

# Peer Tutoring for College Students With Learning Disabilities: Perceptions of Tutors and Tutees

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## Abstract

Peer tutoring is a commonly provided support service for students with learning disabilities (LD) in institutions of higher education. A large-scale survey was conducted to evaluate the PERACH peer tutoring project for students with LD at 25 universities, regional colleges, and teacher training colleges in Israel. The purpose of the study was to understand the tutoring process from the point of view of both tutees and tutors with respect to 5 main areas: tutees' needs, focus of tutoring activities, difficulties surrounding the tutoring endeavor, importance of similar study experiences, and satisfaction with the project. It is our supposition that major discrepancies in perceptions are likely to undermine the effectiveness of the tutoring. Similarities and differences in perceptions were identified, and implications that can be useful in guiding service providers are discussed.

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The growth in the number of students with learning disabilities (LD) attending colleges and universities has been documented the world over (e.g., Heiman & Precel, 2003; Henderson, 2001; Higher Education Statistics Agency, 2003; Him-Unit & Friedman, 2002; National Center for Education Statistics, 1999; Stacey & Singleton, 2003). This development has taken place due to changes in attitudes toward people with disabilities and to the need (in some countries) to comply with laws that protect the right of individuals with disabilities to attend institutions of higher learning. In the United States, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 protect the rights of these students, guaranteeing them the right to reasonable accommodations both in the admission process and once they have matriculated. Similarly, in Britain, the 1995 Disability Discrimination Act, the Dearing Report of 1997, and the Special Educational Needs and Disability Act (SENDA) of 2001 have had an impact on eligibility requirements

and have led to a growth in the number of students with LD who attend institutions of higher learning (Stacey & Singleton, 2003). In Canada, the admission of students has been voluntary in nature but has occurred increasingly as well (Bat-Hayim & Wilchesky, 2003). In Israel, admission to institutions of higher learning is not mandated by law; however, the guidelines set out in 1996 by the Ministry of Education regarding accommodations during matriculation exams (a prerequisite for entry into higher education) have paved the way for students with LD to enter these institutions (Leyser et al., 2000).

The growth in the number of college students with LD, and the recognition that these students experience difficulties, have led to an increase in the support services offered in the various institutions of higher learning (Him-Unit & Friedman, 2002; Madaus, 2005; Mangrum & Strichart, 1992). One service commonly provided in support centers is peer tutoring (National Center for Education Statistics, 1999; Stodden, Whelley, Chang, & Harding, 2001).

The present article will present results from a survey that evaluated the PERACH peer tutoring project for students with LD at 25 universities, regional colleges, and teacher training colleges in Israel. The purpose of the study was to understand the tutoring process from the point of view of both tutees and tutors. Because many students with LD do not understand their individual disability, how it affects their learning, or how to describe it clearly to others (Brinckerhoff, 1996; Madaus, 2005) and because students with LD are often met with negative attitudes by others who often suspect them of using their problem as a way of gaining preferential treatment (Beilke & Yssel, 1999), it is likely that tutors and tutees will enter the tutoring arrangement with different expectations regarding goals and activities. It is our supposition that major discrepancies in perception are likely to undermine the effectiveness of peer tutoring as a service to students with LD. Tutors who understand the needs of their tutees with LD are more likely to plan efficient tutoring sessions. More-

over, better tutoring relationships are likely to evolve when both tutor and tutee feel that they are working toward a commonly defined goal. Identifying similarities and differences in perceptions can be helpful in guiding service providers in designing similar tutoring projects in the future.

### Difficulties Encountered by Students With LD

Because learning disabilities are lifelong and do not disappear, students with LD face difficulties on university and college campuses. A summary of the difficulties encountered (Skinner & Lindstrom, 2003) includes (a) deficits in study skills, such as test preparation, note taking, and listening comprehension; (b) problems with organizational skills; (c) difficulties with social interaction; (d) deficits in specific academic areas, with reading and written composition being the most frequent; (e) low self-esteem; and (f) higher drop-out rates.

In a study of students with LD at the Open University in Israel, Heiman and Kariv (2004) found that most of their academic difficulties continue into adulthood. Students in their study described slowness in reading and difficulties in written expression, statistics, and mathematics. They also spoke of memory problems and difficulties in prolonged concentration. However, the students reported greater use of adaptation techniques and compensational strategies than they had used as younger students.

Researchers have reported that students with LD view themselves as having lower academic or social competence (Kloomok & Cosden, 1994) and as having greater difficulty handling academic demands, adjusting to change, and adjusting to university life (Saracoglu, Minden, & Wilchesky, 1989) than their peers without LD. In contrast, other studies have shown no difference in self-esteem between students with and without LD (e.g., Blake & Rust, 2002). Moreover, Hall, Spruill,

and Webster (2002) found that students with LD obtained significantly higher resiliency scores and higher scores on a need-to-achieve scale than their peers without LD, and reported fewer stressors.

Faculty often do not understand the needs of these students or their own role in the accommodation process (Scott & Gregg, 2000). Campuses have been described as having a "chilly climate" for students with disabilities (Beilke & Yssel, 1999, p. 364).

### Tutoring as Support for Students With LD

In an effort to describe support services available in the United States, Stodden et al. (2001) surveyed 650 colleges and universities. Granting test accommodations was the most common support offered. Tutoring was a service frequently used in 56% of the institutions, whereas only 14% reported that they did not offer any tutoring services at all.

A National Center for Education Statistics (NCES; 1999) survey found that 77% of the institutions surveyed provided tutoring services. A study of 61 community college students with disabilities (half with LD) revealed that 23.6% had used tutoring services (Lancaster, Mellard, & Hoffman, 2001). Henderson (2001) reported that higher percentages of students with LD expected to use tutoring services while at college than did students with other disabilities or with no disabilities at all.

In Israel, Him-Unis and Friedman (2002) surveyed 34 institutions of higher learning. They reported that 29 offered services that they characterized as personal support for students with LD. Two thirds of the institutions reported frequent use of tutoring as a support service.

Tutoring can be offered by peers, by graduate students, by college faculty members, or by professional LD specialists. Not all studies and reports that discuss tutoring as a support service for students with disabilities

clearly state who actually does the tutoring.

### Efficacy of Tutoring for Students With LD

Few studies have dealt with the efficacy of the various services offered to college students with LD in general (Rath & Royer, 2002). We found only four studies that specifically examined tutoring conducted by peers attending the same institutions. Zwart and Kallemeyn (2001) compared students with LD who participated in a peer tutoring program to a group of students with LD who did not participate in the program. They concluded that participation contributed to a general feeling of efficacy and to a greater use of learning strategies and skills.

In a case study of a single student with LD, Rich and Gentile (1995) presented what they described as a successful support model. The student was tutored by a peer who majored in the same subject and by a professional LD specialist who provided strategy instruction. The researchers contended that this was the ideal model for tutoring support services.

In a peer tutoring program at the University of California in San Diego, tutoring was done by students who themselves had LD. The focus of tutoring sessions was on developing self-awareness, self-advocacy, communication skills, and the ability to deal with one's disability. Ten pairs of students participated during the 1997–1998 academic year, and in 1998–1999 there were 12 tutor–tutee pairs in the program. In an evaluation of these two cohorts, Gimblett (2000) found an improvement in self-image and a smooth transition to college life among the tutees.

A pilot study conducted at two institutions of higher learning in Israel examined a small group of tutors and tutees in the PERACH project (Kowalsky & Fresko, 2002). The study was unique in that it examined the perceptions of both the tutors and the tutees.

Two tutors and five tutees with LD at one institution and five tutor–tutee pairs with visual disabilities from the second institution participated in the study. Tutoring activities for the tutees with LD were found to center on reading, writing, and organizational tasks. Both sides felt that satisfying interpersonal relationships were formed that extended beyond the tutoring sessions, even though the pairs successfully differentiated between social time and study time together. The amount of time spent in tutoring sessions varied over the course of the semester, with more sessions being held during exam periods, as the tutors tried to accommodate the needs of the tutees. Both groups expressed satisfaction with the tutoring program. The tutors of the students with LD reported having a hard time understanding the difficulties of these students and also felt that tutees became too dependent on them over the course of the year.

In addition to these few studies of peer tutoring in the context of higher education, some research has been conducted in relation to peer tutoring of children with LD. In general, results have indicated that both tutors and tutees benefit from the activity (e.g., Goodlad & Hirst, 1990; Osguthorpe & Scruggs, 1990).

## Research Questions

The aim of the present study was to describe a peer tutoring program for college students with LD with respect to five main areas: tutees' needs, focus of tutoring activities, difficulties surrounding the tutoring endeavor, importance of similar study experiences, and satisfaction with the project. Tutors' perceptions of these areas were compared to those of the tutees, under the assumption that successful tutoring is related, at least in part, to a common understanding of the goals, processes, and effects of the tutoring experience. Accordingly, the following five research questions were posed:

1. How do tutors and tutees characterize the difficulties of the tutees?
2. How do tutors and tutees describe the activities engaged in during tutoring sessions?
3. What difficulties are encountered that impede the tutoring process as perceived by both tutors and tutees?
4. To what extent do tutors and tutees feel that having a common major or being enrolled in the same courses is important for the tutoring process?
5. To what extent are tutors and tutees satisfied with the tutoring program?

## Method

### Research Context

This study was carried out in the context of the PERACH project (see Note). The project was initiated in 1976 and is a nationwide program through which Israeli students in higher education work mainly with disadvantaged pupils in elementary schools. Over the years, PERACH has expanded to include other activities in which college students serve the community. Peer tutoring of students with LD at institutions of higher education is one of these (see Kowalsky & Fresko, 2002). Although the major emphasis of the tutoring is academic, there is an implicit assumption in PERACH that through the tutoring relationship, some social and emotional needs of the tutees will indirectly be addressed.

Tutors are expected to work individually with students with disabilities regularly (usually twice weekly in 2-hour sessions) throughout the entire academic year and, in return, receive a partial tuition rebate. The project is operated in conjunction with local support services at the colleges and universities, which select and match the tutors and tutees. Both tutors and tutees can seek advice from consultants affiliated with the project. Tutors attend a number of group workshops, and several of the institutions schedule workshops for tutees or joint work-

shops as well. The location of the tutoring sessions is determined by the participants themselves.

### Participants

During the 2002–2003 academic year, 480 students with LD at 25 colleges and universities received tutoring services through PERACH. Tutees were identified by their institutions as having LD, and PERACH supplied the tutors. Institutions require students with LD to submit recent evaluations before granting accommodations and support services. A special unit at each institution reviews the evaluations and looks for evidence of average-range intellectual abilities and evidence of below-average achievement scores and deficits in cognitive processes, in keeping with the definition of the National Joint Committee on Learning Disabilities (1998) in the United States. At the time this study was conducted, institutions required either a combination of psychological and psychoeducational tests or a battery of only psychoeducational tests. The intelligence test used in Israel is the *Wechsler Adult Intelligence Scale* (WAIS-III; Wechsler, 2001), and students must attain an average or above-average score. A variety of psychoeducational tests are used that test academic skills, such as letter-word identification, reading, arithmetic, spelling and writing fluency, short-term memory, and attention span. A score 1 *SD* below the peer mean is required. As the students in this study were tested at different centers, they did not necessarily take the same battery of tests. However, all were recognized by their own institutions as having LD and were granted support services.

Research questionnaires were distributed to all tutors and tutees, and responses were received from 234 tutees (49%) and from 316 tutors (66%). The gender of the tutees was fairly evenly distributed, although the number of women ( $n = 128$ ) was slightly higher than that of men ( $n = 105$ ). The highest percentage of tutees (42%) were first-

year students, and the percentage receiving tutoring services dropped as the year of study increased. Many of the tutees (43%) reported having received tutoring services in the past, whereas others were being tutored for the first time.

Approximately two thirds of the tutors were female students. Most tutors were second- or third-year students, whereas relatively few were in their first year. Just over half of the tutors had prior experience tutoring children, and about 20% had tutored students in higher education before. Their motivation to tutor was mainly extrinsic: They had joined the PERACH project to receive the tuition rebate, and they became tutors of students with LD because it was more convenient for them than working with children. Few tutors joined this particular activity because they knew someone with LD.

### Research Questionnaires

Questionnaires for tutees and tutors at the various institutions were developed by the researchers on the basis of a literature review; prior research on mentoring conducted by the researchers; in-depth knowledge of mentoring and tutoring in the context of PERACH; and several interviews with project coordinators, support service providers, tutors, and tutees. Tutee and tutor questionnaires were similar with respect to the variables examined in this article. Slight adaptations were made to ensure appropriate wording for each group (tutors and tutees).

Most variables were measured using 5-point Likert-type scales on which respondents were asked to indicate the extent to which

1. particular difficulties and needs characterized the tutee (12 items);
2. tutoring sessions dealt with different skills and tasks (8 items);
3. certain situations occurred during the tutoring period that hindered tutoring (7 items);
4. similar study background was deemed important to successful tutoring (2 items); and

5. they were satisfied with their tutoring experience (3 items).

Furthermore, background information was collected, which included gender, year of study, field of study, and prior tutoring experience. An open-ended question eliciting comments and suggestions was included as well.

### Data Collection

Toward the end of the academic year, the questionnaires were distributed to the PERACH project coordinators at each institution who were responsible for their distribution and collection with respect to both tutors and tutees. The support centers at each institution were asked to assist tutees who had reading difficulties. No alternate formats were offered.

To preserve anonymity, respondents placed the completed questionnaire into an envelope and sealed it before returning it to their project coordinator. The questionnaires were then returned to the research team for analysis.

### Data Analysis

Because the questionnaires were anonymous, tutor and tutee questionnaires could not be paired. Therefore, all statistical comparisons were made between the entire group of tutors and the entire group of tutees. Mean responses and standard deviations were calculated per item for each group, and *t* tests were used to determine statistically significant differences. Because the direction of the differences between tutors and tutees could not be hypothesized in advance, a two-tailed significance level of  $p \leq .05$  was used.

## Results

### Difficulties Characterizing the Tutees

Both tutees and tutors were presented with a list of learning difficulties and

asked to indicate to what extent each difficulty characterized the tutees on a scale from 1 (*not at all*) to 5 (*to a very great extent*). Factor analysis identified three categories of items: study skills, language skills, and nonacademic skills. The means and standard deviations of the ratings given by both tutors and tutees are presented by type of difficulty in Table 1.

Attention and concentration deficits were rated as the most severe of the difficulties by both the tutees and the tutors. Reading materials in English, writing papers, summarizing articles, and studying for exams were also identified as areas of difficulty for many tutees. Reading Hebrew materials was generally rated as a less severe problem than reading English materials, indicating that the problem in reading was connected more to foreign language learning than to reading comprehension problems. Nonacademic skills—that is, difficulties in emotional and social areas—received the lowest ratings by both tutees and tutors.

Tutors and tutees tended to rate tutee difficulties and needs similarly. The one area where differences were found was that of memory deficits, where tutees reported more difficulty than the tutors,  $t = 2.149$ ,  $df = 539$ ,  $p = .032$ .

### Tutoring Activities

Tutees and tutors were asked to rate the amount of time spent during tutoring sessions on a variety of activities. The results are presented in Table 2. Tutees and tutors alike reported that they spent the most amount of time studying for exams and reviewing class materials. Time was also spent on writing papers for courses. The varying requirements demanded by different courses would influence how much time was spent writing papers or studying for exams. Significant differences between the way tutees and tutors rated the various activities were found on only two items: time spent on organization,  $t = -2.881$ ,  $df = 533$ ,  $p = .004$ , and on learning strategies,  $t = -2.987$ ,



df = 538,  $p = .003$ . The tutors saw these activities as more central than did the tutees. Both groups rated discussions of both a general and a personal nature lowest on the scale, indicating a task-oriented approach to the tutoring sessions.

### Difficulties Encountered During Tutoring

Tutors and tutees were asked to rate the extent to which seven different situations had undermined the tutoring process from 1 (*not at all*) to 5 (*to a very*

*great extent*). Table 3 summarizes their responses. In general, both the tutees and the tutors reported very little interference with the tutoring process. The highest mean score was 2.24, and all the means ranged from 1.33 to 2.24. According to both groups, the greatest problem was that tutors did not have sufficient skills to enable them to deal with the tutees' learning disabilities. Significant differences were found on this item,  $t = -2.572$ ,  $df = 531$ ,  $p = .003$ , with tutors sensing their lack of skill to a greater degree than the tutees. Similarly, tutors reported to a significantly greater degree than the tutees that the tutees had difficulty explaining their needs,  $t = -2.242$ ,  $df = 526$ ,  $p = .025$ , and reported more difficulties than did the tutees regarding establishing the tutoring relationship,  $t = -2.509$ ,  $df = 525$ ,  $p = .012$ .

### Matching Tutors and Tutees

One of the organizational aspects of the program is the need to pair tutors and tutees. Participants were asked how important they felt it was for tutors and tutees to have a common major and to attend the same courses. Their responses are summarized in Table 4. Both groups indicated that sharing a common major was an important factor and should be taken into account when tutors and tutees are matched. Although both groups attached less importance to actually attending the same classes, tutees saw this as more desirable than did the tutors,  $t = 3.014$ ,  $df = 538$ ,  $p = .003$ .

### Satisfaction

In the final analysis, the continuation of a tutoring program is dependent on the level of satisfaction found among both tutees and tutors. Participants were asked to rate their satisfaction with the tutoring relationship and the contribution of tutoring to the tutee. Moreover, they were asked to what extent they would recommend participation in the program to others. Their responses are presented in Table 5. The

**TABLE 1**  
Means and Standard Deviations of Perceptions of Tutee Difficulties by Group, With Effect Sizes

Difficulty	Tutees <sup>a</sup>		Tutors <sup>b</sup>		ES
	M	SD	M	SD	
General study skills					
Attention and concentration	3.70	1.20	3.61	1.30	.08
Studying for exams	3.49	1.16	3.53	1.05	.03
Use of time	3.35	1.33	3.49	1.30	.11
Memory	3.23*	1.28	2.98	1.31	.20
Mathematics	3.13	1.43	3.21	1.46	.06
Language skills (reading and writing)					
Reading materials in English	3.69	1.35	3.46	1.49	.17
Writing papers	3.62	1.15	3.57	1.28	.04
Summarizing articles	3.54	1.16	3.47	1.25	.06
Finding information	3.01	1.21	3.15	1.32	.12
Reading materials in Hebrew	2.56	1.31	2.57	1.31	.01
Nonacademic skills					
Emotional areas	2.06	1.25	2.15	1.28	.08
Social areas	1.74	1.14	1.82	1.18	.07

Note. Degree of difficulty is measured on a 5-point scale, with higher values reflecting greater difficulty.

<sup>a</sup> $n = 234$ . <sup>b</sup> $n = 316$ .

\* $p \leq .05$ , two-tailed.

**TABLE 2**  
Means and Standard Deviations of Degree to Which Activities Were Engaged in During Tutoring Sessions by Group, With Effect Sizes

Activity	Tutees <sup>a</sup>		Tutors <sup>b</sup>		ES
	M	SD	M	SD	
Studying for exams	4.01	1.27	4.15	1.11	.11
Reviewing class materials	3.96	1.28	4.08	1.25	.09
Writing papers	3.47	1.63	3.40	1.59	.04
Organization	3.19*	1.42	3.53	1.21	.24
Reading articles	3.15	1.61	2.99	1.58	.10
Working on learning strategies	3.07*	1.39	3.41	1.20	.24
Discussion of various topics	2.90	1.34	2.74	1.14	.12
Discussion of personal matters	2.80	1.40	2.92	1.15	.09

Note. Degree of engaging in activity is measured on a 5-point scale.

<sup>a</sup> $n = 234$ . <sup>b</sup> $n = 316$ .

\* $p \leq .05$ , two-tailed.

level of satisfaction was extremely high for both the tutees and the tutors on all items. Both groups were pleased with the relationship, were satisfied that tutoring had contributed to the tutee, and would clearly recommend the program to others. Although both groups would recommend participation to the same extent, tutee ratings of the relationship and the contribution were higher than those of the tutors. These differences were statistically significant.

## Discussion

One of the strengths of this research is the large number of tutors and tutees included in the study. The PERACH program functions on a large scale, and the number of respondents was relatively high. Thus, we were able to gather much data about the perceptions of both tutors and tutees about this particular peer tutoring program. Because peer tutoring is a frequently offered support service in institutions for higher education, examining these findings may assist others who are operating tutoring services for students with LD or who are considering establishing such services.

### Difficulties Characterizing the Tutees

Self-awareness of one's strengths and areas of weakness has been identified as one of the important factors leading to success for persons with LD (Gerber, Reiff, & Ginsberg, 1996; Goldberg, Higgins, Raskind & Herman, 2003; Test et al., 2005). Similarly, faculty and others at the universities and colleges who are working with these students (such as the tutors) need to be aware of the difficulties encountered by these students in order to provide appropriate support. In the context of tutoring, accurate knowledge of the difficulties experienced by tutees can guide tutors in making tutoring sessions more effective. In general, there was a high level of agreement between tutees and tu-

**TABLE 3**  
Means and Standard Deviations of Degree to Which Difficulties Interfered with the Tutoring Process by Group, With Effect Sizes

Interfering situation	Tutees <sup>a</sup>		Tutors <sup>b</sup>		ES
	M	SD	M	SD	
Tutor lacked skills to deal with tutee's learning difficulties	1.92*	1.17	2.24	1.23	.27
Sessions were ineffective	1.88	1.20	2.01	1.07	.11
Tutor was not sufficiently well versed in the content area	1.82	1.17	1.73	1.01	.08
Tutor had no one to turn to for guidance	1.79	1.16	1.74	1.09	.04
Tutee could not explain his or her learning needs	1.70*	1.05	1.91	1.09	.20
The tutor/tutee did not have the time needed for tutoring	1.63	1.07	1.69	1.05	.06
Establishing a relationship was difficult	1.33*	0.80	1.52	1.00	.24

Note. Degree of impediment is measured on a 5-point scale.

<sup>a</sup>n = 234. <sup>b</sup>n = 316.

\*p ≤ .05, two-tailed.

**TABLE 4**  
Means and Standard Deviations of the Degree of Importance of Common Learning Experiences by Group, With Effect Sizes

Matching item	Tutees <sup>a</sup>		Tutors <sup>b</sup>		ES
	M	SD	M	SD	
Share a common major	4.03	1.37	3.88	1.37	.11
Attend the same courses	3.50*	1.53	3.10	1.53	.26

Note. Degree of importance is measured on a 5-point scale.

<sup>a</sup>n = 234. <sup>b</sup>n = 316.

\*p ≤ .05, two-tailed.

**TABLE 5**  
Means and Standard Deviations of Degree of Satisfaction With the Tutoring Program by Group, With Effect Sizes

Item	Tutees <sup>a</sup>		Tutors <sup>b</sup>		ES
	M	SD	M	SD	
Satisfaction with the tutoring relationship	4.56*	0.79	4.41	0.79	.19
Satisfaction with the contribution of tutoring to the tutee	4.43*	0.82	4.22	0.75	.26
Extent to which one would recommend participation in the program to others	4.30	1.14	4.32	0.77	.02

Note. Degree of satisfaction is measured on a 5-point scale.

<sup>a</sup>n = 234. <sup>b</sup>n = 316.

\*p ≤ .05, two-tailed.

tors as to the needs of the tutees. The only area in which a statistically significant difference was found was memory deficits, where the tutees reported more difficulty than the tutors. This study was conducted toward the end of the academic year, after approximately 6 months of tutoring activity. Thus, it is unclear whether tutors entered into tutoring well prepared for the types of learning difficulties characteristic of their tutee, or whether they learned about the tutee's needs only during the tutoring process. In any case, their awareness of tutee difficulties can be expected to have a positive impact on tutoring outcomes.

Attention and concentration deficits were rated as the most severe difficulty by both tutors and tutees. This finding contrasts with findings from another Israeli study, by Triger, Egozi, Doron, and Elharar (2003), of 30 college students with LD who reported that difficulties in reading, math, and English were more severe than attention, memory, and organizational deficits.

The low ratings given to emotional and social needs by both tutees and tutors may be a reflection of the academic nature of the project. However, these findings lend support to several studies that have identified learning and cognitive issues as more common than emotional and social difficulties for students with LD in higher education (Blake & Rust, 2002; Hall et al., 2002).

### *Tutoring Activities*

In examining tutee and tutor perceptions of activities engaged in during the tutoring process, we saw that significant differences were found on only two items: organization and learning strategies. It is interesting that in both cases, tutors perceived a greater emphasis on these areas than did tutees. Both of these items relate to general skills rather than to task-specific skills. It would seem that the tutors were identifying and attempting to deal with tutee difficulties in these areas to a greater extent than the tutees real-

ized. Tutees perceived the time spent during sessions as more task focused, dealing with their immediate needs: preparing for specific exams, writing assigned papers, and so forth. As services that improve more generalizable skills have been found to be more beneficial to the overall achievement of students than services aimed at supporting specific courses (Keim, McWhirter, & Bernstein, 1996), tutors should be encouraged to continue and even strengthen their emphasis on organizational skills and learning strategies, while providing tutees with a sense that their specific, course-related needs are being met.

The minimal amount of time spent discussing personal issues or general topics is in keeping with the low rating given to the presence of social and emotional difficulties in the students with LD by both the tutors and the tutees themselves. Tutoring—as opposed to mentoring, for example—has an academic focus (Goodlad, 1995), and this manifests itself clearly in this study.

### *Difficulties Encountered During Tutoring*

Both the tutors and the tutees encountered few difficulties that interfered with the tutoring process. However, tutors rated three items as significantly more problematic than the tutees. The tutors were more disturbed about lacking the skills to deal with tutees' learning disabilities. This finding was reinforced by their comments on the open-ended question, where many tutors cited the need for more training in this area. Support centers for students with LD should help tutors develop general skills for working with the tutees and also provide them with a specialist with whom they can consult regarding specific problems.

The second item on which tutors reported more difficulties than did the tutees related to the tutees' ability to describe their learning needs. This problem has been cited as common among persons with LD (Hartman-

Hall & Haaga, 2002; Lynch & Gussel, 1996; Madaus, 2005). As shown in this study, there is a gap between how well students with LD perceive their ability to describe their needs and how well their *audience* (in this case the tutors) perceives this ability. The implications of this finding point to the need for offering training in self-advocacy skills to students with LD, which includes the ability to identify one's needs and to communicate these needs to others. Self-advocacy skills would be useful to students with LD not only in tutoring situations, but also when they have to explain their needs to faculty members.

Finally, a significant difference between tutors and tutees was found regarding difficulties in forming the tutoring relationship, although once formed, both sides were highly satisfied with the results. Given the importance cited in the literature (Beilke & Yssel, 1998; Graham-Smith & Lafayette, 2004) of personal relationships on outcomes for students with LD, specific attention should be given to the training of tutors in this area to expedite the formation of the tutoring relationship.

### *Sharing a Common Learning Experience*

Both the tutors and tutees felt that having a common knowledge base was beneficial to the tutoring process. The model of tutoring proposed by Rich and Gentile (1995) recognized this need as well and even recommended a collaborative model, whereby peer tutors would provide content-based tutoring while a professional tutor with expertise in LD would emphasize learning strategies. In the current study, the tutoring process tended to center on content-based activities, making a common knowledge base particularly important.

The tutees saw greater benefit to being enrolled in the same courses than did the tutors. This finding is in keeping with the greater task orientation of the tutees as opposed to the tu-

tors. An earlier, small-scale pilot study of tutoring dyads in the PERACH program (Kowalsky & Fresko, 2002) found that tutees who enrolled in the same classes as their tutors felt uncomfortable and preferred to keep their LD and need for a tutor secret. This does not seem to be the case in the current study, possibly due to the fact that in the current study, the issue was raised as a hypothetical question, whereas in the pilot study students related to their actual experiences.

### *Benefits for the Tutees*

The explicit aim of this peer tutoring program is to help students with LD achieve success in their studies in higher education settings. Although this study did not directly measure achievement, questioning both the tutees and the tutors about the contribution of the program to achieving this goal has shed light on this issue. Certainly, these perceptions will influence their desire to participate in similar programs in the future and to recommend participation to others. This study found that both tutees and tutors perceived tutoring as very beneficial to the tutees, and the level of satisfaction with the program for both groups was high.

The findings of this study have significance for institutions of higher learning that are considering establishing or strengthening support services for students with LD. Training and guidance for tutors is essential and needs to include instruction regarding LD, training in how to establish a tutoring relationship with a peer, and awareness regarding possible problematic situations that could impede effective tutoring. Tutees, on the other hand, need assistance in self-advocacy skills and practice in describing their needs to others. Furthermore, matching tutor-tutee dyads should take into account shared learning experiences to increase the potential effect of tutoring for the tutee.

Although tutoring projects are often set up and running, service pro-

viders are often unaware as to how they function in reality. For example, they know little about how time is actually spent and what activities are engaged in during tutoring sessions. Knowledge about the details of tutoring can be important to service providers who might want to consider recommending different allocations of time or helping dyads engage in activities that they believe will be more useful and effective. We recommend that an evaluation of services for students with disabilities be regularly conducted at all institutions in an effort to make maximum use of the limited resources that are generally allocated for this purpose.

Despite what we have learned from this study, we must remember that it was limited in scope insofar as it focused on a particular project in one country. Moreover, findings are based on the self-reports of participants—no direct observations of the tutoring process were made, and no direct measures of project impact were obtained. Clearly, more research is needed not only to evaluate services provided to students with disabilities but also to better understand the processes and effects of peer tutoring for students with LD.

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### NOTE

*The name PERACH is an acronym for "mentoring project" in Hebrew, but it also means "flower."*

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