

The Perceived Success of Tutoring Students with Learning Disabilities: Relations to Tutee and Tutoring Variables

Rinat Michael¹

Abstract

The current study examined the contribution of two types of variables to the perceived success of a tutoring project for college students with learning disabilities (LD): tutoring-related variables (the degree of engagement in different tutoring activities and difficulties encountered during tutoring), and tutee-related variables (learning difficulties and academic self-efficacy). One hundred and ninety college students with LD who were engaged in a tutoring project completed a questionnaire measuring tutoring and tutee-related variables as well as the perceived success of the tutoring process. Only the tutoring-related variables were significant predictors of tutees' perceptions regarding the success of the tutoring project. Implications for research and practice are discussed.

Keywords: Tutoring, college students, learning disabilities

Students with learning disabilities (LD) face difficulties on university and college campuses. A summary of the difficulties encountered (e.g., 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 dropout rates. The growth in the number of college students with LD (e.g., Parker & Boutelle, 2009), and the recognition that these students experience various difficulties (e.g., Connor, 2012), have led to an increase in the support services offered in institutions of higher learning (e.g., Getzel & McManus, 2005). In addition to providing legally required accommodations, an increasing number of colleges now offer a variety of optional support programs for students with disabilities (Getzel & McManus, 2005; Rath & Royer, 2002). These programs provide services, such as specialized academic advising, personal counseling, training in time-management and study skills, and individualized academic programs (Mull, Sitlington, & Alper, 2001). One service commonly provided in support centers is peer assistance in the form of tutoring (Stodden, Whelley, Chang, & Harding, 2001).

This article will present results from a survey that evaluated the PERACH peer tutoring project for students with LD at 29 universities, regional colleges, and teacher training colleges in Israel. The purpose of the study was to identify variables which may influence the perceived success of the tutoring project for college students with LD.

Peer Tutoring Students with LD

Peer tutoring can be defined as "a class of practices and strategies that employ peers as one-on-one teachers to provide individualized instruction, practice, repetition, and clarification of concepts" (Utley & Mortweet, 1997, p. 9). This type of support exists in a wide range of settings, such as classrooms (Lo & Cartledge, 2004) and the home (Mayfield & Vollmer, 2007), and includes cross-age individual tutoring (Topping, Peter, Stephen, & Whale, 2004), small group (Maheady, Sacca, & Harper, 1987), and class-wide (Ayvazo & Aljadeff-Abergel, 2014; Greenwood, Terry, Arreaga-Mayer, & Finney, 1992) configurations. Studies have shown that moderate to large academic benefits can be attributed to peer tutoring in general, as well as in relation to students with LD (Bowman-Perrott, Davis, Vannest, Williams, Greenwood, & Parker, 2013; Calhoon, 2005; McMaster, Fuchs, & Fuchs, 2006; Scruggs, Mastropieri, & Marshak, 2012).

¹ Tel Aviv University

Despite its prevalence, the effectiveness of peer tutoring in general and tutoring college students with LD in particular has not been thoroughly examined. Past research has suggested that since typically there are fewer differences in age and status, more mutuality of interaction, and relationships of a longer duration (Kram & Isabella, 1985), peer relationships may serve in a supportive capacity related to both career advancement and psychosocial functioning. As for tutoring college students with LD, Zwart and Kallemeyn (2001) found that participation in a peer tutoring program contributed to a general feeling of efficacy and to a greater use of learning strategies and skills. Gimblett (2000) reported an improvement in self-image and a smooth transition to college life among the tutees. Vogel, Fresko, and Wertheim (2007) found that both tutees and tutors perceived tutoring as very beneficial to the tutees, and the level of satisfaction with the tutoring program for both groups was high. However, not much is known regarding the variables which contribute to the success of the tutoring process.

The purpose of this study was to identify variables which may influence the perceived success of the tutoring project to college students with LD. Specifically, two types of variables were examined: tutoring-related (the degree of engagement in different tutoring activities and difficulties encountered during tutoring), and tutee-related (learning difficulties and academic self-efficacy).

Antecedents of Tutoring Success for Students with LD

According to Daiute and Dalton (1993), what permits development in peer tutoring settings is the very fact of having a companion with whom to talk and exchange points of view. This claim is in accordance with that propounded by Rhodes and DuBois (2006) who suggested a model connecting various characteristics of the mentor–mentee relationship to mentoring success. Since mentoring is in many ways similar to tutoring (both can involve students from colleges and universities helping other students on a sustained and systematic basis under direction and supervision), it is plausible that Rhodes and Dubois's model is also relevant to the tutoring process. Specifically, the model mentioned attributes such as companionship, genuine caring and support, and the provision of enrichment activities. Nonetheless, it should be noted that whereas mentoring tends to focus on life skills and often is held outside the academic setting, tutoring generally

focuses on academic learning and is usually held in the educational institution (Goodlad, 1995). Consequently, the contribution of tutoring-related variables to the success of the tutoring process needs further examination.

Daiute and Dalton (1993) as well as Rhodes and DuBois (2006) emphasized only one aspect of the mentoring/tutoring process, the aspect of relationships. They did not take into account other possible influences such as tutee's characteristics. This may be especially important when the tutees are students with disabilities.

When considering students with LD, one should keep in mind that these students continuously confront academic challenges. Many of them have significant deficiencies in reading, writing and/or mathematics, as well as in memory, time management, and organization (Heiman, 2006). In the academic realm, where students are expected to learn largely via lecture format and to read a great amount of literature, these demands are magnified for students with LD. Furthermore, some students with LD face greater difficulties than their non-disabled counterparts in concentrating on the task at hand, determining the salience of information presented in class, and applying test strategies, all potentially contributing to higher levels of anxiety and lower grade point average (GPA) scores (Proctor, Prevatt, Adams, Hurst, & Petscher, 2006).

The various challenges encountered by students with LD may impact their self-efficacy, especially in the academic domain. As suggested by Bandura (1986, 1995), efficacy expectations are hypothesized to be acquired and modified via four types of sources of information: past performance accomplishment, exposure to and identification with efficacious role models (vicarious learning), access to verbal persuasion and support from others, and experience of emotional or physiological arousal in the context of task performance. Students with LD may be expected, as a group, to have lower self-efficacy than students without disabilities, at least partially because of less access to sources of efficacy information. When repeated failure becomes internalized, beliefs about one's ability to achieve in the academic domain are likely to suffer. This weakened sense of efficacy in turn may limit the level of future performance these students are willing to try to achieve as well as their persistence under stressful conditions. Low perceptions of ability, thereby, become reinforced by experience.

Self-efficacy studies indicate that, when compared to peers without LD, students with LD have lower academic self-efficacy, as well as decreased academic competence (Frederickson & Jacobs, 2001; Hen & Goroshit, 2014). In addition, surveys (Klassen, 2002a, 2002b) examining self-efficacy beliefs of students with LD have revealed that self-efficacy was found to play a primary role in predicting academic achievement, although several studies found that students with LD tend to overestimate their efficacy (e.g., Klassen, 2008). Furthermore, individuals with strong efficacy beliefs are more likely to exert effort in the face of difficulty and to persist in working at tasks when they believe that they have the requisite skills (Linnenbrink & Pintrich, 2003; Pietsch, Walker, & Chapman, 2003). Students feel differently about themselves and cope differently with challenges depending on what they believe they are capable of, and what they hope they will be able to achieve (Folkman & Moskowitz, 2004).

It should be noted that most studies on students with LD focused on younger students rather than on college students. Nonetheless, in light of the findings, the research assumption in the present study was that similar results will be found among this group as well. Specifically, hypotheses were that college students' difficulties will be related to their academic self-efficacy and that this sense of efficacy will predict the degree to which they perceive tutoring to be beneficial to them, alongside other variables related to the tutoring process such as tutoring activities and difficulties encountered during tutoring sessions.

In sum, this study addressed three research questions: (a) What are the characteristics of tutoring college students with LD in terms of tutees' difficulties, tutoring activities, difficulties encountered during tutoring, and the perceived success of the tutoring process? (b) Are tutees' difficulties related to their academic self-efficacy? (c) Do tutees' self-efficacy, engagement in different tutoring activities, and difficulties encountered during tutoring sessions contribute to their perceptions regarding the success of the tutoring process?

Method

Research Context

The present study focused on a peer tutoring project for students with LD at universities and colleges in Israel. This project is part of a nationwide program named PERACH through which Israeli students in

higher education work mainly with disadvantaged students 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 them. 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 (Vogel et al., 2007).

Tutors are expected to work individually with the students on a regular basis (usually twice weekly in two-hour sessions) throughout an entire academic year and, in return, they receive a partial tuition rebate. The project is operated in conjunction with local support services at the colleges and universities, which select tutees and match them to PERACH tutors following interviews with both 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 also schedule either workshops for tutees or joint workshops. The location of tutoring sessions is determined by the participants themselves (Vogel et al., 2007).

Participants

During the 2012–2013 academic year, approximately 500 students with LD at 29 Israeli universities and colleges 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-IV]; Wechsler, 2008), 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 one standard deviation below the peer mean is required to be eligible for tutoring. As the stu-

dents 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 tutees, and responses were received from 190 (38%). The gender of the tutees in the sample was fairly evenly distributed, although the number of women ($n = 99$) was slightly higher than that of men ($n = 91$). Most of the tutees (95%) in the sample were Jewish. The highest percentage of tutees (44%) was first year students. Many of the tutees (37%) reported having received tutoring services sometime in the past, whereas others were being tutored for the first time.

Instruments

Tutees' difficulties. A measure was used that was developed by Vogel et al. (2007). Participants are asked to rate the extent to which they cope with difficulties in 12 different domains. These domains are divided into three sub-groups: general study skills (attention and concentration, studying for exams, use of time, memory, and mathematics), language-related skills (reading materials in English, writing papers, summarizing articles, finding information, and reading materials in Hebrew), and nonacademic skills (emotional areas and social areas). Possible answers range from 1 ("very difficult") to 5 ("no problem"). Vogel and colleagues (2007) did not report Cronbach's alphas, however in the current study they were .73 for the general study skills and .82 for the language-related skills. A significant positive correlation was found between the two items which comprised the nonacademic skills domain ($r = .73$, $p < .001$).

Academic self-efficacy. A five-item measure based on Bong's (2001) subject-level academic self-efficacy scale was administered. Instead of mentioning a particular subject area (such as mathematics), as in the original questionnaire, general statements were used. For example, the item "I can master even the hardest material in [a specific subject] if I try" was rephrased as "I can master even the hardest material in my studies if I try". Participants are asked to rate each item on a response scale ranging from 1 ("not at all true") to 5 ("very true"). Cronbach's alphas ranged between .86 and .91 in the original study (depending on the subject matter), and in the current study $\alpha = .86$.

Engagement in tutoring activities. A list of eight different tasks was developed by Vogel and colleagues (2007). Participants are asked to rate the ex-

tent to which each task was dealt with during the tutoring sessions. Possible answers range from 1 ("not at all") to 5 ("very much"). Varimax factor analysis of the data in the current study revealed three distinct factors: general academic activities (four items, e.g., "reading articles"), review of material (two items, e.g., "studying for exams"), and nonacademic activities (two items, e.g., "discussion of personal matters"). Cronbach's alphas were .73 for the general academic activities and .80 for the whole list. Significant positive correlations emerged between the two review of material activities items ($r = .62$, $p < .001$) and the two nonacademic activities items ($r = .77$, $p < .001$).

Difficulties encountered during tutoring. This measure was also developed by Vogel and colleagues (2007). Participants are asked to rate the extent to which seven different situations occurred during the tutoring period that hindered tutoring (e.g., "Sessions were ineffective"). Possible answers range from 1 ("not at all") to 5 ("very much"). Varimax factor analysis of the data in the current study revealed only one factor with an internal consistency of .84.

Perceived success of tutoring. A scale was developed specifically for the present study on the basis of a literature review, prior research questionnaires used in the evaluation of the PERACH program, in-depth knowledge of tutoring in the context of PERACH, and several consultations with colleagues in the field of tutoring. The scale includes six items measuring tutees' perceptions regarding the contribution of the tutoring process to their academic functioning, including improvement in grades, in preparation and organization before lectures, in participation during lectures, in writing papers and doing exercises, in studying for exams, and in learning habits (e.g., "The tutoring program helped me improve my grades"). Participants are asked to rate the extent to which each statement is true for them on a scale ranging from 1 ("not at all") to 5 ("very much"). Varimax factor analysis of the data revealed only one factor. Cronbach's alpha was .88.

Demographic questionnaire. Data were collected on gender, year of study, field of study, and prior tutoring experience.

Procedure

Participants received the questionnaires towards the end of the academic year from the support centers at their academic institution. They completed the questionnaires individually and voluntarily on their own free time and returned them to the centers after com-

pletion. There were no time limits, and no incentives were offered. The questionnaires were anonymous.

Results

Data analyses included two parts: (a) descriptive statistics of the characteristics of the tutoring process, and (b) an examination of the relationships among different research variables.

Descriptive Statistics

Table 1 presents means, standard deviations, and inter-correlations of the main research variables. As can be seen from Table 1 participants reported relatively high levels of nonacademic skills (4.15 on a scale of 1-5) and relatively low levels of general study and language-related skills. A repeated measures MANOVA which was conducted revealed a significant Wilk's Lambda effect [$F(2,188)=171.65$, $p<.001$, Partial $\mu^2=.65$]. Bonferroni post hoc tests showed that the differences between all three types of skills were significant.

Participants also reported a moderate-high level of both academic self-efficacy (an average score of 3.68 on a 1-5 scale) and the extent to which tutoring included different activities. A repeated measures MANOVA which was conducted with the three types of tutoring activities as one factor revealed a significant Wilk's Lambda effect [$F(2,187)=21.07$, $p<.001$, Partial $\mu^2=.19$]. Bonferroni post hoc tests showed that review of material activities received significantly higher scores followed by general academic and non-academic activities. In addition, participants reported relatively low levels of difficulties during tutoring activities (an average of 1.52 on a 1-5 scale) and relatively high levels of contribution (an average of 4.08 on a 1-5 scale).

A further examination of the specific skills of tutees (the different items which comprised the general study skills, the language-related skills, and the nonacademic skills) showed that all the general study skills and three out of the five language-related skills received relatively low scores (less than 3 on a scale of 1-5), as shown in Table 2. Only *finding information* and *reading materials* in Hebrew received scores higher than 3. A repeated measures MANOVA which was conducted with the 12 skill items as one factor revealed a significant Wilk's Lambda effect [$F(11,172)=61.20$, $p<.001$, Partial $\mu^2=.81$]. Bonferroni post hoc tests showed that tutees' social skills received significantly the highest score compared to all

other skills followed by emotional skills, and reading materials in Hebrew. The other items differed significantly only in relation to some items.

In order to explore which activities most characterized tutoring, means and standard deviations of the items which comprised the tutoring activities variables (general academic activities, review of material activities, and nonacademic activities) were calculated as well.

As can be seen from Table 3, all tutoring activities were engaged in at a medium to high level, average scores being around 3 and above. A repeated measures MANOVA which was conducted with the activity items as one factor revealed a significant Wilk's Lambda effect ($F(7, 184)=17.75$, $p<.001$, Partial $\mu^2=.41$). Bonferroni post hoc tests showed that the activities of reviewing class material and writing papers received significantly higher scores than the other tutoring activities, and that the activity of reading articles received significantly the lowest score except in relation to discussion of personal matters and other various topics.

The items which measure difficulties encountered in tutoring were also calculated in terms of their means and standard deviation in order to better understand the specific types of difficulties that characterized tutoring from the viewpoint of the tutee. Results are presented in Table 4.

All types of difficulties received relatively low scores (less than 2 on a scale of 1-5), meaning that in general there were no major difficulties during the tutoring process as reported by the tutees. A repeated measures MANOVA which was conducted revealed a significant Wilk's Lambda effect [$F(6,176)=8.25$, $p<.001$, Partial $\mu^2=.22$]. Bonferroni post hoc tests showed that difficulty to establish a relationship received a significantly lower score compared to the other difficulties that were mentioned in the questionnaire.

As for the perceived success of the tutoring process, means and standard deviations of the items which comprised the tutoring success variable (see Table 5) revealed that all items received relatively high scores (above 3 on a scale of 1-5). A repeated measures MANOVA conducted with the success items as one factor revealed a significant Wilk's Lambda effect ($F(5, 186)=31.12$, $p<.001$, Partial $\mu^2=.46$). Bonferroni post hoc tests showed that the tutoring project contributed the most to tutees' performance on academic assignments, followed by their grades and preparation for exams, organization and preparation for lectures and study habits, and finally - levels of participation in class.

Relationships Among Variables

In general, tutees' skills were positively correlated with their academic self-efficacy. As can be seen in Table 1, correlations ranged between .37 and .47, meaning that between 13% and 22% of the variance of academic self-efficacy was explained by participants' evaluation of their skills, with general study skills explaining the highest percentage and nonacademic skills explaining the lowest percentage. The degree of engagement in tutoring activities was negatively correlated with difficulties encountered during tutoring and positively correlated with the reported success of tutoring.

In order to investigate the contribution of participants' self-efficacy, degree of engagement in tutoring activities, and difficulties encountered during tutoring to tutoring perceived success, a hierarchical linear regression analysis was conducted in the following way: Academic self-efficacy was entered first, the engagement in different tutoring activities (general academic activities, review of material, and nonacademic activities) was entered second, and difficulties encountered during tutoring was entered third. A significant result emerged [$F(5,184)=28.91$, $p<.001$] explaining 45% of the variance of reported tutoring success.

Whereas tutees' academic self-efficacy explained only 10% of the variance, the degree of engagement in tutoring activities explained 28% and not encountering difficulties explained an additional seven percent. Engagement in general academic activities ($\beta=.26$, $p<.001$), review of material ($\beta=.34$, $p<.001$), and tutoring difficulties ($\beta=-.27$, $p<.001$) were significant predictors of perceived tutoring success.

Discussion

Although different studies have examined empirically how formally assigned peer tutors provide support to tutees in general, relatively few of them have examined tutees with LD, and not much is known regarding the variables which contribute to the success of their tutoring process. The present study examined the characteristics of a tutoring project for college students with LD and the contribution of tutee-related and tutoring-related variables to the perceived academic functioning of the tutees. Specifically, the relationship between tutees' skills and their academic self-efficacy were examined, as well as the contribution of academic self-efficacy, engagement in different tutoring activities, and difficulties encountered

during tutoring to the perceived success of the tutoring process.

Several studies 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, Spruill, & Webster, 2002). Thus, the fact that participants reported relatively low levels of general study and language-related skills as opposed to relatively high levels of nonacademic skills is not surprising. In addition, the finding that reading Hebrew (native language) materials was generally rated as a less severe problem than other skills, including reading English (second language) materials, may indicate that the problem in reading was connected more to foreign language learning than to general reading comprehension. A similar result was found in Vogel and colleagues' study (2007).

According to tutees' reports, tutoring sessions included a variety of activities, since seven out of the eight activities which were mentioned in the questionnaire received average scores above 3 on a 1-5 scale. Nonetheless, reviewing class materials and writing papers were the most frequent activities. As services that improve more generalized skills have been found to be more beneficial to the overall achievement of students with LD than services aimed at supporting specific courses (García-Sánchez, & Fidalgo-Redondo, 2006; Keim, McWhirter, & Bernstein, 1996), tutors in this project should be encouraged to strengthen their emphasis on organizational skills and learning strategies, while providing tutees with a sense that their specific, course-related needs are being met.

In general, the research findings suggest that there were no major difficulties during the tutoring process, since all types of difficulties received relatively low scores (less than 2 on a scale of 1-5). Difficulty to establish a relationship received the lowest score. These findings are encouraging especially in light of the claims regarding the importance of the tutor-tutee relationship to the success of the tutoring process (e.g., Daiute & Dalton, 1993). They may also explain why tutees perceived tutoring as relatively beneficial to them.

Specifically, tutees perceived the tutoring process as contributing the most to their performance on academic assignments and the least to their participation in class. This may mean that although the tutoring process included a variety of activities, it was more instrumental in nature, focusing on specific tasks.

In general, results indicate that the tutoring project was successful since participants reported rela-

tively low levels of difficulty during tutoring and relatively high levels of perceived success of tutoring. This finding follows previous studies which reported positive outcomes of peer-tutoring projects in general (e.g., Leung, 2015; Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003) and for students with LD in particular (e.g., Zwart & Kallemeyn, 2001). It should be noted, however, that the participants of the current study were college students. This means that they represent a more skillful sector of persons with LD, at least academically speaking, since they have succeeded in entering higher education despite their LD. Consequently, it may be easier to tutor them than other individuals with LD.

As hypothesized, participants' skills were positively correlated with their academic self-efficacy, with general study skills explaining the highest percentage of self-efficacy and nonacademic skills explaining the lowest percentage. This means that tutees who believe that they have better skills, are more confident in their ability to succeed in the academic domain. This finding is in accordance with Bandura's (1986, 1995) claim regarding past performance as one of the main sources which may impact feelings of self-efficacy. Thus, it is suggested that in order to enhance tutees' academic self-efficacy, tutors need to focus on the academic domain while providing opportunities for success in this field.

Interestingly, only the tutoring-related variables—degree of engagement in tutoring activities and difficulties encountered during tutoring—were significant predictors of the perceived success of the tutoring project. In contrast, academic self-efficacy did not predict the perceived success of tutoring. This finding is indeed encouraging since it suggests that college students with LD may be assisted and contributed by tutoring projects regardless of the extent of their disabilities and sense of efficacy. Nevertheless, it is recommended that future studies should examine the effect of other tutee-related variables, such as motivation and proactivity. They should also explore other indications of tutoring success, including more objective ones, such as tutees' actual grades and dropout rates.

The study's results have some practical implications. First, they suggest that tutoring college students with LD is a successful tool for the advancement of these students, at least from their perspective. Thus, such projects should continue. Second, they may imply that good guidance and preparation of tutors are a key factor in the success of tutoring students with LD,

since tutoring-related variables may contribute more to the success of the tutoring than tutee-related variables. This guidance should focus on aspects such as strengthening the tutor-tutee relationship, using diverse activities during tutoring (and not focusing mainly on instrumental assistance), and enhancing tutees' self-efficacy through the provision of successful experiences.

Despite its importance, the current study is limited in scope insofar as it focused on a particular project in one country. Moreover, findings are based on the self-reports of participants which constitute a little more than a third of the tutees in the specific tutoring project. Although it is considered a reasonable response rate in the social sciences, it may limit the ability to generalize from the results. Future studies should examine other tutoring projects and use direct observations as well as concrete measures of successful tutoring.

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About the Author

Rinat Michael received a B.A. degree in psychology and education and a Ph.D. in education, both from Tel-Aviv University. Her experience includes working as a special education teacher and a school counselor in elementary and junior high schools. She is currently a teaching associate in the Department of School Counseling and Special Education at Tel-Aviv University. Her research interests include academic and career development of students with special needs, professional development of pre-service special education teachers, and evaluation of educational and community projects. She can be reached by email at: freskori@post.tau.ac.il.

Table 1

Means, Standard Deviations, and Inter-Correlations of Main Study Variables (N=190)

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. General study skills of tutee	2.69	0.94								
2. Language-related skills of tutee	2.92	0.94	.41***							
3. Nonacademic skills of tutee	4.15	1.04	.35***	.36***						
4. Academic self-efficacy of tutee	3.68	0.85	.47***	.40***	.37***					
5. General academic activities in tutoring	3.55	1.01	.07	-.12	-.07	.01				
6. Review of material in tutoring	3.97	1.11	.07	.02	.15*	.05	.38***			
7. Nonacademic activities in tutoring	3.33	1.26	-.03	-.06	-.05	.07	.45***	.33***		
8. Difficulties encountered during tutoring	1.52	0.68	-.11	-.10	-.09	.01	-.20**	-.27***	-.15*	
9. Perceived success of tutoring	4.08	0.87	-.03	-.05	-.05	-.07	.47***	.54***	.33***	-.42***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2

Means and Standard Deviations of Perceptions of Tutee Skills (scale 1-5)

Skill	<i>M</i>	<i>SD</i>
General study skills		
Attention and concentration	2.23	1.29
Studying for exams	2.77	1.18
Use of time	2.69	1.45
Memory	2.79	1.32
Mathematics	2.97	1.34
Language-related skills		
Reading materials in English	2.53	1.36
Writing papers	2.55	1.11
Summarizing articles	2.60	1.18
Finding information	3.18	1.21
Reading materials in Hebrew		
Nonacademic skills	3.73	1.27
Emotional areas	4.29	1.07
Social areas	4.02	1.16

Table 3

Means and Standard Deviations of Degree to Which Activities Were Engaged in During Tutoring Sessions (scale 1-5)

Activity	<i>M</i>	<i>SD</i>
General academic activities		
Working on learning strategies	3.67	1.27
Organization	3.55	1.41
Writing papers	4.04	1.17
Reading articles	2.96	1.59
Review of material activities		
Reviewing class material	4.11	1.16
Studying for exams	3.84	1.30
Nonacademic activities		
Discussion of personal matters	3.32	1.36
Discussion of various topics	3.33	1.31

Table 4

Means and Standard Deviations of Degree to which Difficulties Interfered with the Tutoring Process (scale 1-5)

Interfering situation	<i>M</i>	<i>SD</i>
Tutor was not sufficiently well versed in the content area	1.67	1.15
Tutor lacked skills to deal with tutee's difficulties	1.65	1.10
Tutor had no one to turn to for guidance	1.55	0.97
Sessions were not always effective	1.62	1.03
Tutee could not explain his or her needs	1.48	0.93
The tutor did not have the time needed for tutoring	1.43	0.91
Establishing a relationship was difficult	1.23	0.71

Table 5

Means and Standard Deviations of Items Measuring Perceived Tutoring Success (scale 1-5)

Type of Success	<i>M</i>	<i>SD</i>
Improved grades	4.32	0.88
More organized and better prepared for lectures	3.87	1.17
Higher levels of participation in class	3.47	1.35
Better performance on academic assignments	4.55	0.79
More prepared for exams	4.24	1.12
Improved study habits	4.04	1.18

Table 6

Linear Regression Predicting Perceived Tutoring Success (N=190)

Variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
Step 1:				.01
Academic self-efficacy	-.09	.08	-.08	
Step 2:				.38
Academic self-efficacy	-.11	.06	-.11	
General academic activities in tutoring	.25	.06	.29***	
Review of material in tutoring	.31	.05	.40***	
Nonacademic activities in tutoring	.05	.05	.07	
Step 3:				.45
Academic self-efficacy	-.10	.06	-.10	
General academic activities in tutoring	.23	.06	.26***	
Review of material in tutoring	.27	.05	.34***	
Nonacademic activities in tutoring	.04	.04	.06	
Difficulties encountered during tutoring	-.34	.07	-.27***	