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ABSTRACT

This study evaluated the extent to which practitioners in higher education settings employ interventions that promote independence among students with learning disabilities. A survey was developed and sent to 694 practitioners across the United States involved in service delivery to students with learning disabilities at the postsecondary level. Of respondents (N=510), 43 percent were from two-year institutions and 55 percent from four-year institutions. Analysis of survey responses found that practitioners who employ independence-oriented methods to a high degree tend to employ dependence-oriented methods to an equally high degree, indicating that the independence-dependence dichotomy is of almost no heuristic value in describing the present state of support services to these students. Overall, results suggested that, as practitioners develop and expand postsecondary services for students with learning disabilities, they fail to discriminate between those services that foster independence and those that do not. Several tables and graphs illustrate the study's findings. (Contains 38 references and 2 tables.) (DB)

# Independence vs. Dependence: A Study of Service Providers' Intervention Methods for College Students with Learning Disabilities



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Running head: INDEPENDENCE

Abstract

Much of the current literature has been critical of the extent to which secondary educational systems prepare students with learning disabilities to function independently in postsecondary and employment settings. These concerns are shared by those who have been monitoring developments in service delivery practices at the postsecondary level. To evaluate the extent to which practitioners in higher education settings employ interventions that promote independence among students with learning disabilities, a study was conducted among 510 postsecondary service providers across North America. The findings suggest that as practitioners develop and expand postsecondary services for students with learning disabilities, they fail to discriminate between those services that foster independence and those that do not. These results are discussed with respect to the evolution of services to students with learning disabilities at the postsecondary level.

## Introduction

In 1975, just prior to the passage of Public Law 94-142: The Education of All Handicapped Children Act (EHA), a nationwide survey found that only nine percent of public schools provided specialized programs for students with learning disabilities (Scranton & Down, 1975). From this baseline, the EHA, in mandating a "free and appropriate education" for all children regardless of handicapping condition, precipitated a rapid expansion of special education and related services. In their rush to comply with the law, many school systems gave little time to systematic curriculum planning or program development. A review of the literature from this period (Touzel, 1978) concluded that curricula in resource programs for high school students with learning disabilities focused primarily on the preferences of the teacher and/or program director with few written goals or activities.

Shortly thereafter, Cruickshank (1981) noted that "the adolescent with learning disabilities is one for whom little or no planning has been done in any coordinated manner" (p. 5). His concerns were validated by a study in 1984 which found that 52% of a sample of 87 high school special educators reported that their school district lacked a written description of program goals and objectives (Englehard, Geller, & Houck, 1985). Alley,

Deshler, Clark, Schumaker, and Warner (1983) found that most of the methods used by teachers of students with learning disabilities at the secondary level were rooted primarily in "clinical beliefs and nonvalidated models of assessment and instruction" (p. 1).

## The Development of Services at the Secondary Level

Without a clear curriculum or validated methodologies, special education began to find its niche in the organizational structure of high schools as a specialized "study hall" or "sub-remedial" track for students with special needs (Carlson, 1985). This approach, referred to as the "tutorial" model by Spector, Decker, and Shaw (1991), focused on providing tutorial assistance in the content of those mainstream courses in which students were having difficulty. This process often involved having students complete their homework in the resource room with assistance from the special education teacher. In recent years, it also included a kind of "watered-down" curriculum in which students were offered a distinct "special education track" in some of the basic content areas. Under this approach, students with learning disabilities received credit for "learning disabilities" English, math, science, or social studies courses taught in resource rooms or segregated classes by special educators (Carlson, 1985).

The prevalence of the tutorial approach was demonstrated by Wells, Schmidt, Algozzine, and Maher (1983) who found that 42% of high school learning disability teachers reported spending most of their instructional time tutoring students in basic content areas. More recently, Lynch and Beare (1990) found that individualized educational plans (IEPs) for mildly handicapped students at the secondary level almost exclusively emphasize academic goals in reading, writing, and math. Evidence for the prevalence of a content focus can also be seen in recent U.S. Department of Education statistics which indicate that students with learning disabilities receive more than one-third of their high school academic credits in special education classes (Twelfth Annual Report, 1990).

Spector et al. (1991) described the dual purpose of the tutorial model as helping students with learning disabilities graduate from high school and, in the process, feel good about themselves by giving them the opportunity to earn good grades. While these objectives seem noble, they obscure the real goal of support services and, indeed, secondary education in general: preparing students for the challenges of adult life. As Okolo and Sitlington (1986) argued, tutoring does little more than help students "fit into the system." deBettencourt and Zigmond (1990) added that it fosters a sense of helplessness in students with

learning disabilities by encouraging them to rely on special education teachers to solve their problems and fails to reinforce the development of adequate study discipline or perseverance.

Critics of prevailing approaches to service delivery in secondary special education point to the results of longitudinal studies on high school graduates with learning disabilities as evidence that the current system is not functioning effectively. These investigations consistently indicate that young adults with learning disabilities have problems accessing and succeeding in employment and postsecondary education (Chesler, 1982; Hasazi, Johnson, Hasazi, Gordon, & Hull, 1989; Hoffman et al., 1987; Okolo & Sitlington, 1988; Polloway, Smith, & Patton, 1984; Sitlington & Frank, 1990; Wagner, 1988; Zetlin & Hosseini, 1989). In addition to academic and employment problems, White (1992) recently noted that "the number of adults with learning disabilities who have been able to achieve the level of independence and self-sufficiency to 'take their place in society' is disappointingly low" (p. 455).

In an attempt to help all students with disabilities deal with issues of independence in adult life, the Office of Special Education and Rehabilitation Services has encouraged an initiative on self-determination (Ward, 1992). Self-determination is defined as the ability of

individuals to set goals for themselves and to take initiative in achieving those goals. Reiff, Gerber, and Ginsberg (1992) have identified self-determination as a significant characteristic of successful adults with learning disabilities. In light of concerns regarding secondary special education approaches to services and emerging evidence which verifies the importance of self-determination, it is important to examine interventions used at the postsecondary level.

## Implications for Postsecondary Service Providers

The decade of the 1980s witnessed an increase in public awareness of the lifelong and pervasive nature of learning disabilities (White et al., 1982). In addition, the rapid expansion of services to students with learning disabilities at the secondary level, occasioned an explosion in the number of individuals seeking specialized assistance at colleges and universities around the country (Shaw, Brinckerhoff, Kistler, & McGuire, 1991). Practitioners in the last decade have, in fact, noted a tenfold increase in the number of students with learning disabilities at the postsecondary level (Learning Disability Update, 1986) with these students now making up 2.2% of the total first time, full-time freshman class and growing from 15% to 25% of all students with disabilities from 1985-1991 (Henderson, 1992).

With the trend toward increased services to students with disabilities at colleges and universities, researchers have begun to fear that the problems identified in service delivery at the secondary level are being replicated in postsecondary settings. For example, Brinckerhoff, Shaw, and McGuire (1992) described common practices of service providers at colleges and universities which encourage dependence rather than independence in students with disabilities. These practices include routinely offering tutoring, accommodations, and waivers as opposed to personalized instruction in learning strategies and compensatory techniques.

Carlson (1985) described programs that are effective in promoting the autonomy and self-direction of students with learning disabilities as being those that "serve to diminish the impact of the presenting handicap upon future learning or enable the individual to function more adequately" (p. 312). Such programs emphasize instruction in areas such as study strategies, notetaking, memory techniques, time management, metacognition, and self-advocacy skills. In contrast, a study on service delivery practices in programs that serve students with learning disabilities at the postsecondary level (Bursuck, Rose, Cowen, & Yahaya, 1989) indicated that the prevailing model is one in which the student receives academic

accommodations (e.g., course waivers and modifications), assistance with basic skills (e.g., reading and writing), and/or tutorial support in courses that are most profoundly affected by the student's disability. Only about one-third of college services for students with learning disabilities emphasized the strategic approaches advocated by Carlson and others. These findings suggest that the methods most often employed by postsecondary programs for students with learning disabilities are inconsistent with the goal of developing and affirming student self-determination.

While it appears that programs at the postsecondary level have emulated their secondary counterparts by emphasizing tutorial methods, there have been no published, quantitative investigations that address this issue from the perspective of student autonomy and self-direction. This study was designed to fill this gap in the literature. It involved a national survey of postsecondary learning disability service providers that was conducted to classify practitioners according to their frequency in the use of independence-oriented intervention methods. Its overall intent was to explore the degree to which practitioners at the postsecondary level discriminate between independence-oriented and dependence-oriented practices in the services they deliver to students with learning disabilities. The following research question was posed:

"What is the frequency in the use of dependence-oriented intervention strategies among practitioners who use independence-oriented methods to a high degree?"

For the purposes of this investigation, the term independence-oriented referred to services that foster student autonomy and self-direction. The term dependence-oriented referred to services that promote student reliance on programs and services. Thus, an intervention such as offering readers to students diagnosed with reading disabilities would be considered a dependence-oriented approach because it encourages them to rely on a service or another individual rather than their own coping mechanisms to meet their learning needs.

An independence-oriented approach to the same problem would be to teach a specific reading strategy such as SQ3R (Robinson, 1974) to students with a reading disabilities, or to assist students in the process of accessing taped textbooks. Such interventions encourage students to be self-reliant in meeting their learning needs. It is not the position of the authors that dependence-oriented interventions such as offering readers, notetakers, or content tutors to students with LD are necessarily "bad" practices. These services are clearly defensible in many instances. It is, nonetheless, argued that interventions that foster student autonomy and self-sufficiency should

take priority in the delivery of services to students with LD and should, therefore, be used with greater frequency than those that do not.

## Method

### Participants and Instrumentation

To determine the intervention practices and attitudes of postsecondary support services personnel assisting students with learning disabilities, a 50-item survey was developed. It was piloted with a sample of 40 participants at a professional conference for college level providers of services for students with learning disabilities. Based on their responses, the survey was extensively revised to include 23 items that address service delivery practices and 11 dealing with practitioner attitudes toward service goals and philosophies. Respondents were asked to rate the "practices" items on a five-point Likert scale ranging from "1" (almost never) to "5" (almost always). Attitudinal items were based on a scale ranging from "1" (strongly disagree) to "5" (strongly agree).

In addition to the 34 Likert scale items dealing with intervention strategies, respondents were asked to provide information on the type of service delivery model offered by their institution, type of postsecondary institution in which they were employed (e.g., two-year, four-year, graduate/professional), size of the student population,

institutional affiliation (i.e., public vs. private), locale of the institution (i.e., rural, urban, suburban), number of students with learning disabilities served by their program, and degree of competitiveness of the institution based on a scale ranging from "Noncompetitive" to "Most Competitive" as adapted from Barron's Profiles of American Colleges (1991). Respondents were also asked to provide information such as gender, age, estimated percentage of professional time spent providing direct services to students with learning disabilities (e.g., tutoring, advising, counseling), estimated percentage of time spent administering services for students with learning disabilities (e.g., supervising, budgeting, recordkeeping), state of employment, years of experience working with students with learning disabilities at the postsecondary level, highest degree held, primary educational background, and whether or not the phrases "students with disabilities" or "students with learning disabilities" appear in their job title or job description.

A total of 694 surveys were sent to practitioners involved in service delivery nationwide to students with learning disabilities at the postsecondary level. Of these, 576 were members of the special interest group on students with learning disabilities of the Association on

Higher Education and Disability (AHEAD). The remaining 118 members of the sample were randomly selected from Peterson's Guide to Colleges with Programs for Students with Learning Disabilities (Mangrum & Strichart, 1988). While it is estimated that 50% to 60% of all postsecondary institutions providing services to students with learning disabilities are affiliated with AHEAD (Bursuck et al., 1989), the authors felt that is was essential to sample programs not associated with AHEAD as a check against bias that may result from professional group affiliation.

## Data Analyses

Frequency distributions and descriptive statistics were derived for each of the 16 demographic variables and 34 survey items. This information was used to profile the sample and distribution of practitioner responses.

To address the research question, a subset of the 23 survey items dealing with intervention practices was subjected to a principle components factor analysis using an oblique rotation. Independent and dependent variables were identified through this process. Respondents were separated into three groups based on their score on the independent variable. Analysis of variance (ANOVA) techniques were employed to analyze differences between groups according to dependent variables.

## Results

### Sample Characteristics

The first mailing yielded a total of 400 responses while the follow-up resulted in 110 additional replies which represents a 73.5% response rate. The sample of respondents included representatives of 48 states, nine Canadian Provinces, two U.S. Territories, and the District of Columbia. Of those responding, approximately 43% were employed by two-year institutions (including nondegree programs, community colleges, and vocational/technical schools), 55% by four-year institutions (colleges and universities), and two percent by programs described as either graduate-only (e.g., medical or law schools) or "other."

In response to an item asking participants to rate the proportion of their time spent in direct service to students with learning disabilities (e.g., counseling, teaching, tutoring, advising, etc.), 70% indicated that they spend, at least, 20% of their time providing direct service. In contrast, only 53% reported that they spend 20% or more of their time administering services to students with learning disabilities (e.g., supervising, managing, budgeting, recordkeeping, etc.). These findings suggest that the sample for this survey is characterized by individuals whose responsibility is to provide direct

services to students. The three most prevalent categories for respondents' educational background were Special Education (27%), Counseling (20%), and "Other" (16%). None of the other eight categories elicited more than eight percent of the responses. Finally, approximately 66% of respondents indicated that the phrase "students with disabilities" or "students with learning disabilities" appeared in their job description or job title.

The response rate of members sampled from AHEAD was 72% (n=414); 81% (n=96) of professionals randomly selected from Peterson's Guide responded. In comparing the questionnaire responses of the two groups, significant differences were found in such areas as institutional size (respondents from the non-AHEAD sample tended to be employed by smaller postsecondary institutions) and frequency of use of one specific intervention strategy (communication skills). No significant differences were found between the two groups on the other variables used in this investigation. Despite this finding, the minor differences noted confirm the importance of including a sample of respondents with no professional group affiliation.

## Descriptive Statistics

Mean and standard deviation scores for each of the 34 items are profiled in Table 1. Mean scores ranged from

2.34 to 4.41 for "practices" items and 1.62 to 4.65 for "attitudes" items. These results indicate that content tutoring (item #17), notetaking modifications (item #1), and self-advocacy skills (item #12) are the three most frequently employed interventions while proofreading services (item #21), metacognitive strategies (item #14), and activities that address social/interpersonal skills (item #16) are the three least utilized intervention practices. With regard to attitudes, there was strong agreement with such statements as "students with learning disabilities at the postsecondary level should be able to describe needed accommodations to instructors" (item #26 mean = 4.65), "students with learning disabilities at the postsecondary level should be able to describe their specific learning disability in plain language to faculty and staff" (item #24 mean = 4.58), and "postsecondary learning disability service providers should advocate for untimed tests for students with learning disabilities who request them" (item #34 mean = 4.24). At the opposite extreme, there is strong disagreement with such statements as "postsecondary learning disability service providers should be accountable for the products and grades of the students they serve" (item #32 mean = 1.62), "postsecondary learning disability service providers should expect to meet all of the instructional needs of students with learning

disabilities" (item #31 mean = 1.95), and "postsecondary learning disability service providers should correct papers for students with learning disabilities" (item #30 mean = 2.02).

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Insert Table 1 about here.

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Factor Analysis

To define an independent variable for this investigation, 13 of the 23 "practices" items were selected based on the fact that they describe interventions that promote student independence as described in the literature. These items were subjected to a principle components factor analysis, resulting in a two-factor solution that accounted for 66.9% of the total variance. Based on a review of their content, these factors were labeled "Independence-Oriented Academic Practices" (IOAP) and "Independence-Oriented Counseling Practices" (IOCP). Evidence for the cohesiveness of the two factors was provided by the high communality scores (.49 to .80) and primary factor loadings (.70 to .89) of the items. A check of their internal consistency via Cronbach's Alpha revealed coefficients of .94 and .82 for IOAP and IOCP, respectively. These findings provide strong evidence of

reliability and construct validity. The two orthogonal factors, their alpha coefficients, and subordinate items with their means and standard deviations are indicated in Table 2.

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Insert Table 2 about here.

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Given that a correlation of .5 was found between IOAP and IOCP, the two factor scores were combined into a single composite score to obtain the most meaningful estimate of the extent to which respondents employed independence-oriented intervention strategies. This composite score, labeled INDCOM, has a mean of 3.3, a standard deviation of .86, and a reliability coefficient (Cronbach's Alpha) of .93. It was used to separate respondents into groups of "low," "average," and "high" frequency in the use of independence-oriented methods.

To identify a dependent variable for this investigation, a process identical to the one used to isolate the independent variable was employed. Four of the 23 "practices" items were selected based on their potential, as identified in the literature, to promote student dependence on programs and services. However, the results of a principle components analysis of these items

failed to yield a cohesive, reliable factor solution. Therefore, the Analysis of Variance procedure discussed in the next section was based on the individual items themselves. They include Item 1, "Notetaking Modifications;" Item 13, "Readers;" Item 17, "Content Tutoring;" and Item 21, "Proofreading." Table 1 includes the exact wording, means, and standard deviations for these items.

Analysis of Variance

Assignment to groups based on INDCOM was accomplished via z-scores. Respondents with z-scores between +1 and -1 were assigned to the average group while those with z-scores above +1 were assigned to the high group and those below -1 were assigned to the low group. Table 3 indicates the descriptive statistics on the three INDCOM groups.

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Insert Table 3 about here.

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Analysis of variance (ANOVA) procedures were conducted to determine differences in scores on the dependent variables according to group membership on the independent variable (INDCOM). Results displayed in Table 4 reveal that the differences between groups on all variables are significant at the .001 level or greater.

Insert Table 4 about here.

To determine the sources of these differences by group, a post hoc analysis was conducted via the Sheffé method. With respect to Item 1: Notetaking Modifications, this procedure revealed significant differences between groups 1 (low) and 2 (medium), 2 (medium) and 3 (high), and 1 (low) and 3 (high). For items 13 and 17, Readers and Content Tutors, significant differences were noted between groups 1 and 2 and 1 and 3, but not between groups 2 and 3. Finally, on Item 21, significant differences were found between groups 1 and 3 and 2 and 3 but not between groups 1 and 2. As indicated in Figure 1, these findings suggest clear linear relationships between the independent and dependent variables.

Insert Figure 1 about here.

## Discussion

In exploring the issue of whether or not service providers at the postsecondary level discriminate between independence-oriented and dependence-oriented practices in

the delivery of services to students with LD, the following research question was asked: "What is the frequency in the use of dependence-oriented intervention strategies by practitioners who employ independence-oriented methods to a high degree?" The answer to this question has clear implications regarding the present status of support services at colleges and universities across the country.

The results of this national survey of service providers to students with learning disabilities at the postsecondary level indicate that practitioners who employ independence-oriented methods to a high degree tend to employ dependence-oriented methods to an equally high degree. A high score on the INDCOM variable was, therefore, little more than an indication of a high frequency of intervention in general. In fact, the clear linear relationship that was found between INDCOM and the four dependent variables suggests that the independence-dependence dichotomy is of almost no heuristic value in describing the present state of support services to students with LD at the postsecondary level.

This conclusion finds additional support in the outcomes of factor analyses of practitioner responses to survey items dealing with intervention practices. These procedures were successful in identifying a robust index of "independence-oriented" intervention strategies but failed

to yield a cohesive, reliable factor solution for items dealing with practices that have been referred to in the literature as "dependence-producing." The finding that practitioner responses did not conform to the concept of dependence as defined by the field (i.e., services that promote student reliance on programs and services) suggests that the dependence-independence dichotomy has yet to emerge as a critical distinction in service delivery.

Turning to the results of specific items, it should be noted that "tutoring in specific subjects" (item 17) received the highest mean score of all the "practices" items (mean = 4.02). This finding suggests that postsecondary institutions are continuing to use the content tutoring approach discredited in the secondary schools during the 1980's. Ellis (1990) stated that the tutorial approach appeared to "remediate, placate, and suffocate students while intending to be supportive and empathic" (p. 61). While it now seems critical for service providers to re-examine the use of content tutoring as a primary intervention strategy, it also seems clear that, in some instances, due to the specialized nature of some college curricula (e.g., math requirements including precalculus), many students with LD require tutoring for reinforcement and clarification of content. Nonetheless, even when circumstances justify tutorial interventions, the

incorporation of learning strategy instruction into tutorial sessions would contribute to the growth of student independence.

With regard to the degree to which practitioners offer strategic instruction, the data from this investigation, fail to support a consistent preference for independence-oriented approaches to typical student problems. For example, in a review of items dealing with the area of notetaking, service providers indicated that they offer "notetakers" (item 1, mean = 3.95), an intervention that encourages dependence on programs and services, more frequently than they teach "notetaking" (item 4, mean = 3.36) or "listening" skills (item 6, mean = 3.09) strategies that are independence-oriented. Similarly, when a student with LD has difficulty mastering course content, practitioners are, as previously mentioned, more likely to intervene with tutorial assistance in the student's specific area of difficulty (item 17, mean = 4.02) than they are to provide instruction in "memory strategies" (item 8, mean = 3.28) or "metacognitive techniques" (item 14, mean= 2.67) that would aid learning and retention across virtually all content areas.

Finally, in the area of independence-oriented counseling interventions, there are contradictions in the data on student self-advocacy. The item "self-advocacy

skills" (item 12) received a mean score of 3.90, suggesting that this is an area that is either "usually" or "almost always" addressed. However, based on their responses to items dealing with related skills, including "roleplaying to promote a student's ability to self-advocate with a professor" (item 23, mean = 3.01), and "social/interpersonal skills" (item 16, mean = 2.92), practitioners seem less likely to systematically address the skills that a student needs in order to self-advocate. These findings indicate that there does not seem to be a consistent programmatic approach to fostering self-advocacy, a tool of empowerment.

A true commitment to encouraging student independence is based on more than just offering services that are independence-oriented. Practitioners must also intervene directly to bolster student self-advocacy skills. In this regard, it is not sufficient to simply tell a student to self-advocate. Practitioners must also provide the training and environment to foster that skill. Carnevale, Gainer, Metzer, and Holland (1988) specified the psycho-social skills needed in the workplace. Those skills include goal setting, interpersonal and communication skills, self-esteem, and motivation. Although Brinckerhoff, Shaw, and McGuire (1992) cited behaviors leading toward independence, they noted that it is more

important for service providers to operationalize a mind-set. That mind-set is for professionals to function as facilitators who empower students to become decision makers and problem solvers, thus avoiding the role of "helpers and experts" who rescue passive students.

Overall, the results of this investigation support the conclusion that practitioners in the field of support services to students with LD at the postsecondary level do not effectively discriminate between those services that foster student autonomy and those that do not. Therefore, service providers may wish to consider that more is not necessarily better. Offering students a "menu" of service options from which to casually choose may fulfill the initial expectations of students and their parents but may not lead to productive outcomes. There must, instead, be a clearly delineated vision of service delivery goals and philosophy that is evident to consumers, faculty, and administration. Brinckerhoff, Shaw, and McGuire (1993) have delineated how institutional mission, organizational structure, and service delivery philosophy must be synchronized to fulfill both student and institutional goals.

## Conclusion

Given that the intent of this study was to investigate practitioner attitudes and practices using survey methodology, limitations to its findings must be acknowledged. In developing the survey instrument, care was taken to pilot test and solicit expert feedback as a means of assuring that the wording and intent of items and directions would be clear. Despite these efforts, there is always a concern about the reliability of respondents' interpretations. Phrases such as "How often . . .?" and "To what extent . . ." require respondents to make subjective judgments that will inevitably introduce error. In addition, many of the survey items addressed concepts for which there is no established definition among practitioners. For example, the term "tutoring" may mean remedial assistance to one respondent and a format for instruction in basic learning strategies to another. Furthermore, this investigation, like all studies involving students with LD, must contend with the vagueness and confusion surrounding the LD label itself. Although the survey was distributed to personnel providing postsecondary services to students with LD, there is no assurance that the data reflect services only to students who would, in fact, meet an accepted definition of a learning disability. It is, nonetheless, felt that the high

response rate, strong reliability of the factors used for analysis, and representativeness of the sample mitigate against these concerns constituting serious threats to the validity of the results presented in this article.

The results of this investigation suggest that those troubled by the manner in which services for students with learning disabilities are evolving at colleges and universities across the country, may, indeed, have just cause for concern. Given the fact that practitioners who reported the highest rates of interventions associated with student independence also exhibited the highest rates of interventions associated with student dependence, those responsible for developing programs to serve students with learning disabilities at the postsecondary level would be well advised to reflect on program philosophy and priorities when extending service delivery options. In addition, the finding that practitioners employ dependence-oriented methods as or more frequently than independence-oriented approaches in several critical areas of student need appears to be at odds with the growing evidence for a strong relationship between student autonomy and success in employment and other critical life endeavors. Therefore, those who offer comprehensive programs for students with learning disabilities at the postsecondary level must evaluate the extent to which their

programs emphasize services that undermine student autonomy and offer a consistent approach to promoting student self advocacy. The future excellence of postsecondary programming for students with learning disabilities lies not in the quantity but in the quality and type of services available to these students.

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Table 1

Descriptive Statistics for 34 Survey Items

| Survey Item | Mean | SD |
|---|---|---|
| In your setting, how often are the following activities addressed with students with learning disabilities? | | |
| 1. Notetaking modifications (e.g., taping lectures, using carbon paper, employing notetakers, etc.)? | 3.95 | 1.24 |
| 2. Study skills (e.g., SQ3R, PQ3R, or reading strategies, cognitive mapping, etc.)? | 3.64 | 1.26 |
| 3. Time management skills (e.g., scheduling, estimating and budgeting time, time use logs, etc.)? | 3.73 | 1.18 |
| 4. Notetaking skills (e.g., the Cornell method, outlining, etc.)? | 3.36 | 1.27 |
| 5. Word processing to improve writing skills (e.g., the use of spelling and/or proofreading software)? | 3.62 | 1.18 |
| 6. Listening skills (e.g., how to attend to lectures)? | 3.09 | 1.19 |
| 7. Communication skills (e.g., how to describe their learning disability to others)? | 3.49 | 1.20 |
| 8. Memory strategies (e.g., mnemonics, visual imagery, etc.)? | 3.28 | 1.17 |

Table 1 (continued)

| Survey Item | Mean | SD |
|---|---|---|
| 9. Organizational skills (e.g., notebooks, date books, assignment calendars, etc.)? | 3.76 | 1.12 |
| 10. Test-taking strategies (e.g., strategies for completing multiple choice vs. essay items)? | 3.70 | 1.16 |
| 11. Developing a plan or process for eventually decreasing students' participation in (or reliance on) support services? | 3.09 | 1.30 |
| 12. Self-advocacy skills (e.g., how to independently seek accommodations from faculty members)? | 3.90 | 1.14 |
| 13. Readers to assist students with text assignments and exams? | 3.21 | 1.33 |
| 14. Metacognitive strategies (e.g., task analysis, self-monitoring, etc.)? | 2.67 | 1.26 |
| 15. Obtaining taped texts from Recording for the Blind or other sources? | 3.32 | 1.37 |
| 16. Social/interpersonal skills (e.g., strategies for resolving conflict situations with peers and faculty)? | 2.92 | 1.19 |
| 17. Tutoring in specific subjects (i.e., laboratory sciences, math, English or foreign languages)? | 4.02 | 1.12 |

Table 1 (continued)

| Survey Item | Mean | SD |
|---|---|---|
| 18. Developmental/remedial instruction (e.g., basic reading, writing, or mathematics skills)? | 3.39 | 1.45 |
| How often . . . | | |
| 19. Are your recommendations for student accommodations based on individual diagnostic information? | 4.41 | .95 |
| 20. Do you feel you help students with LD without taking responsibility for their success or failure? | 4.31 | .93 |
| When a student with LD . . . | | |
| 21. Wants a term paper corrected, to what extent do you proofread the paper for him/her? | 2.34 | 1.31 |
| 22. Must make a decision related to academic performance (e.g., whether or not to use taped texts), how often do you assist him/her to determine the pros and cons of different alternatives? | 4.10 | .98 |
| 23. Requests assistance in obtaining an accommodation from a professor, how often do you role play this interaction so that the student can self-advocate? | 3.01 | 1.25 |

Table 1 (continued)

| Survey Item | Mean | SD |
|---|---|---|
| Students with LD at the postsecondary level should be . . . | | |
| 24. Able to describe their specific learning disability in language to faculty and staff. | 4.58 | .75 |
| 25. Allowed to interrupt you in order to get an immediate response to a perceived need. | 2.05 | 1.10 |
| 26. Able to describe needed accommodations to instructors. | 4.65 | .66 |
| 27. Routinely granted a foreign language waiver/substitution if requested. | 2.45 | 1.22 |
| 28. Routinely granted a mathematics waiver/substitution if requested. | 2.26 | 1.18 |
| Postsecondary LD service providers should . . . | | |
| 29. Provide lists of students with learning disabilities to faculty who have these students in their classes (based upon student informed consent). | 2.94 | 1.66 |
| 30. Correct papers for students with learning disabilities. | 2.02 | 1.07 |
| 31. Expect to meet all of the instructional needs of students with LD. | 1.95 | 1.05 |

Table 1 (continued)

| Survey Item | Mean | SD |
|---|---|---|
| 32. Be accountable for the products and grades of the students they serve. | 1.62 | .95 |
| 33. Request a conference with a student when it is believed that a credit load, course or major is inappropriate in light of the student's specific disability. | 4.13 | 1.09 |
| 34. Advocate for untimed tests for students with LD who request them. | 4.24 | 1.19 |

Table 2

Survey Factors and Subordinate Items

| Factors | Standardized Item Alpha Coefficient | Communality | Primary Factor Loading |
|---|---|---|---|
| FACTOR 1: INDEPENDENCE-ORIENTED ACADEMIC PRACTICES | .94 | | |
| In your setting, how often are the following activities addressed with students with learning disabilities? | | | |
| 1. Study skills (e.g., SQ3R reading, cognitive mapping, time lines, etc.)? | | .77 | .86 |
| 2. Time management skills (e.g., estimating and budgeting time, time use logs, etc.)? | | .74 | .86 |
| 3. Notetaking skills (e.g., the Cornell method, outlining, etc.)? | | .80 | .89 |
| 4. Listening skills (e.g., attending to lecture content)? | | .70 | .83 |
| 5. Memory strategies (e.g., mnemonics, visual imagery, etc.)? | | .70 | .84 |
| 6. Organizational skills (e.g., weekly schedules, date books, assignment calendars, etc.)? | | .75 | .86 |
| 7. Test-taking strategies (e.g., strategies for completing multiple choice vs. essay items)? | | .72 | .85 |
| 8. Metacognitive strategies (e.g., task analysis, self-monitoring, etc.)? | | .53 | .71 |

Table 2 (continued)

| Factors | Standardized Item Alpha Coefficient | Communality | Primary Factor Loading |
|---|---|---|---|
| FACTOR 2: INDEPENDENCE-ORIENTED COUNSELING PRACTICES | .82 | | |
| 1. Communication skills (e.g., how to describe their learning disability to others)? | | .68 | .79 |
| 2. A plan or process for "weaning" student away from direct support services? | | .55 | .73 |
| 3. Self-advocacy skills (e.g., how to independently seek accommodations from faculty members)? | | .71 | .84 |
| 4. Social/interpersonal skills (e.g., strategies for resolving conflict situations with peers and faculty)? | | .57 | .75 |
| When a student with LD . . . | | | |
| 5. Requests assistance in obtaining an accommodation from a professor, how often do you role-play this interaction so that the student can self-advocate? | | .49 | .70 |

Table 3

Descriptive Statistics on INDCOM Groups

| Group | N | Mean on INDCOM | Standard Deviation |
|---|---|---|---|
| Low | 82 | 1.94 | .39 |
| Medium | 331 | 3.37 | .46 |
| High | 89 | 4.53 | .22 |
| Total Sample | 502 * | 3.34 | .86 |

* Eight of the 510 total cases were excluded due to missing data.

Table 4

Analysis of Variance Results by INDCOM

| Dependent Variables | F | F Probability |
|---|---|---|
| Item 1: Notetaking Modifications | 13.04 | < .0001 |
| Item 13: Readers | 9.07 | < .0001 |
| Item 17: Content Tutors | 4.98 | < .0073 |
| Item 21: Proofreading Services | 6.35 | < .0019 |

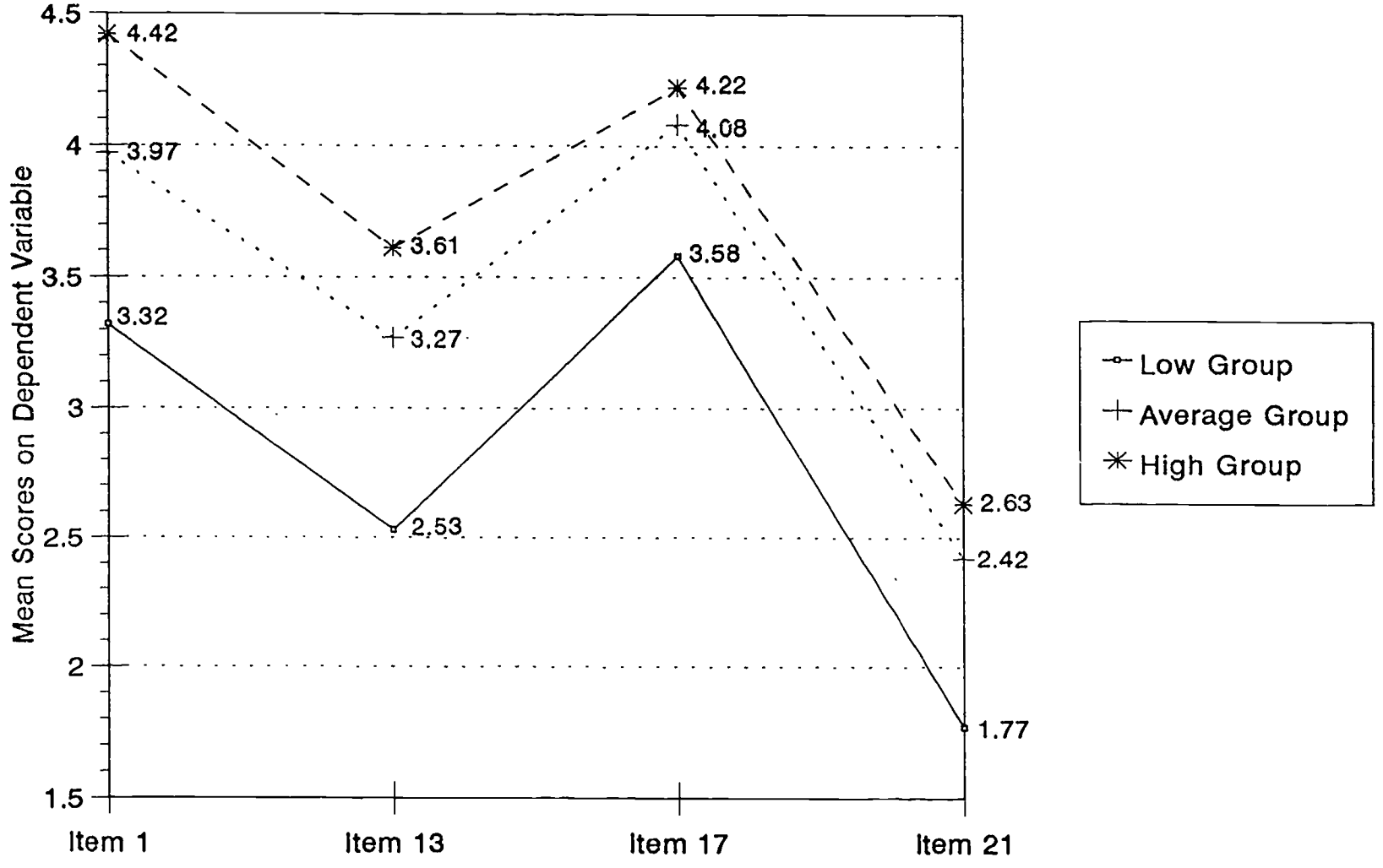


Figure 1. Scheffé post-hoc analyses of group mean scores according to dependent variables.