

Rowan University

Rowan Digital Works

Theses and Dissertations

5-6-1996

Support services and accommodations provided for college students with learning disabilities

Mary C. Tortorici

Rowan College of New Jersey

Follow this and additional works at: <https://rdw.rowan.edu/etd>



Part of the [Disability and Equity in Education Commons](#)

Recommended Citation

Tortorici, Mary C., "Support services and accommodations provided for college students with learning disabilities" (1996). *Theses and Dissertations*. 2218.

<https://rdw.rowan.edu/etd/2218>

This Thesis is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact graduateresearch@rowan.edu.

SUPPORT SERVICES AND ACCOMMODATIONS
PROVIDED FOR COLLEGE STUDENTS
WITH LEARNING DISABILITIES

by
Mary C. Tortorici

A THESIS

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate Division
of Rowan College of New Jersey
1995

Approved by _____ Professor

Date Approved May 6, 1996

ABSTRACT

Mary C. Tortorici
Support Services and Accommodations Provided for
College Students With Learning Disabilities
1995
Dr. Stanley Urban, Thesis Advisor
Learning Disabilities

The purpose of this research project was to compile a listing of support services available and accommodations provided for college students with learning disabilities from a selected sample of surveyed four year colleges and universities. This information will be used in conjunction with other research being conducted by the Special Education Department at Rowan College in order to provide the college's Department of Specialized Services with recommendations for support services with this population at Rowan College.

The number of students with learning disabilities attending college since the late 1980s has increased dramatically. Several factors account for this increase, but the major reason is the passage of Section 504 of the Rehabilitation Act of 1973 which provided legal entitlement for qualified students with learning disabilities to attend college.

A review of the literature indicates that a continuum of services are available and are offered to students with learning disabilities but that research concerning

accommodation and program effectiveness is lacking.

Overall, 63% of the surveyed institutions responded. The lack of response from six institutions may be due to insufficient staff to complete survey forms. Survey results confirmed that a continuum of services are available to students with learning disabilities. The average graduation rate for more selective colleges exceeded that of less selective ones. This difference can possibly be accounted for by students with learning disabilities having to meet the same competitive requirements as students without learning disabilities. Also, for schools like Hofstra and Boston Universities, comprehensive services provided for students with learning disabilities more likely ensured academic success than schools without these services.

MINI-ABSTRACT

Mary C. Tortorici
Support Services and Accommodations Provided for
College Students With Learning Disabilities
1995
Dr. Stanley Urban, Thesis Advisor
Learning Disabilities

The purpose of this research project was to compile a listing of support services available and accommodations provided for college students with learning disabilities from a selected sample of surveyed four year colleges and universities. A continuum of services are available at a wide variety of colleges.

ACKNOWLEDGEMENTS

The author would like to express her sincere appreciation and gratitude to all who provided the love and the support needed to complete this project. My special thanks to Maria and Vincent Guidera for their computer expertise.

TABLE OF CONTENTS

	Page
Acknowledgements.....	ii
Chapter	
1	
Introduction.....	1
Purpose.....	3
Research Question.....	4
Overview.....	4
2	
Review of the Literature.....	5
Factors in Colleges Providing Services and Accommodations to College Students with Learning Disabilities.....	5
Defining the Student with Learning Disabilities.....	6
Characteristics of College Students with Learning Disabilities.....	7
Responses to Section 504-The Qualified Applicant.....	9
Responses to Section 504-Accommodations.....	13
Program Effectiveness.....	19
Summary.....	20
3	
Methodology and Procedure.....	22
Method of Sample Selection.....	22
Instrumentation.....	24
Data Analysis.....	25
4	
Compilation and Analysis of Results.....	27
General Institution Characteristics.....	28
Eligibility Criteria for College Students with Learning Disabilities.....	30
Service Provisions.....	32
504 Access Services for College Students with Learning Disabilities.....	32
Special Services for College Students with Learning Disabilities.....	35
Basic Skills Remediation for Students with Learning Disabilities.....	38
Graduation Rates.....	40
5	
Summary.....	42
Discussion.....	43
Appendix A	
Initial Cover Letter for Survey.....	44
Appendix B	
Follow-Up Cover Letter for Survey.....	45
Appendix C	
Survey of Postsecondary Education Services for Students with Learning Disabilities.....	46
Bibliography.....	52

CHAPTER 1
INTRODUCTION

The number of students with learning disabilities attending college since the late 1980s has increased dramatically (Scott, 1990; Vogel, 1993). This increase is partly due to students becoming college age who were identified and provided with special education as a result of the Education for All Handicapped Children Act of 1975 (PL 94-142). Another factor for this increase is federal legislation. Section 504 of the Rehabilitation Act of 1973 (PL 93-112) states:

No otherwise qualified handicapped individual...shall, solely by reason of his/her handicap, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance (PL 93-112, material in public domain).

Any college receiving federal financial assistance is subject to Section 504 regulations (Rothstein, 1993).

The definition of learning disabilities incorporated into PL 94-142 was developed by the National Advisory Committee on Handicapped Children (1968) and referred specifically to children. Since learning disabilities do

not disappear in adulthood, the definition has been revised several times to reflect this awareness (Hammill, 1990).

The 1981 definition revision by the National Joint Committee on Learning Disabilities (NJCLD) is the most widely accepted one (Hammill, Leigh, McNutt, & Larsen, 1981). It states:

Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulating behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (NJCLD, 1981).

Students with learning disabilities enter college with a need for services beyond those offered or provided by the college for students without learning disabilities. Those services that are provided frequently lack the individualization, intensity, regularity, and coordination required to help learning disabled students succeed at the college level and in some cases, students with learning disabilities attend a college where no special programs or services exist (Mangrum & Strichart, 1988).

To date, there has been no nationally representative random stratified sample survey of institutions providing support services. However, there has been a wide range of institutional response to Section 504.

The services, accommodations, or modifications provided by institutions will, in part, determine whether students with learning disabilities are successful in achieving their goal of postsecondary education (Vogel, 1993).

PURPOSE

The purpose of this research project is to compile a listing of support services available and accommodations provided for college students with learning disabilities from a selected sample of surveyed four year colleges and universities. This information will be used in conjunction with other research being conducted by the Special Education Department at Rowan College in order to provide the college's Department of Specialized Services with

recommendations for support services with this population at Rowan College.

RESEARCH QUESTION

What support services and accommodations are offered at a selected sample of four year colleges and universities to students with learning disabilities?

OVERVIEW

The need for support services and accommodations for college students with learning disabilities varies from individual to individual. In Chapter 2, pertinent literature which describes the characteristics of students with learning disabilities, the support services necessary for successful completion of college course work, and needed accommodations will be discussed.

In Chapter 3, the colleges and universities to be surveyed will be listed, along with the method of sample selection. A description of the development of the survey form will be included.

In Chapter 4, the findings from the returned surveys will be compiled and analyzed. In addition, similarities and differences among support services and accommodations provided will be discussed.

CHAPTER 2

REVIEW OF THE LITERATURE

Discussions regarding the services and accommodations provided to college students with learning disabilities first appeared in the professional literature in the late 1970s. This development is not surprising since Section 504 of the Rehabilitation Act of 1973 provided impetus to the principle that handicapped persons could not be denied access to occupational activities, including educational programs, if reasonable accommodations could be made.

FACTORS IN COLLEGES PROVIDING SERVICES AND ACCOMMODATIONS TO COLLEGE STUDENTS WITH LEARNING DISABILITIES

Between 1978 and 1985, the proportion of new, full-time freshmen with learning disabilities attending college increased threefold according to the Higher Education and Adult Training for People with Handicaps (HEATH) Resource Center and the American Council on Education (ACE) (Astin, Green, Korn, Schalit, & Berz, 1988).

Several factors account for this increase. Many of the students provided with Special Education Services as a result of the Education for All Handicapped Children Act of

1975 (PL 94-142) were of college age and services provided at the postsecondary level were a natural continuation of services initially received in the elementary and secondary levels. Second, the Adult Committee of the Association of Children with Learning Disabilities (ACLD) and other professional organizations exerted pressure on colleges and universities to offer programs and provide assistance to students with learning disabilities. Third, with college officials facing declining enrollment, the qualified student with learning disabilities represented a new source of enrollment. Finally, the passage of federal legislation, particularly Section 504 of the Rehabilitation Act of 1973 provided legal entitlement for qualified students with learning disabilities who desired to attend college (Mangrum & Strichart, 1988).

DEFINING THE STUDENT WITH LEARNING DISABILITIES

The Rehabilitation Act of 1973 defines a handicapped person as one who has a physical or mental impairment that substantially limits one or more major life activity. Since learning is considered a major life activity, specific learning disability is listed as one such impairment (Mangrum & Strichart, 1988). A learning disabled student is considered to be of average or above average intelligence, and therefore should have the intellectual capacity to succeed in college (Bireley & Manley, 1980).

A definition of a college student with learning

disabilities developed by the California Association of Postsecondary Educators of the Disabled states:

A specific learning disability refers to disorders in which an individual exhibits a significant/severe discrepancy between the current level of developed intellectual abilities and academic performances despite regular instruction and educational opportunity, as currently measured by professionally recognized diagnostic procedures. Academic achievement refers to the following areas: listening comprehension, oral expression, basic reading, comprehension, mathematical calculation and reasoning. Specific learning disabilities are often due to constitutional, genetic and/or neurological factors and are not primarily due to: visual or auditory sensory deficits, motor handicaps, severe emotional disturbance, environmental or economic disadvantage, cultural/language difference or mental retardation (Ostertag, Baker, Howard, & Best, 1982).

CHARACTERISTICS OF COLLEGE STUDENTS WITH LEARNING DISABILITIES

The following list of some common academic characteristics of college students with learning disabilities was compiled by the Learning Disabilities Association of America (LDA, undated).

READING SKILLS

1. Slow reading rate and/or difficulty in modifying reading rate in accordance with material difficulty.
2. Poor comprehension and retention.
3. Difficulty identifying important points and themes.
4. Poor mastery of phonics, confusion of similar words, difficulty integrating new vocabulary.

WRITTEN LANGUAGE SKILLS

1. Difficulty with sentence structure (e.g., incomplete sentences, run-on's, poor use of grammar, missing inflectional endings).
2. Frequent spelling errors (e.g., omissions, substitutions, transpositions), especially in specialized and foreign vocabulary.
3. Inability to copy correctly from a book or the blackboard.
4. Slow writer.
5. Poor penmanship (e.g., poorly-formed letters, incorrect use of capitalization, trouble with spacing, overly-large handwriting).

ORAL LANGUAGE SKILLS

1. Inability to concentrate on and comprehend oral language.
2. Difficulty in orally expressing ideas which he/she seems to understand.
3. Written expression is better than oral expression.
4. Difficulty speaking grammatically correct English.
5. Cannot tell a story in proper sequence.

MATHEMATICAL SKILLS

1. Incomplete mastery of basic facts (e.g., mathematical tables).
2. Reverses numbers (e.g., 123 to 321 or 231).
3. Confuses operational symbols, especially + and x.
4. Copies problems incorrectly from one line to another.
5. Difficulty recalling the sequence of operational processes.
6. Inability to understand and retain abstract concepts.
7. Difficulty comprehending word problems.
8. Reasoning deficits.

ORGANIZATIONAL AND STUDY SKILLS

1. Time management difficulties.
2. Slow to start and complete tasks.
3. Repeated inability, on a day-to-day basis, to recall what has been taught.
4. Difficulty following oral and written directions.
5. Lack of overall organization in written notes and compositions.
6. Demonstrates short attention span during lectures.
7. Inefficient use of library reference material.

SOCIAL SKILLS

Some LD adults may have social skills problems due to their inconsistent perceptual abilities. For the same reason that a person with visual perceptual problems may have trouble discriminating between the letters "b" and "d", he/she may be unable to detect the difference between a joking wink and a disgusted glance. People with auditory perceptual problems might not notice the difference between sincere and sarcastic comments, or be able to recognize other subtle change in tone of voice. These difficulties in interpreting nonverbal messages may result in lowered self-esteem for some LD adults, and may cause them to have trouble meeting people, working cooperatively with others, and making friends.

RESPONSES TO SECTION 504 - THE QUALIFIED APPLICANT

According to Section 504 Regulations, the qualified handicapped person is defined as one "who meets the academic and technical standards necessary for admission or participation in an education program or activity" (Mangrum & Strichart, 1988). Defining the word "qualified" is problematic. When the word "qualified" is defined, admissions officers are then faced with determining if the learning disabled applicant is qualified to successfully complete a program if reasonable accommodations can be made

(Vogel, 1982). Since academic difficulties are associated with learning disabilities, and academic merit and competition are valued in college admission, determining the "otherwise qualified" applicant is a complex dilemma (Scott, 1990).

In postsecondary institutions, there are three types of school admissions policies. An open admissions policy, typically used by junior or community colleges, that requires an applicant to have a high school diploma or its equivalent. A regular admissions policy, used by most four year colleges and universities, requires an applicant to have a high school diploma or its equivalent, high school grade point average (GPA), class rank, and standardized test scores such as the Scholastic Aptitude Test (SAT) or the American College Testing Program (ACT) with some colleges accepting untimed results. A special admissions policy allows case by case consideration for admission. Flexible entrance criteria along with varied sources and types of information are gathered (Mangrum & Strichart, 1988).

In a nationwide survey of postsecondary institutions by Bursuck, Rose, Cowen, & Yahaya (1989), sent to members of the Association on Handicapped Student Service Programs in Postsecondary Education (AHSSPPE), 103 schools (52%) had open admissions policies. Of the 103 schools, 81 community colleges in the sample normally use an open admissions policy. A combination of procedures was used to admit

students to the remaining schools. Sixty-three schools (32%) used GPA, 57 schools (29%) used SAT scores, 47 schools (24%) used ACT scores, and 45 (23%) maintained cooperative admissions policies between the institutions and handicapped student services.

Since learning disabilities require an accommodation of the learning process, selecting acceptable nondiscriminatory screening procedures in order to evaluate applicants with learning disabilities poses complex problems. Specific procedures for admissions policies are not prescribed. However, some revisions are necessary. Not all students will meet the admissions criteria for postsecondary education. However, if the admission criteria are uniformly applied to all applicants, the policy is not considered discriminatory (Scott, 1990).

As part of the admissions criteria, regulations state that an institution may not make use of any tests that will have a disproportionate effect on handicapped individuals. Scott (1990) points out that the use of timed standardized tests is potentially discriminatory for the student with learning disabilities. The SAT and the ACT are the two major standardized admissions tests used by colleges and universities, both of which provide accommodations for handicapped individuals. Research programs by both testing services have been initiated to determine student performance under varied testing conditions. Limited

research has been conducted to evaluate testing modifications (Mangrum & Strichart, 1988). However, in a report by Bennett, Ragosta, and Stricker (1985) which presents research on the performance of more than 1,100 examinees who took the SAT in timed and untimed administrations between 1979 and 1982, the Verbal section mean standard timed administration score was 338, the Mathematics section was 393. The corresponding untimed administration scores were 394 and 452. When the SAT was administered under standardized procedures to all high school seniors during same time period, the Verbal mean was 427 and the Mathematics mean was 467. The means for examinees with learning disabilities were more than 0.5 standard deviations below those without learning disabilities for standard administration, while with untimed administration the gap narrowed.

Applicants need to provide clear evidence of their learning disability to the postsecondary institution. Some forms of evidence include reports by a qualified psychoeducational diagnostician who used a wide range of instruments, transcripts that validate placement in a learning disabilities program, letters from special educators, and so on (Mangrum & Strichart, 1988).

Students with learning disabilities entering college possess a wide range of abilities. The idea that college students with learning disabilities are of average or above

average intellectual ability is supported by eligibility criteria for admittance to programs (Bireley & Manley, 1980). The nature and extent of their abilities are of particular interest to those involved in developing and implementing programs for students with learning disabilities. In a review of the literature pertaining to the cognitive and academic performance of college students, Hughes and Smith (1990) state that the variety of problems that college students with learning disabilities exhibit adversely affects their academic performance and that a comprehensive research base is necessary in order to plan services and programs for this population. Studies providing the exact nature of the subject's academic difficulties are essential for developing programs for this college population. Research to determine the type of writing disabilities that can best be accommodated by word processors, along with the types of hardware and software most effective for this group is needed. In addition, information on expressive and receptive language of college students with learning disabilities is necessary since language problems can affect college success.

RESPONSES TO SECTION 504 - ACCOMMODATIONS

Another component of Section 504 mandates that postsecondary institutions make reasonable adjustments in order for students to fulfill academic requirements. For students with learning disabilities, these modifications

based on individual need may include extending the time to complete a program, adapting the instructional method, substituting one required course for another, waiving or modifying foreign language requirements, and providing modifications in examination procedures so that acquisition of course content can be measured without interference from an individual's disability (Vogel, 1982).

Ganschow and Sparks (1987) state that approximately half of all postsecondary institutions of learning have a foreign language requirement. According to Ganschow and Sparks (1987), an increasing number of colleges and universities are beginning to grant waivers or allow course substitutions for the language requirement for students with learning disabilities.

According to Gajar (1987), guidelines for diagnosing a foreign language learning disability do not exist. However, the Modern Language Aptitude Test (MLAT) is potentially valuable to the diagnostic process. In the study by Gajar, when the scores of students without learning disabilities were compared to students with learning disabilities enrolled in introductory foreign language classes, students with learning disabilities scored significantly lower on all five subtests of the MLAT. The fourth subtest, Words in Sentences, and the fifth subtest, Paired Associates, scores which were appreciably lower predict a relationship to a foreign language learning disability.

For students who were exempted from a foreign language requirement, Boston University offered a special sequence of three courses within the Department of Modern Foreign Languages and Literature. The first course which was highly cognitive focused on the general rules and logic of language and then to a specific foreign language. In following semesters a cognitive approach which emphasized reading skills was utilized. Pre- and post-test scores on the MLAT after the first semester indicated significant increases in language aptitude after completion of the first course in the three course sequence. Although it is not clear whether or not a small, slow-paced spoken language class would have produced the same results, the course was effective and fairly economical (Demuth & Smith, 1986).

For those for whom waivers are not provided, accommodations for foreign language classes are offered for consideration by Ganschow and Sparks (1993). They are the following: providing compensatory strategies, modifying the pace of instruction, providing tutorial support, simultaneous visual and auditory presentations, and monitoring the initial language choice.

The types and number of support services in postsecondary institutions for students with learning disabilities varies among institutions (Mangrum & Strichart, 1988). However, according to Nelson and Lignugaris/Kraft (1989) in a literature review of 12 of 14 programs on

available services for students with learning disabilities, they found that the types of services provided to this population were similar.

Counseling services were reported as a necessary program component for students with learning disabilities. The types of counseling services most commonly provided were personal or social counseling, and career or vocational counseling.

Personal counseling was provided to help students with social and interpersonal skills along with providing support in response to academic stress. Some counseling services were provided individually and others to a group. In some cases counseling was provided by a specialist and in other cases by a peer.

Academic counseling involved two steps. First, after diagnostic testing was conducted, program eligibility was determined. Second, an individualized education program (IEP) was developed based on testing results. Diagnostic evaluations varied among colleges. Also, the components of the college level IEP varied among programs. Some IEPs included course content tutoring, the use of a tape recorder for lectures, talking books, and alternative test-taking procedures. It was recommended that basic skills training along with compensatory strategies be addressed in the IEP objectives of programs emphasizing remedial services.

Siperstein (1988) suggests that students with learning

disabilities be provided career awareness workshops, job search strategy workshops, and job maintenance skills workshops in order to provide students with learning disabilities with information and skills necessary for a successful transition from college to employment. However, career counseling, was considered an important program component in three of the fourteen program descriptions.

Instructional accommodations included course modifications or support services. Instructional modification provided by the college includes services such as tutors, notetakers, taped textbooks, typists, interpreters and textbook readers and computers. The second type of accommodation provided by members of the faculty includes allowing students to tape record lectures, alternative test-taking procedures, self-paced instructional packets, copies of lecture notes, alternative assignments, and extended deadlines for assignments. Some instructional accommodations were provided by a majority of the colleges.

In a nationwide survey of postsecondary education services for students with learning disabilities, Bursuck et al. (1989), found that 90% of the 197 schools that returned surveys provided 504 access services such as taped textbooks, tape recorded lectures, notetakers, and modified exam procedures.

Included on the survey was a question regarding faculty inservice training on Section 504 regulations. Eighty-one

percent of the institutions provided such training. Although faculty inservice training is not mandated by Section 504, this proactive approach provides faculty and staff with information and workshops about learning disabilities (Rose, 1993).

Most surveyed institutions reported providing special services which include academic advisement (93%), tutoring (94%), counseling (97%), advocacy (86%), and progress monitoring (80%).

Remedial services were provided by many of the schools. Reading remediation was offered by 77% of respondents, 82% offered remedial instruction in written language, 78% offered remedial mathematics instruction and 86% offered remediation in study skills.

When service providers were asked to prioritize the following three service provision goals: access under Section 504, special goals for developing learning strategies, and remediation of basic skills, 109 respondents (55%) ranked access to Section 504 as their most important service goal. Sixty-seven (34%) favored development of compensatory learning strategies, and 25 (13%) indicated that basic skills was most important. More remedial instruction was provided at two year colleges granting associate degrees than at colleges providing bachelor's programs.

Tutoring services differed among colleges. Those

colleges favoring remediation as a focus provided basic skills and/or course content tutoring. Alternatively, those colleges whose approach to tutoring was support service provided only course content tutoring. The service providers were specialists, faculty, or peers.

The result of a survey conducted by Bursuck et al. (1989) indicated that, overall, the institutions surveyed were in compliance with Section 504 mandates. Most surveyed schools provided special and remedial services. The continuum of services by surveyed providers are an outgrowth of the needs of postsecondary students with learning disabilities.

PROGRAM EFFECTIVENESS

Numerous programs and services were developed in the 1980s to serve students with learning disabilities. McGuire, Harris, & Bieber (1987) stress the importance of implementing evaluation activities for services provided for students with learning disabilities. A comprehensive program evaluation approach of services provided to students at two pilot programs, one at Housatonic Community College and one at the University of Connecticut, utilize the Context-Input-Process-Product (CIPP) model which emphasizes program process and program product. The grade point averages for students in both settings were higher than the required 2.0. The Housatonic Community College retention rate was 82% and the rate at the University of Connecticut

was 92%.

In a study of students with learning disabilities at Barat College which offers comprehensive, highly coordinated support services, students with learning disabilities who self-referred at admissions and used all provided services graduated at the same rate and within the same time frame as students without learning disabilities. Although these results are encouraging, they do not necessarily generalize to other colleges and universities. Overall, there is very little information about program effectiveness at the postsecondary level (Bursuck et al., 1989).

SUMMARY

The number of students with learning disabilities attending college has continually increased since the 1970s. The major reason for this is the passage of Section 504 of the Rehabilitation Act of 1973 which provided legal entitlement for qualified students with learning disabilities who desired to attend college.

The need to define the college student with learning disabilities along with identifying the academic characteristics of this population is necessary in order for colleges to appropriately respond to Section 504. Determining the "qualified" applicant and providing reasonable academic adjustments challenge institutions as they accept these students and plan for their academic success.

It is apparent in the review of the literature that a continuum of services are offered in postsecondary education to students with learning disabilities but that research concerning accommodations and program effectiveness is lacking.

CHAPTER 3

METHODOLOGY AND PROCEDURES

The method of sample selection, the survey instrument, and data analysis will be discussed in this chapter.

METHOD OF SAMPLE SELECTION

Sixteen surveys of postsecondary education services for students with learning disabilities were mailed to four year degree granting institutions located in the Northeast. Brown University and Dartmouth College, with established support services for students with learning disabilities, were specifically selected because of their highly competitive entrance requirements. Syracuse University and the University of Connecticut, with long established support services for students with learning disabilities and competitive entrance requirements were also selected to be included in the survey. In addition, while conducting a review of the literature, the number of educational documents discussing aspects of the University of Connecticut's program for students with learning disabilities contributed to its inclusion in the survey (Brinckerhoff, Shaw, McGuire, Norlander, & Anderson, 1988;

McGuire, Harris, & Bieber, 1987; Norlander, & Czajkowski, 1986). Hofstra University, also with established support services was selected because of its competitive entrance requirements. Boston University was selected based on Dr. Loring Brinckerhoff, formerly associated with the University of Connecticut, serving as the director of support services for students with learning disabilities.

The remaining ten surveyed colleges are public New Jersey institutions. They are the following:

- * Kean College of New Jersey
- * Jersey City State College
- * Montclair State College
- * Ramapo College of New Jersey
- * Rowan College of New Jersey
- * Rutgers - Douglass College
- * Rutgers - University College
- * Stockton State College
- * Trenton State College
- * William Paterson College of New Jersey

Some of these colleges, such as Trenton State College, Ramapo College, and Kean College, have recognized support services. The competitiveness of each school varies. These schools were included in the survey in order to determine what support services and accommodations are provided in New Jersey public institutions.

Enclosed with each survey was a cover letter and a

stamped self-addressed envelope. A follow-up mailing was conducted to encourage participation of nonrespondents.

INSTRUMENTATION

The survey instrument developed was based on the presentation of results of a nationwide survey of postsecondary education services for students with learning disabilities by Bursuck, Rose, Cowen, and Yahaya (1989). According to the authors, the organization of the questionnaire was organized around programming practices for students with learning disabilities at postsecondary institutions as determined by a comprehensive literature review. Permission for use of the survey instrument with modifications was granted by Dr. William Bursuck of Northern Illinois University by telephone conversation on November 15, 1994.

There are five sections to the survey. In the first section, the respondents were asked to provide information on general characteristics of their institution, such as location, degrees offered, total enrollment, along with the number of students with learning disabilities, number of LD Specialists on staff, and to prioritize among three service provision goals: 504 access services, special services, and basic skills remediation.

In the second section, information regarding eligibility criteria such as type of admission policy, GPA requirements, psychoeducational reports documenting

disability, was requested.

The three remaining sections of the survey involve service provisions to students with learning disabilities. In the third section, questions regarding 504 access services such as provisions for taped textbooks, exam modifications, and course modifications were asked.

The fourth section of the survey requested respondents to provide information on special services for developing learning strategies such as the development of IEPs for each student, counseling services, social skills, and study skills.

The last section of the survey requested information regarding basic skills remediation in oral language, mathematics, reading, and written language, along with the percentage of students with learning disabilities graduating from their institution.

Modifications of the survey instrument based on results of a nationwide survey by Bursuck et al. (1989) include questions regarding the number of full-time and part-time LD specialists on staff, the provision for listing of psychoeducational reports, a fee requirement for special services, and the provision for additional comments following all sections.

DATA ANALYSIS

Frequencies for responses to each survey item will be computed and presented in tabular form. Discussion of

significant results along with percentages within each of the survey sections (with differences and similarities between institutions) will be presented.

CHAPTER 4

COMPILATION AND ANALYSIS OF RESULTS

In order to determine the variety and intensity of support services and accommodations that were offered at a selected sample of four year colleges and universities to students with learning disabilities, a survey form was developed and mailed to sixteen institutions of higher learning.

There were 6 respondents to the first survey mailing and 4 additional returns after a follow-up mailing conducted 8 weeks later. Overall, 10 (63%) of the 16 surveyed institutions responded to the survey. Institutions that responded to the survey are listed below:

- * Boston University
- * Brown University
- * Hofstra University
- * University of Connecticut
- * Kean College of New Jersey
- * William Paterson College of New Jersey
- * Ramapo College of New Jersey
- * Rowan College of New Jersey

* Richard Stockton College of New Jersey

* Trenton State College

The following institutions did not respond to the survey:

* Dartmouth College

* Syracuse University

* Jersey City State College

* Montclair State College

* Rutgers - Douglass College

* Rutgers - University College

GENERAL INSTITUTION CHARACTERISTICS

Surveys were returned by 2 (20%) of the respondents located in urban areas, 6 (60%) from suburban areas, and 2(20%) located in rural areas. All 10 respondents were four year colleges and universities offering a minimum of a bachelor's degree.

Enrollments ranged from a low of 4,500 to a high of more than 23,000 with an average student enrollment of 11,289. The number of students with learning disabilities ranged from 17 to 400, with an average of 134 learning disabled students receiving services. Data shown in Table 1 indicates the number of enrolled students with learning disabilities and the total student enrollment for each of the institutions responding to the survey.

TABLE 1

Total Student Enrollment and the Total Number of Students
With Learning Disabilities by Institution

<u>Respondent</u>	<u>Total Enrollment</u>	<u>Students With Learning Disabilities</u>
Boston University	23,000+	400
Brown University	5,500	125
Hofstra University	12,000	173
University of Connecticut	24,000	110-130
Kean College of New Jersey	13,000	21
William Paterson College	10,000	120
Ramapo College of New Jersey	4,500	60
Rowan College of New Jersey	8,588	17
Richard Stockton College of New Jersey	5,300	47
Trenton State College	7,000	160

As shown in Table 2, the number of full-time and part-time learning disabilities specialists on staff ranged from none to eight. New Jersey colleges such as William Paterson and Trenton State with approximately 1-2% of its population identified as having learning disabilities reported having no full-time or part-time learning disabilities specialists on staff. On the other hand, Boston University, also with approximately 2% of its student population identified as having learning disabilities, reported having 3 full-time and 8 part-time learning disabilities specialists on staff.

TABLE 2

Number of Full-time and Part-time Learning Disabilities
Specialists on Staff by Institution

<u>Respondent</u>	<u>Full-time LD Specialists</u>	<u>Part-time LD Specialists</u>
Boston University	3	8
Brown University	1	0
Hofstra University	3	2
University of Connecticut	2	5*
Kean College of New Jersey	1	2
William Paterson College	0	0
Ramapo College of New Jersey	1	0
Rowan College of New Jersey	2	0
Richard Stockton College of New Jersey	0	1**
Trenton State College	0	0

* Graduate Assistants - 20 hours per week

** Retired - as needed between 7 to 12 hours per week

In ranking priority of service goals, 6 schools (60%) ranked 504 access services as their most important priority, 3 schools (30%) ranked special services as their most important consideration, and 1 school (10%) considered basic skills remediation their service goal priority.

ELIGIBILITY CRITERIA FOR COLLEGE STUDENTS WITH
LEARNING DISABILITIES

Concerning admissions requirements, 9 schools (90%) had a regular admissions policy, and 1 school (10%), Hofstra University had a special admissions policy. A combination of procedures was used to admit students: 6 (60%) used student GPA, and 9 (90%) of the schools required either SAT or ACT scores.

Nine of the ten respondents reported requiring documentation of a learning disability. Brown University was the only institution that did not. Institutions requiring documentation and the required reports are listed in Table 3.

TABLE 3
Institutions Requiring Documentation of a Learning
Disability and Required Reports

<u>Respondent</u>	<u>Reports</u>
Boston University	Wechsler Adult Intelligence Scale-R
Hofstra University	Woodcock-Johnson-R Wechsler Adult Intelligence Scale-R
University of Connecticut	Wechsler Adult Intelligence Scale-R
Kean College of New Jersey	Woodcock-Johnson Battery Psychological, Education Reports
William Paterson College of New Jersey	IEP
Ramapo College of New Jersey	Comprehensive Learning Assessment including Psychological (WAIS)
Rowan College of New Jersey	IEPs; Child Study Evaluation or Psychological Reports
Richard Stockton College of New Jersey	Did not specify
Trenton State College	(Suggested) IEPs, Learning Evaluations, Neurologicals, Psychologicals

Regarding qualities required by applicants for admission, seven schools provided details which are found in Table 4. Motivation appears to be a key factor in determining college admission.

TABLE 4

QUALITIES DETERMINING COLLEGE ADMISSION

<u>Respondent</u>	<u>Qualities for Admission</u>
Boston University	Excellent Grades Personal Qualities
Brown University	Must Meet Same Competitive Requirements
Hofstra University	Compatibility, Maturity, Ability, Motivation, Self- knowledge
University of Connecticut	Academic Preparation Motivation
Kean College of New Jersey	Motivation
Rowan College of New Jersey	High School Grades, Recommendations, SATs
Trenton State College	Consistency, High Grades after LD Diagnosis, Extra Curricular Activities

SERVICE PROVISIONS504 ACCESS SERVICES FOR COLLEGE STUDENTSWITH LEARNING DISABILITIES

As shown in Table 5, the majority of schools surveyed provided most 504 access services. For example, taped textbooks, tape recording of lectures, notetakers, calculators, word processing programs, exam modifications, and course assignment modifications were available by 90% or more of the sample.

TABLE 5

Percentage of Postsecondary Schools Providing 504 Access
Services to Students With Learning Disabilities

<u>Service</u>	<u>Overall</u>
Faculty Inservice On Section 504	50
Early Syllabus	40
Taped Textbooks	90
Supplementary Recorded Materials	60
Tape Recording of Lectures	90
Copies of Lecture Notes	80
Notetakers	90
Calculators	90
Word Processing Programs	90
Proofreaders	30
Exam Modifications	100
Course Assignment Modifications	100

Six respondents specified the exam modifications provided by their institutions. Data shown in Table 6 indicates that additional time on exams was the most common exam modification.

TABLE 6

Examination Modifications

<u>Respondent</u>	<u>Exam Modifications</u>
Boston University	Additional Time
	Quiet Room
University of Connecticut	Extra Time
	Different Location
	Different Format
	Computer Use
William Paterson College of New Jersey	Oral or Extended Time
Ramapo College of New Jersey	Extended Time
	Private Room
	Use of Word Processor
Rowan College of New Jersey	Untimed or Orally
	Read to Student
	Alternate Locations
Trenton State College	Untimed Tests

Only Boston University supplied information concerning course assignment modifications. A course substitution was permitted for mathematics or for foreign language provided the course is not integral to the program in which the student is enrolled.

It is interesting to note that although most 504 access services were provided, only half of the respondents stated that their faculty was provided with some type of inservice training. For one respondent replying "yes" to the inservice training, the training was optional, for another it was informal, and for one respondent answering "yes", there will be a faculty inservice once the policy is in place.

SPECIAL SERVICES FOR COLLEGE STUDENTS WITH
LEARNING DISABILITIES

The results for special services, as shown in Table 7 indicated that many schools were providing special services including progress monitoring (90%), advocacy (100%), and study skills (70%). Special classes were provided by 10% of the respondents.

Respondents were requested to indicate how and by whom tutoring, counseling, study skills, and social skills services were provided. The results indicated that 60% of schools provided individual tutoring, with 60% of the tutoring provided by peers. Learning disabilities professionals provided 30% of the tutoring. Group tutoring was provided by 30% of the schools.

With respect to counseling, personal counseling was provided by 80% of the schools and career counseling by 60% of them. Data indicated that individualized counseling, both personal (80%) and career (60%), was the way most programs provided counseling. A group counseling format was used by 60% of schools for personal counseling and 40% of the schools for career counseling.

TABLE 7

Percentage Of Schools Providing Special Services To Students
With Learning Disabilities

<u>Service</u>	<u>Overall</u>
IEPs for Each Student	50
Academic Advisement	70
Progress Monitored	90
Advocacy	100
Special Courses	10
Tutoring - Any	90
Tutoring - Individual	60
Using LD Staff	30
Using Regular Teachers	10
Using Trainees	10
Using Peers	60
Tutoring - Group	30
Using LD Staff	20
Using Regular Teachers	20
Using Trainees	10
Using Peers	20
Counseling - Any	90
Counseling - Personal	80
Individual	90
Group	60
Class	10
By LD Professional	30
By Regular Professional	60

Counseling - Career	60
Individual	70
Group	40
Class	0
By LD Professional	10
By Regular Professional	60
Social Skills - Any	20
Individual	10
Group	10
Class	0
By LD Staff	20
By Psychologist	10
Other	30
Study Skills - Any	70
Individual	80
Group	40
By LD Staff	60
By Specialist	40
Other	30

Data on study skills indicated that 10% of the institutions provided training in this area. Individual training (80%) was provided twice as often as group training (40%). Learning disabilities staff provided 60% of this training.

With respect to social skills training, only two schools (20%) provided training in this area. Training was provided by LD staff (20%) and psychologists (10%).

Individualized education programs (IEPs) were provided for students by 50% of the schools. The schools providing IEPs and personnel developing them are presented in Table 8.

TABLE 8

Schools Providing IEPs And Personnel Developing Plans

<u>Respondent</u>	<u>Personnel</u>
Hofstra University	Specialists
University of Connecticut	Students and LD Staff
Kean College of New Jersey	LD Specialists
Rowan College of New Jersey	Provided by Student
Richard Stockton College of New Jersey	LD Consultant

BASIC SKILLS REMEDIATION FOR STUDENTS WITHLEARNING DISABILITIES

As shown in Table 9, few institutions surveyed reported providing basic skills remediation services for students. Most of the schools providing services were New Jersey public colleges and Hofstra University, which provided a program especially designed for students with learning disabilities. The most frequently provided basic skills remediation were in the areas of mathematics (40%) and written language (40%). Individual instruction in these areas was provided by 30% of the schools. Small group instruction was provided by 30% of the respondents for mathematics, and 20% of the respondents for written language. Instruction was provided by LD staff (20% for both mathematics and written language) and specialists (20% for mathematics and 30% for written language).

TABLE 9

Percentage Of Schools Providing Basic Skills Remediation
For Students With Learning Disabilities

<u>Service</u>	<u>Overall</u>
Oral Language	20
Individual	10
Small Group	10
Class: Credit	10
Noncredit	10
By LD Specialist	10
Other	10
Mathematics	40
Individual	30
Small Group	30
Class: Credit	10
Noncredit	20
By LD Staff	20
By Specialist	20
Other	10
Reading	20
Individual	20
Small Group	10
Class: Credit	10
Noncredit	20
By LD Staff	10
By Specialist	20
Other	20
Written Language	40
Individual	30
Small Group	20
Class: Credit	10
Noncredit	30
By LD Staff	20
By Specialist	30
Other	10

One college, Richard Stockton College of New Jersey, indicated that some remedial services were available to all students but did not indicate how or by whom these services

were provided.

Twenty percent of the schools surveyed provided remedial reading and oral language services. Individual instruction (20% for reading and 10% for oral language) was provided by LD staff with specialists providing 20% of the instruction for reading and 10% for oral language.

Boston University reported that their focus is on learning strategies instruction, not content tutoring or remediation. The tutoring that is available is provided by learning specialists for an additional fee of \$1,300 per semester for two hours a week. Hofstra University charges a fee for services to students their freshman year of the program but not afterward.

GRADUATION RATES

Of the schools surveyed providing data regarding the percentage of students with learning disabilities graduating from their institutions, Brown University had the highest graduation rate (96%). The average graduation rate was approximately 74%. Ninety percent of the students at Boston University who used comprehensive services and ninety percent of the students at Hofstra University who entered through their program graduated.

The average graduation rate for Boston University, Brown University, University of Connecticut, and Hofstra University was approximately 89%, while the average graduation rate for five of the six New Jersey college

respondents was 59%. This difference can possibly be accounted for by students with learning disabilities having to meet the same competitive requirements as other students at institutions like Boston University and Brown University. Also, for schools like Hofstra and Boston Universities, comprehensive services provided for students with learning disabilities more likely ensured academic success than schools without these services.

CHAPTER 5

SUMMARY

The purpose of this research project was to compile a listing of support services available and accommodations provided for college students with learning disabilities from a selected sample of surveyed four year colleges and universities. This information will be used in conjunction with other research being conducted by the Special Education Department at Rowan College in order to provide the college's Department of Specialized Services with recommendations for support services with this population at Rowan College.

The number of students with learning disabilities attending college since the late 1980s has increased dramatically. Several factors account for this increase, but the major reason is the passage of Section 504 of the Rehabilitation Act of 1973 which provided legal entitlement for qualified students with learning disabilities to attend college.

A review of the literature indicates that a continuum of services are available and are offered to students with

learning disabilities but that research concerning accommodation and program effectiveness is lacking.

DISCUSSION

Overall, 63% of the surveyed institutions responded to the survey. The lack of response from six institutions may be due to insufficient staff to complete survey forms. Survey results confirmed that a continuum of services are available to students with learning disabilities. The average graduation rate for more selective colleges exceeded that of less selective ones. This difference can possibly be accounted for by students with learning disabilities having to meet the same competitive requirements as students without learning disabilities. Also, for schools like Hofstra and Boston Universities, comprehensive services provided for students with learning disabilities more likely ensured academic success than schools without these services.

APPENDIX A

INITIAL COVER LETTER FOR SURVEY

[Return address]
November 27, 1994

[Title/Address]

Dear [Name]:

I am a graduate student at Rowan College (Glassboro, New Jersey) working on a thesis project which involves surveying a selected sample of four year colleges and universities in order to determine the availability and types of services and accommodations offered to students with learning disabilities.

This information will be used in conjunction with other research being conducted by the Special Education Department at Rowan College in order to provide the College's Department of Special Services with information regarding services and accommodations most commonly provided to students with learning disabilities.

Enclosed is a survey form along with a stamped self-addressed return envelope. Your participation in this project and time spent completing the survey is greatly appreciated. Please return the completed survey by December 23, 1994. If you have any additional information you feel would be of assistance in completing this project, it would be welcome.

I can be reached at (609)785-2708 from 9:00 A.M.-3:00 P.M., Monday through Friday, if you have any questions or comments.

Sincerely,

Mary C. Tortorici

APPENDIX B

FOLLOW-UP COVER LETTER FOR SURVEY

[Return address]
January 25, 1995

[Title/Address]

Dear [Name]:

In the latter part of November 1994, I sent you a letter explaining that I am a graduate student at Rowan College (Glassboro, New Jersey) working on a thesis project which involves surveying a selected sample of four year colleges and universities in order to determine the availability and types of services and accommodations offered to students with learning disabilities.

I realize that the letter and survey arrived at a very busy time of the academic year and that it may have been laid aside for more pressing deadlines. Your response is important to the completion of my project.

Enclosed is a survey form along with a stamped self-addressed return envelope. Your participation in this project and time spent completing the survey is greatly appreciated. Please return the completed survey by February 22, 1995. If you have any additional information you feel would be of assistance in completing this project, it would be welcome.

I can be reached at (609)783-2708 from 9:00 A.M.-3:00 P.M., Monday through Friday, if you have any questions or comments.

Sincerely,

Mary C. Tortorici

APPENDIX C

SURVEY OF POSTSECONDARY EDUCATION SERVICES FOR STUDENTS WITH
LEARNING DISABILITIES

School Name _____

Location _____Urban _____Suburban _____Rural

Degrees Offered _____

Total Enrollment _____

Number of Students with Learning Disabilities _____

Number of Full Time LD Specialists on staff _____

Number of Part Time LD Specialists on staff _____

Please rank the following three service goals in priority of
importance to your college/university. (1-most important)

- _____504 Access Services
 _____Special Services
 _____Basic Skills Remediation

ELIGIBILITY CRITERIA FOR COLLEGE STUDENTS WITH
LEARNING DISABILITIES

Please check all items required for program admittance.

* Admissions Policy _____Open _____Regular _____Special

Yes No

* High School Transcript _____

* GPA Requirement _____

If yes, please list GPA required. _____

- * Psychoeducational reports documenting learning disability
(psychologicals, learning evaluations, neurologicals,
IEPs)

Yes No

If yes, please list reports requested.

- * If standardized test scores are required, are extended
time scores acceptable?

- * Personal Interview

What particular qualities determine college admission?

- * Autobiographical Statement

- * Letters of Recommendation

- * Attendance at a summer orientation

- * Is there a fee for special services?

OTHER _____

504 ACCESS SERVICES FOR COLLEGE STUDENTS WITH
LEARNING DISABILITIES

Please check all instructional accommodations provided.

	Yes	No
Faculty Inservice on Section 504	_____	_____
Syllabus Provided Prior to Semester	_____	_____
Taped Textbooks	_____	_____
	Yes	No
Supplementary Recorded Materials	_____	_____
Tape Recordings of Lectures	_____	_____

	Yes	No
Copies of Lecture Notes	_____	_____
Notetakers	_____	_____
Calculators	_____	_____
Word Processing Programs	_____	_____
Proofreaders	_____	_____
Exam Modifications	_____	_____
Please specify modifications _____		
<hr/>		
Course Assignment Modifications	_____	_____
Course load reduction	_____	_____
Course substitutions	_____	_____
Extended time to complete course	_____	_____
Extended time to complete degree	_____	_____
OTHER _____		
<hr/>		
<hr/>		

**SPECIAL SERVICES FOR COLLEGE STUDENTS WITH
LEARNING DISABILITIES**

Please check all special services provided.

	Yes	No
IEPs for each student	_____	_____
If yes, who develops IEP? _____		
Academic Advisement	_____	_____
Progress Monitored	_____	_____
Advocacy	_____	_____
Special Courses	_____	_____
Tutoring - Any	_____	_____

	Yes	No
Tutoring - Individual	_____	_____
Using LD Staff	_____	_____
Using Regular Teachers	_____	_____
Using Trainees	_____	_____
Using Peers	_____	_____
Tutoring Group	_____	_____
Using LD Staff	_____	_____
Using Regular Teachers	_____	_____
Using Trainees	_____	_____
Using Peers	_____	_____
Counseling - Any	_____	_____
Counseling - Personal	_____	_____
Individual	_____	_____
Group	_____	_____
Class	_____	_____
By LD Professional	_____	_____
By Regular Professional	_____	_____
Counseling - Career	_____	_____
Individual	_____	_____
Group	_____	_____
Class	_____	_____
By LD Professional	_____	_____
By Regular Professional	_____	_____
Social Skills - Any	_____	_____
Individual	_____	_____
Group	_____	_____
Class	_____	_____
By LD Staff	_____	_____
By Psychologist	_____	_____
Other	_____	_____
If other, please specify. _____		

	Yes	No
Study Skills - Any	_____	_____
Individual	_____	_____
Group	_____	_____
By LD Staff	_____	_____
By Specialist	_____	_____
Other	_____	_____
If other, please specify _____		

Other _____

**BASIC SKILLS REMEDIATION FOR STUDENTS
WITH LEARNING DISABILITIES**

Please check all basic skills remediation services provided.

	Yes	No
Oral Language	_____	_____
Individual	_____	_____
Small Group	_____	_____
Class: Credit	_____	_____
Noncredit	_____	_____
By LD Staff	_____	_____
By Specialist	_____	_____
Other	_____	_____

 If other, please specify. _____

Mathematics	_____	_____
Individual	_____	_____
Small Group	_____	_____
Class: Credit	_____	_____
Noncredit	_____	_____
By LD Staff	_____	_____
By Specialist	_____	_____
Other	_____	_____

 If other, please specify. _____

	Yes	No
Reading	_____	_____
Individual	_____	_____
Small Group	_____	_____
Class: Credit	_____	_____
Noncredit	_____	_____
By LD Staff	_____	_____
By Specialist	_____	_____
Other	_____	_____

If other, please specify. _____

Written Language	_____	_____
Individual	_____	_____
Small Group	_____	_____
Class: Credit	_____	_____
Noncredit	_____	_____
By LD Staff	_____	_____
By Specialist	_____	_____
Other	_____	_____

If other, please specify. _____

OTHER _____

	Yes	No
Is there a fee for special services?	_____	_____

If yes, please provide details _____

Percentage of students with learning disabilities graduating _____

Thank you for taking your time to complete this survey.
Please complete and return in the enclosed envelope by
December 23, 1994 to:

Mary C. Tortorici
[Address]

Permission for use of this modified survey instrument was
granted by Dr. William D. Bursuck, Associate Prof., Northern
Ill. Univ.

BIBLIOGRAPHY

- Astin, A., Green, K., Korn, W., Schalit, M., & Berz, E. (1988). The American freshman: National norms for 1988. Los Angeles: University of California.
- Barron's Educational Series. (1994). Profiles of American colleges (20th ed.). Hauppauge, NY: Author.
- Bennett, R.E., Ragosta, M., & Stricker, L.J. (1984). The test performance of handicapped people. (Report No.2). Princeton, NJ: Educational Testing Service.
- Bireley, M., & Manley, E. (1980). The learning disabled student in a college environment: A report of Wright State University's program. Journal of Learning Disabilities, 13, 12-15.
- Brinckerhoff, L. C., Shaw, S. F., McGuire, J. M., Norlander, K. A., Anderson, P. L. (1988). Critical issues in learning disability college programming. (Report No. EC-23-1860). Storrs, CT: University of Connecticut. (ERIC Document Reproduction Service No. ED 322 672)
- Bursuck, W. D., Rose, E., Cowen, S., & Yahaya, M. A. (1989). Nationwide survey of postsecondary education services for students with learning disabilities. Exceptional Children, 56(3), 236-245.
- Demuth, K. A., & Smith, N. B. (1987). The foreign language requirement: An alternative program. Foreign Language Annals, 20, 67-77.
- Gajar, A. H. (1987). Foreign language learning disabilities: The identification of predictive and diagnostic variables. Journal of Learning Disabilities, 20, 327-330.
- Ganschow, L., & Sparks, R. (1993). "Foreign" language learning disabilities: Issues, research, and teaching implications. In S. A. Vogel & P. B. Adelman (Eds.), Success for college students with learning disabilities (pp. 283-317). New York: Springer-Verlag.
- Ganschow, L., & Sparks, R. (1987). The foreign language requirement. Learning Disabilities Focus, 2, 116-123.
- Hammill, D. D. (1990). Defining learning disabilities: The emerging consensus. Journal of Learning Disabilities, 23, 74-84.

- Hammill, D. D., Leigh, J., McNutt, G., & Larsen, S. C. (1981). A new definition of learning disabilities. Learning Disabilities Quarterly, 4, 336-342.
- Hughes, C. A., & Smith, J. O. (1990). Cognitive and academic performance of college students with learning disabilities: A synthesis of the literature. Learning Disability Quarterly, 13, 66-79.
- Learning Disabilities Association of America (undated). College students with learning disabilities. Pittsburgh, PA: Author.
- Lerner, J. W. (1993). Learning disabilities: Theories, diagnosis and teaching strategies (6th ed.). Boston: Houghton Mifflin.
- Mangrum, C. T., & Strichart, S. S. (Eds.). (1992). Peterson's colleges with programs for students with learning disabilities (3rd ed.). Princeton, NJ: Peterson's Guides.
- Mangrum, C. T., & Strichart, S. S. (1988). College and the learning disabled student: Program development, implementation and selection (2nd ed.). Philadelphia: Gune & Stratton.
- McGuire, J. M., Harris, M. W., & Bieber, N. (1987). Evaluating college programs for learning disabled students: An approach for adaptation. (Report No. EC-23-1863) Storrs, CT: University of Connecticut. (ERIC Document Reproduction Service No. ED 322 675)
- Nelson, R., & Lignugaris/Kraft, B. (1989). Postsecondary education for students with learning disabilities. Exceptional Children, 56, 246-265.
- Norlander, K., Czajkowski, A., & Shaw, S. (1986). The University of Connecticut program for learning disabled college students. (Report No. EC-191-750). Storrs, CT: University of Connecticut. (ERIC Document Reproduction Service No. ED 278 194)
- Ostertag, B. A., Baker, R. E., Howard, R. F., Best, L. (1982). Learning disabled programs in California community colleges. Journal of Learning Disabilities, 15, 535-538.

- Rose, E., (1993). Faculty development: Changing attitudes and enhancing knowledge about learning disabilities. In S. A. Vogel & P. B. Adelman (Eds.), Success for college students with learning disabilities (pp. 131-150). New York: Springer-Verlag.
- Rothstein, L. F. (1993). Legal issues. In S. A. Vogel & P. B. Adelman (Eds.), Success for college students with learning disabilities (pp. 21-35). New York: Springer-Verlag.
- Scott, S. S. (1990). Coming to terms with the "otherwise qualified" student with a learning disability. Journal of Learning Disabilities, 23, 398-405.
- Siperstein, G. N. (1988). Students with learning disabilities in college: The need for a programmatic approach to critical transitions. Journal of Learning Disabilities, 21, 431-436.
- Vogel, S. A. (1993). The continuum of university responses to Section 504 for students with learning disabilities. In S. A. Vogel & P. B. Adelman (Eds.), Success for college students with learning disabilities (pp. 83-113). New York: Springer-Verlag.
- Vogel, S. A. (1982). On developing LD college programs. Journal of Learning Disabilities, 15, 518-528.