION_______

___________________________ has a documented disability and
will need the following accommodation(s):

___ Permission to tape record lectures
___ Designated note-taker
___ Extended time on test
___ Proctored testing outside of classroom
___ Use of dictionary or electronic speller
___ Other: __________________________

________________________________

________________________________

The above accommodations are among those identified as reasonable under Section 504 of
the Rehabilitation Act of 1973. Your cooperation and understanding is appreciated.

_________________________________ Date:________________
(Signature of Program Director)

_________________________________ Date:________________
(Signature of Faculty)

For clarification/questions, please call________________ ext____
References


SEMINAR EVALUATION FORM

SEMINAR: _______________________________  DATE: _________________

1. Did you find the seminar informative?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

2. Was information presented in an interesting manner?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

3. Was the material presented in a clear and organized fashion?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

4. Was there enough opportunity for participation/questions?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

5. Is there any other day of the week or time which would have been more convenient for you to attend a seminar such as this?

6. Do you have any suggestions for improving a seminar such as this?

7. Please list any questions pertaining to learning disabilities that you would like further clarification on or would like to see covered in the Faculty Guide:

8. Additional comments:
The transition from high school to postsecondary education is becoming increasingly more likely for students with learning disabilities. In 1991, over 34,000 full-time college freshman reported having a learning disability, a figure that has doubled since 1985 (Henderson, 1992).

In comparison to non-disabled peers, however, students with learning disabilities continue to participate in postsecondary education at a much lower rate - 17% vs. 56% (Fairweather & Shaver, 1991). Furthermore, LD students are more likely to drop out of college before completing a degree.

Several reasons have been cited for LD students' lack of acceptance or lack of success in college: studies show that many LD students do not understand their individual disability, how it affects their learning, or how to describe it to others (Dalke & Schmitt, 1987); many LD students lack content preparation necessary for success in college (Cowen, 1993; Brinckerhoff, 1996); and often LD students have not been provided with learning strategies instruction in high school (Deshler & Schumaker, 1986).

Current research suggests a need for improving the quality of transition services for LD students in high school. Better communication and coordination of efforts between special educators and postsecondary service providers could serve to alleviate some of the problems surrounding transitioning LD students into college. Communication should be ongoing to facilitate the distribution of accurate information to students and families concerning realistic goals and expectations, planning and preparation, and resource
The postsecondary LD service provider can offer assistance to high school transition teams in several ways: written correspondence with high school personnel; college "open house" presentations with specialized transition to college information; or presentation at high schools and regional transition events.

Because students and their parents play a vital role in transition decision-making, it makes sense to present information not only to high school personnel but also to students and parents. This can be accomplished in one presentation with all parties invited.

On the following pages is a plan for a transition presentation to be given by the college's LD service provider. The presentation and guide are intended for high school students with LD, parents, high school educators, child study team members, and guidance counselors who are interested in gaining information about higher education and support services at this level.
OUTLINE FOR TRANSITION PRESENTATION

I. Introduction

The players: student, parent(s), high school professionals, postsecondary service providers
Encouragement and early preparation

II. How does a student know if college should be considered as an appropriate post high school choice?

Prerequisite skills
Success and non-success characteristics

III. What are the differences between high school and college?

IV. What can a student do to prepare for college?

High school curriculum
Assessments (compile transition file)
Research colleges and support programs

V. Are all colleges the same?

How to find differences, questions to ask

VI. Cumberland County College policies and forms

Eligibility criteria for Project Assist
Steps for admission to Project Assist
Chargeback information

Services offered through Project Assist

VII. Video: College Students with LD Answer Questions

VIII. Questions

IX. Evaluation of presentation
TRANSITION: A GUIDE ABOUT COLLEGE FOR STUDENTS WITH LEARNING DISABILITIES
Introduction

Greater opportunities are available today than in past years for graduating high school students with learning disabilities. Options are expanding particularly in the area of higher education. These expanding opportunities bring to mind questions such as: Should I think about going to college? Do students with learning disabilities succeed in college? What do I need to do to prepare for college? How can I figure out if college is right for me?

Determining the answer to these questions will take careful consideration and planning. The systemized planning toward postsecondary outcomes that is required for special education students during high school is known as transition planning. Students, parents, and high school personnel are involved in creating the transition plan.

Transition planning should be initiated as early as possible to provide ample opportunity for the student to explore a variety of learning environments; develop skills and compensatory strategies; and assess abilities, interests, and aptitudes in order to establish realistic goals.

For many students with learning disabilities, attending college can be a realistic goal. But the percentage of learning disabled students who go on to college after high school is substantially smaller than that of non-disabled students. Furthermore, studies show that many of the LD students who do attempt college fail due to false expectations and lack of adequate preparation (Cowen, 1993; Brinckerhoff, 1996).

These studies suggest that there is a need to carefully initiate transition services during the high school years in order to insure that LD students are not unnecessarily restricted from pursuing college as a goal, and also to insure that students are adequately prepared for that goal, and that students receive thorough and accurate information about higher education.

Collaboration between the high school transition team and college personnel, particularly those involved with providing services for students with disabilities, can be very useful for insuring that information about higher education is available to high school students.

This guide has been prepared to provide information to those involved in the transition planning of students with learning disabilities who may be considering college after high school.

Information presented in the guide was gathered from research publications and input from college service providers and college students with learning disabilities.
How does a student know if college should be considered as an appropriate post high school choice?

Knowing and understanding the student's levels of ability and academic performance in high school course work and on standardized tests will help parents and students decide on the appropriateness of different postsecondary programs.

Generally, to be successful in a college program, students should possess at least average cognitive ability and have the potential to read college-level text books or listen to taped texts; comprehend material presented; and be able to integrate and express ideas in written form.

A number of colleges offer remedial courses in reading, writing, and mathematics for students who are entering college with basic skills below a college level; however, it is important to understand that students, even those with learning disabilities, will be expected to master the basic skills in a relatively short period of time (one to two semesters) in order to maintain satisfactory academic standing and to progress into college-level courses.

The student's Individual Educational Plan (IEP) contains testing and school performance levels. To obtain this educational information, students and parents should consult their school's Child Study Team.

Many colleges have selective admission policies and require applicants to possess a high school diploma or GED and take the Scholastic Aptitude Test (SAT) or the American College Test (ACT). LD students can arrange for test accommodations for these entrance tests but will still have to meet the individual college's entrance standards.

A number of colleges, especially community colleges, have open-admission policies. This means that an applicant is guaranteed admission as long as he or she has a high school diploma or GED, or is 18 years of age. At open-admission institutions, applicants are not required to meet minimum proficiency levels in order to gain admission to the institution. One should be advised, however, to check with the individual institutions about admission criteria. To obtain financial aid consideration or be accepted into certain programs at the open admission college, students may have to meet separate admissions criteria for the particular program or service for which he or she is applying.

The student's interests and career aptitudes must also be taken into consideration. The guidance department can assess the student to provide direction for career choices and postsecondary options.

In general, one must remember that a college education is primarily academic, that is, centered around book learning. Students who wish to pursue careers in technical areas that de-emphasize reading and writing skills and capitalize on hands-on activities may find vocational training to be a more appropriate option.
What are the qualities of successful LD college students?

Competency in reading, writing and basic mathematics
Average cognitive abilities
Positive attitude - motivation
Strong commitment - understands that college is a full-time job
Understands and accepts demands - willing to spend at least 3 hours outside of class doing assignments for every 1 hour of class time
Manages freedom - uses free time wisely
Seeks knowledge - learns how to compensate
Self-advocates - knows when and how to seek help
Has strong family or peer support
Knows proper college etiquette

What behaviors or characteristics lead to failure?

Lacks basic skills
Low or borderline cognitive ability
Misses classes
Doesn't do assignments and/or turns them in late
College isn't #1 priority
Lacks knowledge of proper college etiquette
Lacks maturity
Personal problems overwhelm
 Doesn't seek help

Remember: Students with learning disabilities need all the same competencies as any college student PLUS whatever special skills or strategies are needed to cope with their disability.
How is college different from high school?

In college, there is no "special education." Special education programming ends when the student graduates from high school. In college, it will be up to the student to disclose his or her disability and to seek appropriate services or accommodations. Furthermore, there are no resource rooms or special education classrooms in college.

Students transitioning into college will be moving from a high school environment which is carefully guided to a setting where the student must achieve on his/her own. During the high school years, limits are set by parents, teachers, and counselors. In college, students will encounter much more freedom. College requires a greater deal of self-discipline on the part of the student. The student will have to structure his or her time. Parents or counselors will no longer be responsible for "checking up" on the student. As a matter of fact, information concerning college students' grades and progress may not be disclosed to parents unless the student gives written permission to share such information.

In high school, students attend class 30 hours per week. In college, students usually attend class 12 to 15 hours per week. However, expected study time increases dramatically in college. College students should expect to spend 20 to 30 hours per week studying and preparing assignments.

Because the most academically prepared students choose college, college professors generally have higher expectations of their students than high school teachers do.

Grading policies may be very different between high school and college. In high school, grades may be based upon the student's effort or level of improvement. In college, students must maintain a "C" average, and grades are based mostly on performance on exams which measure mastery of course material.

The teaching style and format may be quite different between high school and college. In high school, teachers tend to give facts, use the blackboard and worksheets, and check notebooks and homework. In college, professors seldom check homework, rarely check attendance, and require students to locate information rather than just giving it to them. Additionally, worksheets and study guides are rarely given in college.

The student's personal support network changes in college. Students will have to get to know new instructors and make new friends. Counseling and other supports will have to be sought out by the student. The student may be living away from home in a dormitory or apartment and will have to be able to cope with his or her new living environment.

There is the difference between the cost of a high school education and the cost of a college education. The cost of college tuition may range from $1400 to $26,000 per year. Students may apply for financial aid to help cover college costs.

Finally, since there is no "special education" in college, students with LD will not be identified as such on any college records or transcripts, nor will they be referred to as "classified" or "special ed."
How do special education laws differ between high school and college?

The Individuals with Disabilities in Education Act (IDEA) is the legislation that guarantees a free appropriate public education and governs the provision of special education services to students with disabilities in elementary and secondary schools. IDEA does not apply to higher education. Colleges do not offer "special education."

Under IDEA, the school is responsible for identifying students with disabilities, for providing all necessary assessments, and for initiating the delivery of special education services.

In higher education, it is the student's responsibility to self-identify and to provide the college with documentation of the disability. Postsecondary institutions are not required to provide assessments or to design special academic programs for students with disabilities.

Section 504 of the Rehabilitation Act and the Americans with Disabilities Act (ADA) are the legal mandates which prohibit colleges from discriminating against a person because of a disability. Under Section 504 and the ADA, institutions of higher education are required to provide accommodative services so that qualified students with disabilities will have equal access to the institution's regular academic program. Accommodative services include reasonable modifications, accommodations, or auxiliary aids which will enable qualified students to have access to, participate in, and benefit from the full range of educational programs and activities which are offered to all students on campus. Examples include taped tests, preferential seating, use of computers for written work, and extended time to complete exams. The institution has the right to select the specific aid or service it provides, as long as it is effective.

Under IDEA, the requirements of the "standard" high school academic program may be significantly altered for a special education student. For example, the student may be exempt from taking the High School Proficiency Exam or from taking certain courses that are usually required for a diploma. In contrast, postsecondary institutions are not required to alter their requirements for graduation, nor will college students with disabilities be exempt from testing. Some colleges may offer course substitutions such as a Statistics or Logic course rather than College Algebra; however, the law does not require that a substitution be made, particularly if the course in question is essential to the degree sought by the student.

Colleges are not required to lower standards for admissions or graduation. Students considering a college should find out what the college's admission criteria and graduation requirements are as well as what types of accommodations and support systems are available.
What can the college-bound student do to prepare?

Planning should begin as early as 8th or 9th grade; however, preparation during the student's junior or senior year of high school is not too late. Planning and preparation needs to focus primarily on three areas: selecting appropriate high school courses; obtaining assessments of abilities, skills, and interests; and researching colleges and support programs.

Selecting Appropriate High School Courses

An effective high school instructional program for LD students who plan to attend college is characterized by a curriculum based on skills that reflect the demands of the first-year college classroom.

Many LD students fail in college because they lack the content preparation necessary to succeed in college. College-bound LD students need to take prerequisite academic courses during high school. These courses should include, to the greatest extent possible, mainstreamed college preparatory classes.

Four years of English, including writing and literature, are highly recommended as preparation for selective universities and community colleges. Mathematics courses taken in high school should include Algebra I as a minimum; Algebra II and Geometry are recommended for preparation for 4-year and selective colleges. Two to four years of sciences are recommended in the core areas of Biology, Chemistry, and Physics. Two to four years of social sciences with an emphasis on history and government are suggested. Necessary preparation in the foreign languages varies from zero to four years, depending on the program of study and the selectivity of the college or university.

College service providers who work with LD students seem to agree that in addition to core academic subjects, LD students benefit greatly from pre-college preparation in computer and keyboarding skills. Most college programs require students to take at least one basic computer course and to submit most papers typewritten. Students lacking computer experience prior to college entry are at a distinct disadvantage in the college setting.

Finally, an aspect not to be overlooked is that of pre-college preparation in the area of self-advocacy and compensatory strategies. LD students need to understand their disability, how to explain it, and how to compensate for it. Students should learn how to study effectively, manage their time, take notes, and use a library, before coming to college.
Obtaining Assessments of Abilities, Skills, and Interests

As mentioned previously, the Child Study Team and the high school guidance department can administer assessments to determine levels of cognitive functioning, achievement, and career interest and aptitude. For the student planning to seek admission at a college or university, having current assessment information is important. Many colleges with LD services will require recent documentation of the disability as well as copies of the students' educational and psychological evaluations and scores. High school students should be sure that they have updated educational and psychological assessments. Keeping a personal portfolio of these records will help students with the college admissions process.

Researching colleges and support programs

LD students considering higher education need to find out about various colleges - their admissions criteria, curricular offerings, LD support, cost, and location. There is a great deal of variety among colleges. The following steps are suggested for planning your research.

The initial search should be based on the following criteria: location, cost, size, type of institution, admission requirements, curricular offerings, and LD support. There are several ways to obtain this information:

1) Arrange for campus visits
2) Talk to students who attend colleges
3) Talk to guidance counselors, teachers, parents, and other adults
4) Send for college catalogs
5) Attend "college nights" and "college fairs" and speak with college representatives
6) Use resource guides such as the "K&W Guide to Colleges for the Learning Disabled" and "Peterson's Colleges with Programs for Students with Learning Disabilities or Attention Deficit Disorders."
7) Phone or write to individual colleges asking specific questions. Sample questions are provided on the following page.
Questions to Ask College Admissions Personnel

1) Does the college require standardized college admissions test scores (SAT or ACT)? If so, what score does a student need to be admitted?

2) What is the current cost for tuition, fees, and housing?

3) Are remedial courses available to students needing to "brush up" on basic skills?

4) What are the major fields of study offered?

5) What services are available for students with learning disabilities on the campus? Who is the contact person for these services? Are there additional fees for learning disability-related services?

6) Where is the campus located? Is it rural, suburban, or urban?

7) How many students are enrolled at the college?

8) What are the application deadlines and fees?

9) Is financial aid available?

Questions to Ask the College LD/Disabilities Service Provider


2) What types of academic accommodations are typically provided to students with learning disabilities on campus? Will the college provide the specific accommodations that I need?

3) What records or documentation of a learning disability are necessary to arrange academic accommodations or services for admitted students?

4) How many LD students are enrolled at the college?

5) Are faculty open to working with LD students?

6) What are the procedures for getting accommodations and/or services? Is there a separate interview or application process?

7) Are there special orientations available to facilitate the transition into college?
References


WORKSHOP EVALUATION FORM

WORKSHOP________________________________________ DATE_________________________

Please list whether you are a student, parent, guidance counselor, teacher, learning specialist, etc.______________________________

1. Was the workshop informative?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

2. Was information presented in an interesting manner?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

3. Was material presented in a clear and organized fashion?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

4. Was there enough opportunity for questions and participation?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

5. Do you have suggestions for improving a workshop such as this one?

6. Please list any questions you may have pertaining to this workshop or areas that you feel need further clarification.

7. Additional comments:
CHAPTER 3: PART III

TRAINING COLLEGE TUTORIAL STAFF

It is estimated that more than 9% of college freshmen report having disabilities and, at many colleges, as high as 60% of the disabled student population report having learning disabilities (Henderson, 1992). The provision of quality tutoring for LD students is often a key factor to their success in higher education (McGuire, Hall, & Litt, 1991). Each year, campus tutorial service directors and LD service providers encounter new tutors who will need training so that they can tutor effectively. With growing numbers of students with learning disabilities attending colleges, there is an increasing need to provide specialized training to tutors to increase their awareness of this distinct population and to promote the use of effective tutoring strategies.

This section of Chapter 3 provides a format for conducting a tutor training workshop which can be used to prepare both peer and professional tutors to work with college students with learning disabilities. The tutor training model has been developed through consultations with students with learning disabilities and college service providers active in the field; in addition, the most successful innovations from LD literature have been adopted. The model has been put into practice and piloted with tutors at Cumberland County College. The material within this section is presented to guide the campus service provider in conducting a tutor training workshop in one 2-hour session or less. The forms and manual included are designed to serve as samples which may be tailored to the varying needs of different colleges.

Materials included:

- Outline for Inservice
- Tutor Manual
- Case Studies
- Workshop Evaluation
TUTORING COLLEGE STUDENTS WITH LEARNING DISABILITIES

WORKSHOP OUTLINE

Purpose: Most campus tutors work with a variety of students - some are underprepared, others simply need to "brush up" on a certain subject, others may have disabilities. This workshop will focus on tutoring students with learning disabilities, but a number of the strategies introduced can be used for any student.

I. An Introduction to Learning Disabilities: Definition, Characteristics, Accommodations

II. A Rationale for Tutoring; Tutoring Principles

III. A Problem Solving Approach to Tutoring

IV. Learning Strategies

   Memorization
   Study Strategies
   Test Taking
   Note Taking
   Organization and Visual Aids
   Getting the Most from a Textbook
   Technology
   Stress Reduction

V. Content-Specific Tutoring Tips

   Reading
   Writing
   Math

VI. Case studies/scenarios

VII. Discussion of scenarios

VIII. Workshop evaluation
A GUIDE TO TUTORING COLLEGE STUDENTS WITH LEARNING DISABILITIES
This manual is written for tutors who work with college students. As a tutor, you will no doubt encounter students with learning disabilities. This manual provides information about learning disabilities and suggests strategies to enhance your effectiveness when tutoring students with unique learning problems.

The manual is divided into six sections:

1) An Introduction to Learning Disabilities: Definition, Characteristics, and Accommodations

2) A Rationale for Tutoring; Tutoring Principles

3) A Problem-Solving Approach to Tutoring

4) Learning Strategies

5) Content-Specific Tutoring Tips for Reading, Writing, and Math

6) References
1. AN INTRODUCTION TO LEARNING DISABILITIES

WHAT IS A LEARNING DISABILITY?

Although it is not visible like a physical impairment, a learning disability is a permanent disorder that affects how an individual of average to above average intelligence acquires, stores, and/or retrieves information. The adult with a learning disability may have language-based and/or perceptual problems that affect reading, spelling, written language, and mathematics. For some, organization, time management, and social perceptions are also affected.

Abilities are frequently disparate: a student who is highly verbal with an excellent vocabulary has difficulty spelling elementary-level words; a student who learns very well in lecture cannot complete the reading assignments. These striking contrasts in abilities were evident in many famous individuals. For example, Nelson Rockefeller had dyslexia, a severe reading disability, and yet he was able to give very effective political speeches.

Learning disabilities are often confused with other handicapping conditions like mild forms of mental retardation and emotional disturbances. However, a learning disability does not mean the following:

1) **Mental Retardation:** Students who are learning disabled are not mentally retarded. They have average to above average intellectual ability. In fact, it is believed that Albert Einstein and Thomas Edison had learning disabilities.

2) **Emotional Disturbances:** Students who are learning disabled do not suffer from primary emotional disturbances such as schizophrenia. The emotional support LD students need is due to the frustration that mentally healthy individuals experience from having a learning disability.

3) **Language Deficiency Attributable to Ethnic Background:** Students who have difficulty with English because they come from a different language background are not necessarily learning disabled (Adelman & Olufs, 1992).
CHARACTERISTICS OF COLLEGE STUDENTS WITH LEARNING DISABILITIES

Adults with LD may have a few or several of these problems:

**Reading**
Difficulty sounding out unfamiliar words
Slow reading rate
Poor comprehension and retention

**Writing**
Difficulty taking notes
Poor letter formation
Frequent spelling errors, including transpositions of letters ("b" for "d")
Word and/or word-part omissions
Difficulty organizing essays
Sentence structure problems

**Math**
Difficulty with basic math computation
Difficulty with aligning problems, number reversals, confusion of symbols
Difficulty with word problems and math reasoning
Difficulty following a sequence of steps
Associated nonverbal disorders such as problems in left-right, time and space orientation

**Oral Language**
Difficulty with word retrieval
Difficulty comprehending oral language presented at a rapid rate
Difficulty in expressing ideas succinctly or a series of events in correct sequence

**Study Skills**
Difficulty organizing and budgeting time
Poor notetaking skills
Lacking in memorization strategies
Difficulty following directions
Difficulty completing tests and in-class assignments without additional time
Lacking system for organizing notes and other materials
Inefficient use of library reference material

**Social Skills**
Difficulty interpreting non-verbal messages
Difficulty differentiating between sincere and sarcastic comments
Poor self-esteem (Vogel, 1995)
It is not the role of the tutor to diagnose a learning disability; the determination of whether or not a learning disability is present is made by a certified specialist such as a psychologist or learning disabilities consultant through a comprehensive battery of tests. It is important, however, for a tutor to understand that college students who are diagnosed as LD are protected from discrimination under Section 504 of the Rehabilitation Act of 1973. This law states:

No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

This law requires colleges to make reasonable accommodations for disabled students, including those with learning disabilities. Some students with learning disabilities do not require programmatic accommodations, while others need modification on a regular basis. Whether accommodations are necessary and what types of accommodations are needed are determined on a case-by-case basis, usually by the campus disabilities specialist. Some examples of accommodations are:

- Tape recording lectures
- Time extension on exams
- Alternative administration of an exam (taped version, use of word processor for essay response, use of spelling aid or calculator)
- Alternative testing site to eliminate distractions

These accommodations are not meant to give the LD student an advantage, but to help "equalize" his or her opportunity to show mastery of course material. For example, a student who has a learning disability in the area of written language, particularly spelling, could be allowed to use a dictionary or word processor with Spellcheck for essay exams.

As a tutor, you should be aware of these rights so that:

1) you do not perceive the student as manipulative or one who uses unfair advantages
2) you can direct an LD tutee who is unaware of this law to the appropriate services
KNOW YOUR CAMPUS POLICIES AND PROCEDURES

If you don't know the answer to the following questions, find them out and jot down the information in the space provided so that you may refer to them whenever necessary.

Does your campus have a Disabilities Office?

Does your campus have an LD Specialist?

Who are the contact individuals at these offices?

What is the procedure for referral?

Does your campus have a specialized testing center?

Does your campus lend specialized equipment for handicapped students?
2. A RATIONALE FOR TUTORING; TUTORING PRINCIPLES

RATIONALE FOR TUTORING

In order to be successful in college, the majority of students with LD need:

- individualized attention
- extra practice (guided)
- remediation of basics
- alternative approaches
- positive reinforcement and feedback

Although instructors may attempt to provide these factors, they are usually difficult to achieve in a classroom setting due to the high pupil to teacher ratio and the limited flexibility of curriculum and scheduling.

Tutoring offers an opportunity to provide flexible, relaxed, individualized learning. Each student's unique needs can be assessed and individual plans made to help lead the way to success.

Tutors should not attempt to duplicate the traditional classroom setting, but rather seize the opportunity to develop a more informal atmosphere in which the tutee can feel free to ask questions, make mistakes, and explore various non-traditional approaches to learning.
TUTORING PRINCIPLES

A good tutor must be able to create an atmosphere of comfort that will keep students involved and motivated. Listed here are a number of principles critical for effective tutoring:

**Human concern** - you want to help

**Empathy** - you, too, have encountered difficulties in learning

**Patience** - you allow the tutee time to think, time to express thoughts; you don't interrupt, don't give answers; you allow the tutee to work out the problem

**Flexibility** - when one method or approach doesn't work, you are willing to try another; you are able to vary approaches for different tutees; you are open-minded and non-judgmental; you can vary your vocabulary level for different individuals

**Positive role model** - you are reliable, considerate, and hard-working

**Expectations** - you have expectations but are not overly critical; you frequently set up learning experiences that can insure success and gradually increase the challenge

**Observation, organization, and analytical skills** - you are observant, noting verbal and non-verbal cues; you listen and ask questions, you assess tutee's progress, motivation, and comfort with pace and setting; from your observation and analysis, you organize situations for optimal learning
**Sensitivity** - you don't treat the tutee as stupid or speak to him like a child; you are sensitive to issues of self-esteem; you are aware of the confidential nature of a disability

**Effective communicator** - you know your subject and strategies for learning and can explain them in a clear, organized fashion; you do not attempt to introduce too many new concepts too quickly

**Willingness to learn** - you like to look for new solutions; you seek out resources

**Willingness to follow college guidelines** - you are aware of your college's ethical guidelines and follow them
AVOIDING THE QUICK FIX: COMBINING CONTENT TUTORING WITH LEARNING STRATEGIES

The majority of students with learning disabilities are referred for tutoring for a particular course such as English Composition, College Algebra, or Biology. There is often pressure on the tutor to help the student meet deadlines for assignments in the particular class. The tutee may say, "I have a test on Chapter 1 tomorrow and I don't understand the material." The tutor is then pressed to reteach the course content as quickly as possible. Frequently, however, the tutor realizes that the student has not developed or used effective strategies for learning the material and that the same problem occurs across subjects.

To avoid the "quick fix", which is rarely successful, an integrated approach to tutoring the LD student is recommended. With this approach, the tutor teaches not only the content, but also the strategies required to make the learning of the subject meaningful, integrated, and transferable (Hock, Schumaker, & Deshler, 1995).

Following, in Section 4, are examples of several learning strategies which, when taught to the LD student, can enhance his or her potential to achieve in any number of subject areas. Section 5 contains content-specific tutoring tips for Reading, Writing, and Math.
3. A PROBLEM-SOLVING APPROACH TO TUTORING: HOW TO HELP A STUDENT GET FROM WHERE HE IS NOW TO WHERE HE WANTS TO BE

Rapport
Create an atmosphere of trust and comfort

Get Background
**Collect data:** Get work samples, look at student's notes
**Observe:** Does student use appointment book? Is student punctual?
**Question:** How do you study? Tell me what you do? Tell me what you're having trouble with? How much time do you spend on your assignments? Where do you study?
**Assess:** Look into what's missing in terms of subject content and learning strategies

Set Goal
Plan, prioritized, set goals; motivate; gain student's commitment to change/learn

Organize
Plan, organize tasks- transfer content into a form that's "learner friendly"

Teach
Show the student how - model
Use a variety of modalities - visual, auditory, tactile

Give Guided Practice
Let student show you he can do it; encourage student to work out loud and check understanding; plan independent practice activities; set expectations for student to practice independently

Evaluate
How did the approach work? How did the student perceive its effectiveness? Can the student see himself using the approach in other situations or independently?
GETTING BACKGROUND

To determine specific problem areas, a tutor needs to inquire, observe, and analyze. Three primary avenues for obtaining background or "baseline" information are:

1) **Asking the student** to describe to you his/her problem areas

2) **Asking the Learning Disabilities Specialist** (with the student's permission) to share information derived from formal and informal evaluations.

3) **Recording your own observations**
   You can get tons of valuable information this way, but be prepared to probe. LD students are not always eager or able to describe their weaknesses. Some ways of getting information for analysis are:
   a) Ask to see the student's graded tests and/or papers and do an error analysis (look for patterns of errors)
   b) Ask to see the student's notes
   c) Make your own informal quizzes

Remember to look for subject-content weaknesses as well as strategy weaknesses.

It is a good idea to record background/baseline information to help you set goals, monitor, and evaluate each student's progress.

You may want to record information using a checklist format as seen on the next page. Using a pre and post-skills assessment checklist will enable you to keep a record of what you have observed to be each student's skill levels in the beginning of a semester and to compare ratings at the end of the semester in order to evaluate progress.
**PRE AND POST SKILLS ASSESSMENT**

<table>
<thead>
<tr>
<th>Student's Name</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor</td>
<td>Subject(s)</td>
</tr>
<tr>
<td>Present Grade for Class</td>
<td>Desired Grade</td>
</tr>
<tr>
<td>Student Perceived Weakness</td>
<td></td>
</tr>
</tbody>
</table>

Use this checklist to informally rate student skills in various areas at the beginning of the semester and, later, at the end of the semester.

**Key:**  
E - Excellent  D - Developing  W - Weak

<table>
<thead>
<tr>
<th>Note-taking:</th>
<th>Use of Learning Strategies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legibility</td>
<td>Surveying Text</td>
</tr>
<tr>
<td>Organization</td>
<td>Highlighting Text</td>
</tr>
<tr>
<td>Thoroughness</td>
<td>Outlining Text</td>
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<td></td>
<td>Summarizing Text</td>
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<td></td>
<td>Note Cards</td>
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<tr>
<td></td>
<td>Self-Quizzing</td>
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<tr>
<td></td>
<td>Color-Coding</td>
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<td></td>
<td>Memory Strategies</td>
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<thead>
<tr>
<th>Reading:</th>
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<tbody>
<tr>
<td>Decoding</td>
<td>Self-Starting</td>
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<tr>
<td>Comprehension</td>
<td>Persistence</td>
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<tr>
<td></td>
<td>Asking for Assistance</td>
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<tr>
<td>Pace</td>
<td></td>
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<tr>
<td>Vocabulary</td>
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<th>Writing:</th>
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<tr>
<td>Spelling</td>
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<tr>
<td>Mechanics</td>
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<tr>
<td>Organization</td>
<td></td>
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<tr>
<td>Word Processing</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Habits:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Attendance</td>
<td></td>
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<tr>
<td>Punctuality</td>
<td></td>
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<tr>
<td>Class Preparation</td>
<td></td>
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<tr>
<td>Completing Assignments</td>
<td></td>
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<tr>
<td>on Time</td>
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<tr>
<td>Managing Study Time</td>
<td></td>
</tr>
<tr>
<td>Study Environment</td>
<td></td>
</tr>
<tr>
<td>Method of Getting</td>
<td></td>
</tr>
<tr>
<td>Missed Assignments</td>
<td></td>
</tr>
<tr>
<td>Understanding Assignments</td>
<td></td>
</tr>
</tbody>
</table>
MOTIVATING THE TUTEE TO CHANGE

Finding the problem, or weak area, is a good start. But getting the tutee to change from an ineffective to an effective skill or study habit is not always easy.

First, you have to get the tutee to **acknowledge the problem**.

Next, **make the tutee aware that there are strategies that actually can improve the situation**. At this point, you might prove to the tutee that a strategy will work for him or her. For example, if the tutee uses no memory strategies, have him repeat back a long string of numbers to you and note how many he could remember correctly. Then teach him to "chunk" to memorize strings of numbers. Try again and compare results.

Once the tutee "buys into" the strategy, you have to get him to **commit to using the new behavior**.

Some tips you can give your tutees on using a new strategy or behavior are:

- Visualize yourself doing it.
- Sweeten the task: Sometimes it's just one part of a task that holds you back. For example, if you're always studying in a cold, lonely room, try studying in a cheery, well-lit library.
- Adopt a model: Hang around the masters. Spend time with successful students; observe what they do, and use it as a model for your own behavior.
- Compare the payoff to the cost: If you don't do the assignment, you can go to the movies; however you will have to do twice the work tomorrow.
- Practice the behavior (Ellis, 1994).
TEACHING

Once you've developed a rapport with your tutee, made the setting comfortable, analyzed current skill levels, and obtained the tutee's commitment to learn, you can begin teach the skills or strategies that the tutee needs. The following pages of this manual contain ideas for strategies which studies show to be effective for tutoring adults with learning disabilities.

To maximize effectiveness, teaching strategies or skills must be done using the following steps:

1) The tutor must simplify and organize the task into a form that is "learner friendly."

2) The tutor should "model" the procedure using several modalities. This means show the student how to do it by doing it yourself and "thinking aloud" during each step. Using a variety of modalities means to demonstrate the task visually, verbally, and through tactile modes.

3) After modeling, the tutor must allow the student to try the task, encouraging the student to work out loud and check understanding.

4) Once the tutee can do the task correctly, the tutor should provide independent practice activities (Hock, Schumaker, & Deshler, 1995).
4. LEARNING STRATEGIES

MEMORIZATION STRATEGIES

• Say words out loud
• Record important concepts on cassette tape and play back while driving, etc.
• Visualize concepts by closing eyes and imaging concepts in your mind (mentally picture information in mind's eye)
• Write down major concepts several times and say them to yourself
• Use association learning; relate personal facts with facts to be memorized; for example, the biology term lysomes, meaning the part of the cell that kills bacteria, might be associated with Lysol
• Use acronyms and mnemonics: Please Excuse My Dear Aunt Sally (PEMDAS) to remember the order of operations in algebra or NATO for North Atlantic Treaty Organization
• Use "chunking": for example, instead of trying to memorize R O Y G B I V, an acronym standing for the colors of the rainbow, "chunk" the letters into ROY G BIV which can be remembered as a name rather than 7 random letters. Phone numbers, address numbers, and other facts can be easily "chunked"
• Categorize into groups: it is easier to remember 5 terms categorized into 4 groups than 20 terms that are not grouped
• Overlearn material through practice and repetition
• Study and review frequently for shorter periods of time
• Explain what you've studied to someone else
• Use "pegs": Mentally imagine terms to be memorized placed on "pegs". First, you memorize the "pegs": Some people use rooms in their house, others use "body pegs." Following is a list of "body pegs": Feet, knees, thigh, bottom, love handles, chest, shoulders, head, point. Always use the same pegs as a reference and mentally imagine items to be memorized located on each peg (Ellis, 1994; Nolting, 1991).
STUDY STRATEGIES

- Study in a well-lit, comfortable place, free of distractions.

- Begin reviewing early for exams. This gives your brain time to get comfortable with information.

- Conduct short daily review sessions so you can ease into more intense review sessions prior to major exams.

- Read text assignments before lectures; this will help you identify concepts that the professor considers important and that are already familiar. Highlight new terms.

- Review notes immediately after lectures; this will help you identify information that you do not understand while the lecture is still fresh in your memory - and other students' memories as well. When you review immediately, you'll have time to clarify information with other students.

- Reviewing with a group will help you to cover important material that you may overlook on your own.

- Conduct a major review early enough so you can visit the instructor during office hours if necessary.

- During major reviews prior to exams, break up the study tasks into small, manageable chunks. Studying three hours in the morning and three in the evening, with breaks, will be more effective than studying at a six-hour stretch. Studying while you are mentally fatigued is usually a waste of time.

- Study the most difficult material when you are alert (Ellis, 1994).
When you get the test:

- Write down information you might forget
- Scan the test
- If any new information from scanning comes to mind now, write it down
- Answer easiest problems first - you may get clues from them on how to do harder problems
- Don't spend too much time on questions you don't know - skip them and come back later
- Don't leave any questions blank - at least guess or attempt to give a partial answer
- Review test for careless errors
- Use all allowed test time - if allowed extended time, use it! (Ellis, 1994; Nolting, 1991)
NOTETAKING: THE CORNELL SYSTEM AND THE 6 R'S

In college, taking good notes is imperative. In fact, some college professors rely more on testing students from the content of their lecture notes than from textbook information.

Dr. Walter Pauk of Cornell University devised a system that can help students keep their notes neat, complete, and well-organized (Pauk, 1989).

To use the Cornell System, draw a vertical line down the left side of each page in your notebook. This line should be about 1/3 of the way across the page. Also, draw a horizontal line across the bottom of the page, 2 inches above the paper's edge. Below, you can see an example of how notes using the Cornell System might look. In the wide column on the right, write your lecture notes. In the narrow column on the left, write cue words, questions, or notes to yourself such as "look this up." The space at the bottom of the page should be used to summarize your notes later on after class.

<table>
<thead>
<tr>
<th>Record</th>
<th>Record notes, fill in more later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce</td>
<td>Later, reread notes + reduce to keywords</td>
</tr>
<tr>
<td>Recite</td>
<td>Read facts + ideas out loud.</td>
</tr>
<tr>
<td>Reflect</td>
<td>Think about ideas learned.</td>
</tr>
<tr>
<td>Review</td>
<td>Every evening, review notes.</td>
</tr>
<tr>
<td>Recapitate</td>
<td>Write a summary of each page of notes here.</td>
</tr>
</tbody>
</table>

When studying from notes, use the "6Rs": Record, Reduce, Recite, Reflect, Review, and Recapitate.
ORIENTATION AND VISUAL AIDS

Teach these strategies to help with organization, focusing attention, visualization, and comprehension (Adelman & Olufs, 1992):

- Mark important areas or areas frequently referred to in textbook or notebook with labeled tabs or sticky notes.
- Highlight textbook and notes: Use one color for vocabulary and another for main points.
- Use a different color note paper for each subject.
- Make flowcharts and webs.
- Create visual images to aid in comprehension and memory.

```
= Equation
```

```plaintext
\[ \text{colors} \]
\[ \text{warm} \quad \text{cool} \]
\[ \text{red} \quad \text{orange} \quad \text{yellow} \quad \text{blue} \quad \text{violet} \quad \text{green} \]
```
GETTING THE MOST FROM A TEXTBOOK

General Tips:

- Begin your reading assignment by scanning the title, headlines, pictures, and charts to get the big picture before you start. This makes details easier to recall and understand later on.

- Be an "active reader." Put marks in your textbook; use a highlighter to mark vocabulary and important ideas (Ellis, 1994).

- Outline key information as you read.

Expanded Chapter Guide: An Alternative to Traditional Outlining

- Begin with a survey of the chapter; write down major headings and subheadings

- Read the chapter, writing down details and vocabulary next to the appropriate headings

- After chapter is complete:
  1. Write summary
  2. Answer questions at the end of the chapter or make up your own questions to answer
  3. Make vocabulary note cards
  4. Self-quiz: Cover column 3 of your chapter guide and look at column 2 - see if you can fill in details from memory
  5. Color code or highlight notes
  6. Develop mnemonics, acronyms, etc.

- If reading disability is severe, order books on tape and make an expanded chapter guide from the tape. College texts are available on tape through Recordings for the Blind & Dyslexic, Princeton, NJ (Lodato-Wilson & Michaels, 1995).

On the following page is an example of an expanded chapter guide adapted from Lodato-Wilson & Michaels (1995).
## EXPANDED CHAPTER GUIDE

Textbook: Reaching Your Potential  
Author: Throop, R.  
Chapter #: 3  
Chapter Title: Improving Your Thinking Skills

<table>
<thead>
<tr>
<th>Page #</th>
<th>Major Headings</th>
<th>Subheadings/Details</th>
<th>Vocabulary</th>
<th>Comments/Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>The Brain</td>
<td>Major Parts</td>
<td>hemisphere, corpus callosum, spinal cord</td>
<td>left hem.-Verbal, right hem.-non-Verbal</td>
</tr>
<tr>
<td>50</td>
<td>Remembering</td>
<td>How does memory work?</td>
<td>information, sensory memory, STM, LTM</td>
<td>short-term memory, long-term memory</td>
</tr>
</tbody>
</table>
TECHNOLOGY

Tutors of students with learning disabilities should be aware of new technology and computer software on the market which can greatly assist their tutees (Higgins & Raskind, 1995). Of course, as with all strategies and aids, students must be taught how to access and use them.

- Word processing programs with spell check and grammar check
  
  Word Perfect 6.1
  Corel Word Perfect Suite

- Outlining software
  
  Claris Works Electronic Outlining

- Laptop computers and notepads

- Word recognition software
  
  Dragon Dictate

- Speech enhanced computers
  
  Keynote Gold Voice Synthesizers
  DecTalk

- Talking calculators

- Talking spellers
  
  Franklin Language Master

- 4-track tape players for books on tape
  
  Recording for Blind & Dyslexic
STRESS REDUCTION STRATEGIES

PALMING

Sit with elbows resting on a table or desk, eyes closed and covered with the palms of your hands. Don't apply pressure to your face or eyeballs; simply try to block out light. Start to visualize relaxing scenes. Do this for one to two minutes.

DIFFERENTIAL RELAXATION

This is a way to relax while being active. As you go through daily activities, be aware of needless tension in parts of your body and relax those parts:

1) Put feet flat on the floor
2) With hands, grab under chair
3) Push down with feet and pull up on chair at the same time for five seconds
4) Relax five to ten seconds
5) Repeat two to three times (Nolting, 1991).
5. CONTENT-SPECIFIC TUTORING TIPS

READING USING SQ3R

The SQ3R method presented below is a technique which will help you in better comprehending and recalling text materials.

**S** - Survey; **Q** - Question; **3R** - Read, Recite, and Review

**Survey**

Briefly look over the material you have to study. Read all the titles and subtitles. Notice headings, subheads, italics, graphs, typographical clues (italics, bold face, etc.), summary, and glossary. Look at the pictures, diagrams, and maps if there are any.

If the selection is short, read the first sentence of each paragraph. If the selection is only one paragraph, read the first and last sentence.

**Question**

Write down some questions that your survey brought to mind. Think of questions that you expect the selection to answer. Questions are formed by changing topics, subtopics and headings into questions, using words like “what, how, why, when, where.” Ask questions about diagrams and graphs.

**Read**

Read the selection through carefully. As you read, notice the answers to the questions you wrote. Highlight key points, or write key points down in your notes.

**Recite**

After you have finished reading, answer all the questions in your own words. You may re-read the material whenever necessary.

**Review**

Briefly look back through the selection and remind yourself of the important points. This would be a good time to proofread your paper for accuracy while comparing your answers to the selection read.

This technique is especially good for learning material in you textbooks. You will understand and remember more of the material you read using SQ3R than if you simply read it (Stahl, King, & Eilers, 1996).
WRITING STRATEGIES

Teach metacognitive strategies:

T - A - P: Topic, Audience, Purpose
T  Topic: What am I writing about?
A  Audience: Who is the reader?
P  Purpose: Why am I writing this? (Rosenberg, 1989).

T - O - W - E - R: A guide for the writing process
T  Think about topic (thesis)
O  Order your ideas (outline)
W  Write (rough draft)
E  Edit (make corrections)
R  Rewrite (final copy)

Create personalized writing checklists:

Example:
- Do I have a thesis statement?
- Is there a topic sentence in each paragraph?
- Are all sentences complete?
- Did I check spelling?
- Did I look for and replace unclear pronouns?

Create an abridged grammar

An abridged grammar is a set of sentences that exemplify certain grammatical rules (Howie, 1984). Students can make their own abridged grammar lists like the one that follows with the help of a tutor.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apostrophe</td>
<td>It's a tiger.</td>
</tr>
<tr>
<td></td>
<td>I like its fur.</td>
</tr>
<tr>
<td></td>
<td>A tiger's fur is warm.</td>
</tr>
<tr>
<td></td>
<td>Tigers' coats are warm.</td>
</tr>
<tr>
<td>Agreement</td>
<td>The student should know his grade.</td>
</tr>
<tr>
<td></td>
<td>Students should know their grades.</td>
</tr>
<tr>
<td>Avoiding run-ons</td>
<td>Bill went to the store. He bought beans.</td>
</tr>
<tr>
<td></td>
<td>Bill went to the store; he bought beans.</td>
</tr>
<tr>
<td></td>
<td>Bill went to the store, and he bought beans.</td>
</tr>
</tbody>
</table>

Recommend Technology: Use word processing with thesaurus, spelling and grammar check.
ORGANIZING THE 5 PARAGRAPH ESSAY (Gallo, 1994)

THESIS PARAGRAPH (minimum 4 sentences; 50-75 words)
General Introduction
Thesis Statement
Directional Guides: A, B, C (3 preview sentences pertaining to each topic in paragraphs of illustration)

FIRST PARAGRAPH OF ILLUSTRATION (minimum 12 sentences)
Topic Sentence (Thesis is true because of Guide A)

SECOND PARAGRAPH OF ILLUSTRATION (minimum 12 sentences)
Topic Sentence (Thesis is true because of Guide B)

THIRD PARAGRAPH OF ILLUSTRATION (minimum 12 sentences)
Topic Sentence (Thesis is true because of Guide C)

CONCLUDING PARAGRAPH: (minimum 4 sentences)
MATH STRATEGIES

Reasons why LD students struggle with math:

1) Math requires linear learning - material learned one day is used the next day and the next month. If the student misunderstands one concept, he will have trouble for the rest of the class.

2) Many math textbooks have a visually cluttered and confusing format.

3) Students may have difficulty keeping up with the pace of the classroom lecture and only get partial notes.

Tutoring Tips:

1) Start with an error analysis - in test analysis look for the following types of errors:
   - Misread direction errors
   - Careless errors - sloppy scratch paper, etc.
   - Concept errors - didn't understand principle
   - Application errors - know concept but can't apply
   - Test-taking errors - spending too much time on one problem
   - Study errors - studied the wrong stuff

2) Teach relaxation, test-taking, and note-taking strategies.

3) Teach math checking techniques. LD students shouldn't just "look over" their math work; they should be taught to use checking procedures whenever possible.

4) Use multimodal approach - say and show.

5) Use color coding (write negative signs in red)

6) Always review previous session before starting new material.

7) Teach and use the "language of math." Call the distributive property the distributive property, not "the thing where you have to multiply what's outside by what's inside the parentheses." Teach students to utilize verbal abilities to compensate for mathematical deficits.

8) Write tutor notes using a 2-column method as seen on the next page. Simplify the problem and show it in a very sequential and clear manner, placing the problem in the left column and a verbal description of the steps in the right column. Box the step that's being worked on. Don't clutter - put one problem per page (Nolting, 1991).
Example of Two-Column Note Method

\[2x + 4x - 7 = 23\]

combine like terms

\[6x - 7 = 23\]

eliminate by "doing the opposite"; the opposite of subtracting 7 is adding 7

remember to do the same thing to both sides of the equation

\[6x = 30\]

eliminate by "doing the opposite"; the opposite of multiplying by 6 is to divide by 6

remember to do the same thing to both sides of the equation

\[x = 5\]

the answer
References


CASE STUDIES/SCENARIOS

1) Bill is assigned to you for tutoring in Psychology 101. He tells you he is LD and that he has already failed the first two Psychology exams. What do you do?

2) Amy is assigned to you for tutoring in English Composition 101. You request to see some of her graded writing samples and find that she has numerous spelling errors, sentence fragments, and poor handwriting. She is not identified as LD. How would you handle this case?

3) Gary is an LD student assigned to you for tutoring in General Biology. He comes late to the 1st tutoring session and spends most of the session telling you that the professor is too difficult and that he has no idea what she's talking about in class. Gary says he has spoken to the professor and told her that he has a learning disability, but she doesn't care. He also tells you that he's sure she doesn't like him. What do you do?

4) Sue is assigned to you for tutoring in English Composition 101. When she arrives for her first session, she tells you she has an essay due tomorrow and she hasn't started it, because she can't think of what to write. She asks you to help her with writing it. What do you do?

5) George is a freshman who was classified as learning disabled in high school, is struggling with college courses, and has not requested accommodations or assistance for his learning disability at the college. When you ask to see a copy of his notes from a US History class, it is apparent that they are barely legible and lacking in content and structure. What can you suggest to help George?

6) Ellen is a college student who doesn't know her multiplication facts. You have been assigned to tutor her for the college's remedial math course. She has not identified herself as LD. What do you do?

7) Arnold has been assigned to you to be tutored in College Algebra. His learning disability is in the area of visual memory and attention. How would you tutor him in math?

8) Jill's learning disability is in auditory memory. Visual memory is her strength. You are assigned to tutor her for US History and she is having difficulty remembering dates and sequences of events. What techniques would you suggest to help her?
WORKSHOP EVALUATION FORM

WORKSHOP ____________________________ DATE ______________

1. Was the workshop informative?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

2. Was information presented in an interesting manner?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

3. Was material presented in a clear and organized fashion?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

4. Was there enough opportunity for questions and participation?
   ( ) very much ( ) quite a bit ( ) somewhat ( ) very little

5. Do you have suggestions for improving a workshop such as this one?

6. Please list any questions you may have pertaining to this workshop or areas that you feel need further clarification.

7. Additional comments:
CHAPER 4
SUMMARY

The number of learning disabled students attending colleges and universities has increased dramatically in the last ten to fifteen years. This increase may be attributed to several factors: legal mandates requiring equal access and accommodations for learning disabled college students; colleges' commitments to accepting diversity; and increased information about learning disabilities. College services for learning disabled students are becoming more prevalent, as well. Services range from basic guarantees of accommodation granted through Section 504 and the Americans with Disabilities Act (ADA) provided by the campus-designated Section 504 officers to comprehensive data-based learning disabilities programs.

It is apparent that the rising numbers of LD students and the increasing amount of information on legal access and possibilities for educational success of learning disabled college students place a greater demand on college personnel to keep abreast of effective service models and educational interventions for this population.

Issues needing to be addressed include: understanding learning disabilities, in particular, their characteristics and educational manifestations; knowledge of legal rights and responsibilities as they pertain to LD students in higher education; development of institutional policy and procedures; effective teaching approaches; new technological aids; and early planning for high school students with learning disabilities.

Many colleges now have a learning disabilities specialist on staff to coordinate
services and accommodations for learning disabled students. To enhance programming for LD students, the learning disabilities service provider needs to stay informed on legal guidelines and best practices in the field and devise a mechanism to share this information with college and high school staff. Communication and cooperation between the college learning disabilities service provider and faculty and staff is essential to the development and delivery of services for LD college students.

The importance of developing efficient and effective communications networks which encourage the dissemination of new ideas and skills cannot be understated. The LD service provider can serve a valuable role in guiding faculty and staff in the understanding of LD issues through ongoing development and discussion activities. Inservice training is one way to share resource information and enhance skill levels of personnel.

In this paper, a three-part model for implementing an inservice program has been presented.

Part one is designed to be presented to college faculty and staff and is entitled, "A Resource to College Faculty." This part covers topics such as characteristics of learning disabled students, faculty responsibilities, and instructional tips.

Part two is designed to be presented to individuals on a high school transition team - students, parents, and high school professionals involved in preparing high school students with learning disabilities for life after high school. This part is entitled, "Assisting High School Transition Teams" and covers topics such as the differences between high school and college, steps for getting into college, and how and when to make decisions about post high school activities.
Part three is entitled, "Training College Tutorial Staff" and is designed to provide specialized training to tutors who work with college students with learning disabilities.

Each part of the inservice model contains an inservice outline, a manual or guide, and an inservice evaluation form. The materials included are designed to be used by the campus LD service coordinator at Cumberland County College, but it may easily serve as a model for use on other campuses.

Information for the inservice model was compiled, analyzed, and evaluated from current literature, professional and peer practices, and the writer's own experience as director of Cumberland County College's Regional Center for College Students with Learning Disabilities. It is hoped that the information generated by this project will contribute to a more comprehensive and effective educational program for LD students who are considering college or are already enrolled in college.

In reviewing the literature to develop this project, it became apparent that more literature is focused on learning disabilities in adulthood than ever before. However, most of the current literature is theoretical and does not examine or evaluate the effectiveness of suggested programs or approaches. Areas for future research should be directed toward replicating models and evaluating their effectiveness in an actual college setting.
References


