

Mentoring mentors as a tool for personal and professional empowerment in teacher education.

Orly Michael, Achva Academic College, Bar Ilan University, Israel
Email: orlym06@walla.co.il

Abstract

This study examined the effects of a support course for student teachers who served as mentors of school children over one school year in the Perach Mentoring Project (PMP). One hundred student teacher mentors responded to a questionnaire that examined the student teacher mentors' role perceptions, mentoring performance and support sources. The findings indicate that participation in mentoring and in support course experiences can change attitudes and beliefs, develop personal and professional skills and cause changes in work relations. Our recommendations include greater participation of the student teacher mentors in support courses, as well as the inclusion of the PMP in teacher education curriculum. Mentoring should be included as an integral part of preservice teacher training programmes.

Keywords: Teacher training, mentoring, mentors, education, student teachers.

Introduction

Mentoring is an educational activity that is widespread throughout the world. There is much evidence to support the assertion claiming that mentoring can influence a person's life cycle (Lucas, 2001).

The term "mentoring" is used to describe a variety of situations in which one person instructs, assists or guides another person. There is a wide variety of definitions of mentoring. For example, a distinction exists between natural or informal mentoring (Rodes, 2002; DuBois, 2005) and mentoring that evolves through formal programmes (Kiltz *et al.*, 2004; Miller, 1976). Mentoring contains characteristics of friendship and relationship, and Lucas (2001) adds that the roles of mentor and mentee are not predefined but are formed, established and expanded through interpersonal interaction and according to individual perspectives.

There are many models of mentoring programmes. A mentoring programme can be structured or unstructured, optional or mandatory, with or without mentor guidance, prolonged or short-term, individual or group-based. It can bring together a mentor and a mentee of the same background or of differing backgrounds. The focus of the mentoring also varies from one project to another (Rhodes *et al.*, 2000): assistance can be given in the academic field, in the enrichment of knowledge or in the strengthening of social or cognitive skills, and so forth (Wertheim and Fresko, 2000). There are mentoring programmes in which children mentor children (Miller, 2002), programmes in which veteran school principals mentor novice principals (Kiltz and co., 2004) and programmes in which peers mentor each other to assist with learning difficulties or as a way to improve students' social status (Goodlad, 1998). There are also programmes in which adults mentor youth at risk (DuBois, 2005) and programmes in which workers are trained at a workplace (DuBois, 2004).

This research focuses on the Perach Mentoring Programme (PMP), a programme in which individual students mentor individual school children twice a week throughout a full school year. The aim of the PMP is to advance children who do not function adequately in the academic or social spheres. The PMP mentors are students from various academic departments. However, in this study, we shall focus on a group of student teachers and education students who participate in a special academic Support Course (SC) for PMP mentors.

The Perach Mentoring Project is a socio-educational project which assists schools in poor socio-economic neighborhoods. PMP was established in 1974 and is now considered to be one of the world's biggest mentoring projects (Goodlad and Hirst, 1989). PMP is a national project in Israel and is supervised by a public council. The proclaimed aim of this educational project is to promote the educational and cultural advancement of intellectually, emotionally or socially under-achieving children (Fresko and Kobelski, 1998; Fresko and Carmeli, 1990; PMP, 2003; PMP, 1984; Tzilik, 1989). The project operates in eight universities around the country. In each of the branches, students work part-time as coordinators of about fifty student mentors each (Fresko and Kobelski, 1998; PMP, 1984). In recent years, over 20,000 students have acted as mentors in PMP to over 45,000 child mentees (Fresko and Kobelski, 1998).

PMP operates various types of mentoring programmes:

1. Individual mentoring, in which mentor and mentee meet on a one-to-one basis. The research conducted by Eisenberg et al. (1980) revealed that most of the mentoring meetings are devoted to activities related to school study materials (75%) and additional activities related to a variety of areas: reading newspapers, handicrafts, watching movies, personal conversations and cultural activities (Fresko and Kobelski, 1998).
2. Group mentoring, which at times includes a small number of children (3 to 5 children) and at times includes a whole class. These meetings are devoted to various topics such as health education, art, science and other subjects.
3. Special projects, such as mentoring to inmates' children, children with special-needs, sailing and diving, virtual mentoring and others.

PMP mentors – PMP mentors are students selected for the job through a screening process carried out by the PMP administration. The students chosen to be mentors comprise a diverse population which specialises in a variety of study areas. In the course of one academic year the mentors are required to mentor individual children 4 hours a week (2 weekly meetings of 2 hours each), or, alternatively, to mentor a group once a week for 2 hours. In return, the students receive a scholarship that covers part of their tuition (Fresko and Kobelski, 1998; PMP, 1984; Shiloah, 1988; Tzilik, 1989). Individual meetings are usually held at the child's home, allowing the mentor to become acquainted with the child's environment and family background. In addition, the mentor can organize meetings in the library or elsewhere. The mentors' work is monitored by a **coordinator**, who meets with the mentors once a month. The mentor-coordinator meetings are intended to aid in resolving social or professional problems that the mentor encounters, as well as to provide information and guidance (PMP, 1984).

PMP children (the mentees) are mostly from poor socio-economic neighborhoods and/or from large families, and are of the age of elementary and junior high school. The children are chosen for the project due to environmental deficiencies (social, economic, cultural and/or educational) of varying

degrees, which are reflected in low academic achievement, lack of motivation to study and low self-esteem (Tzilik, 1989; PMP, 1984). The school staff is responsible for locating suitable children and following up on their progress.

The Perach Mentoring Project (PMP) activity in Israel is similar to the model that Goodlad (1998) described: every university student can apply to be a mentor in PMP. The uniqueness of our research project is expressed in two aspects: We added a support course for the mentors (SC) as described above, and we focused on one mentor population only, student teachers.

This study focuses on the population of mentors specialising in teacher education and education programmes. Sasson (1997) notes that in the teacher education colleges alone there are about 6,000 mentors every year. There are also additional student mentors studying at the universities' education departments. The research examines the role perceptions of the PMP mentor, the contribution of the mentoring to both mentor and mentee and the contribution of a mentoring support course (SC) among two groups of PMP mentors, those who participated in an academic SC and those who did not.

Mentoring as a tool for personal and professional empowerment

The integration of mentoring in the teacher training process can enrich the student with unique educational experience that in turn can contribute greatly to his or her professional and personal development. Miller (2002) presents three main goals in student mentoring: one is the goal of development – in which there is room for change of attitudes and beliefs; this goal emphasises the interpersonal relationship of the mentor with the mentee, formed through meaningful dialogue. Another goal concerns work relations, and emphasises the building of career aspirations for the future. The third goal is implementation – the students develop skills and capabilities acquired in their studies, and can implement and incorporate knowledge from courses they have taken (psychology, sociology, curriculum planning, pedagogy, etc.). In this respect Miller (2002) stresses that mentoring programmes should have a holistic approach by which the mentor functions at a high, professional performance level that integrates academic aspects, professional aspirations and motivation for achievement. Mentoring also enables student teachers to get closely acquainted with the pupil population, with which they are to work in the future, and gives them the opportunity to take care of one child before having to deal with an entire class (Wertheim and Fresko, 2002). In addition mentoring exposes student teachers to various sub-sectors in the population and enables acquaintance with them.

The learning occurs around three pivots:

1. The world of teaching – learning about teaching/learning through the implementation of teaching techniques and strategies, through interpersonal communication and forming of educational attitudes.
2. The world of the child – learning about the child that experiences difficulties and his or her world.
3. The self – learning of the mentors about themselves as teachers, as educators and as human beings.

Some teacher training preservice programmes in Israel may have a mentoring programme as part of the student teachers' practical work, but it is not obligatory and it is not common practice to include mentoring in the preservice programme.

The mentoring work differs from the practicum and from the internship in that it takes place in a non-threatening environment and focuses on the client and his or her "problems", rather than examining the novice teacher's capabilities.

Mentoring work is compatible with the prevalent approach in education today, which acknowledges the difference among students and demands sensitivity towards the special needs of each student as an individual. Through the personal meeting with the mentee, the mentor learns to be empathic and listen. The mentoring work particularly emphasises the affective aspect in teacher training, and this too trains students towards their role as homeroom teachers (Wertheim and Fresko, 2000). Mentors who are student teachers reported a high level of professional satisfaction in their mentoring work. The experience gained in mentoring reinforced them regarding their career choice, taught them about what occurs in class from the point of view of the child who experiences difficulties, strengthened their self awareness as teachers, developed their teaching skills and clarified concepts they learned in college. In addition, mentoring was found to have influenced their sense of personal teaching capability: a stronger sense of personal teaching capability was found among mentor students than among students who did not engage in mentoring. The experience of mentoring was perceived among mentors to be a trial of their ability to cope as educators in the future. During the mentoring mentors receive almost immediate feedback about their use of the various teaching techniques and strategies that they learned in college, (Wertheim and Fresko, 2002). In sum, the mentoring experience gives the students unique practical opportunities in the process of their teacher training.

Mentor guidance

Mentoring is useful even without guidance, but the added value of the experience can be enhanced, for both mentor and mentee, if it is accompanied by individual or group guidance to the mentors. Accompanying the mentoring with guidance can increase the student's learning process (Wertheim and Fresko, 2002), growth and professional training, in addition to the benefits which the mentees gain. Mentors who experience both the mentoring and the guidance course fortifies both the organization in which they will work as a professional in the future and the PMP in the present (Michael, 2005; Lucas, 2001).

In models of guided mentoring, the programme includes a structure that allows the mentors reflective meetings, providing ongoing support to this process (Miller, 2002; Kiltz and Co., 2004). The guidance directly contributes to the mentors in their coping with the difficulties and frustrations that are involved with the job, and indirectly affects the children, who receive mentoring that is more effective and better tailored to their needs. Goodlad (1998) notes that each mentor must be guided, particularly in areas such as creating a friendly environment, varying the meetings with the mentee, knowing the child's school materials, reinforcing the child, documenting the mentoring for reflection and separation from the child when the mentoring reaches its end.

The guidance is intended to help the mentors define their role. It provides them with support and backup in finding solutions for the children's problems and the difficulties that arise during the mentoring meetings, and directs the mentors towards professional work and correct implementation of their academic studies. The tutors assist the mentors in developing communication skills and teaching skills. They also help them plan appropriate activities, search for varied and enriching means, and learn for the future, by reflection.

This study examined the impact of a special course (SC), designated exclusively for PMP mentors, on their perception of mentoring and the contribution of the mentoring and the SC to the PMP mentors. The SC is a special course intended to support teacher education students who mentor children through PMP. The objectives of the course include assisting PMP mentors to fulfill their role as mentors, and empowering and developing the mentors' professional skills. Another objective of the course is to connect the theories and concepts that are taught at the education department to events (case study) and experiences acquired throughout the mentoring by deepening the teaching student's understanding and perspectives. The SC combined mentoring (individual work) with participation in the course meetings (workshop group work). The group of student mentors functioned as a support group, a group which analyses events (as a case study) and enables personal and professional growth. Such a course can upgrade the level of mentoring as well as the professional level of the future teacher. The SC was an annual course and took place in addition to the routine guidance activities of the PMP administration, as a supplement. . The SC was held throughout the academic year, and group meetings were two hours every two weeks. Full attendance was required of the participating students and they received full academic accreditation for their participation and fulfillment of the course assignments.

Issues dealt with in the course include what mentoring is, types of mentoring and relating with the mentee; diversion among students and dealing with it; multiculturalism – different cultural backgrounds and ways of handling difference; acquaintance with the mentee's background characteristics and environment; students of a different background and their academic and social difficulties; coping with different students' difficulties; alternatives in teaching; reference to the children's family and environment; finalizing the relationship and parting.

The instruction method included frontal lectures and group work. The course introduced a method of presenting and analysing events, and in many of the meetings the participants presented events from their own mentoring experience. Each student was asked to analyse an event as part of the homework, which required in-depth studying of theoretical material, searching in the library and suggesting ways of handling the event. In class the student described his or her mentee, the event and the problem arising from the event, and suggested various ways of dealing with it based on the theoretical and practical background found in the literature.

Methodology

This research examined the PMP mentors' perception of the mentoring role, the contribution of the mentoring and of the SC to the mentor and mentee, among two groups of PMP mentors – those who participated in an academic mentoring SC and those who did not.

The study examined the effect of an academic SC which accompanied the mentoring process. The research questions were:

1. Are there differences in the perception of mentoring among the two groups, and if so what are they?
2. Are there differences in the contribution of the mentoring to personal and professional skills among the two groups?
3. Are there differences in the usage of support sources and work relations among the two groups, and if so what are they?

Population and sample

The research population included a sample of the mentor population in two PMP administrations: center and south. The final sample included an overall of 100 mentoring students: 50 PMP student mentors, BA students of education and/or teacher education, who participated in the course, and 50 PMP student mentors who did not participate in the SC, as a control group.

The research was conducted over two years.

Research variables

1. Independent variables: participation in the mentoring SC.
2. Moderator variables: age, mentoring experience.
3. Dependent variables:
 - i. Perception of mentoring: this index relates to the general perception of the concept of mentoring. We checked how students define their perception of mentoring according to 5 definitions: supervisor, teacher, parent, sibling and friend.
 - ii. Contribution of mentoring: this variable was measured by 4 indices: academic contribution to the mentee, social contribution to the mentee, personal contribution to the mentee, and contribution to the mentoring student.
 - iii. Support sources: this index relates to the support sources which the students use. The analysis was performed according to 4 values: literary sources, lecturers, peers and the PMP administration.

Research tools

The research tools in this study were two questionnaires constructed particularly for this study. The questionnaires were distributed to two groups of mentors before the mentoring and after it ended:

1. A questionnaire regarding the mentor's perception of his or her role at the end of the mentoring.
2. A personal details questionnaire.

The questionnaire concerning the mentors' perception of their role at the end of the mentoring was composed of three sections. The questions in each section had 6 possible answers, ranging from 1 (do not agree with the statement about the role perception) to 6 (agree with the statement very much).

The first section of the questionnaire concerns the perception of mentoring. There is one index in this section, hereafter called "the role perception". The subject's score in this variable is his or her answer to each statement. A low grade indicates that the mentor does not agree with the role perception in the statement, whereas a high score indicates that the mentor agrees with the role perception in the statement. Some example statements are "being a mentor is similar to being a teacher" and "being a mentor is similar to being a parent". Internal cohesion according to Cronbach's alpha was $\alpha = 0.81$.

The second section examines the contribution of the mentoring. This section is comprised of 5 indices, and the subject's score is the average of his or her answers in each index:-

The first index is called the mentor's feeling about his or her performance of the role.

A low score reflects a low sense of capability that the mentor has regarding his or her performance as a mentor, whereas a high score reflects the mentor's great sense of capability regarding his or her role as mentor. Exemplary questions are "I sense that I have the required capabilities to deal with the mentee" and "I perform the role to my satisfaction". Internal cohesion according to Cronbach's alpha was $\alpha = 0.56$.

The second index is called "the contribution of the mentoring to the mentor's personal development".

A low score indicates that the mentor feels that the contribution of the mentoring to his or her personal development was low, and a high score indicates that the mentor feels that the contribution of the mentoring to his or her personal development was high. Example statements: "following the mentoring I have learned a lot about coping with children's problems" and "following the mentoring I have improved my abilities of dealing with children". Internal cohesion according to Cronbach's alpha was $\alpha = 0.64$.

The third index is called "academic contribution of the mentoring to the mentee".

A low score indicates a small contribution of the mentoring to the academic development of the mentee, whereas a high score indicates a large contribution of the mentoring to the academic development of the mentee. Examples: "I enrich the mentee with general knowledge", "I advance the mentee academically". Internal cohesion according to Cronbach's alpha was $\alpha = 0.76$.

The fourth index is called "social contribution of the mentoring to the mentee".

A low score indicates a small contribution of the mentoring to the social development of the mentee, whereas a high score indicates a large contribution of the mentoring to the social development of the mentee. Examples statements: "I help the mentee cope with social difficulties", "I succeed in coping with the mentee's behavioral problems". Internal cohesion according to Cronbach's alpha was $\alpha = 0.54$.

The fifth index is called "emotional contribution of the mentoring to the mentee".

A low score indicates a small contribution of the mentoring to the emotional development of the mentee, whereas a high score indicates a large contribution of the mentoring to the emotional development of the mentee. Examples statements are "I help improve the mentee's self esteem" and "I often speak with the mentee about personal matters". Internal cohesion according to Cronbach's alpha was $\alpha = 0.22$.

The third section has one index, called "sources for receiving assistance in mentoring". The subject's score in this variable is his or her answer to each statement in this index. A low score reflects a small degree of using the help source, and a high score reflects high use of the help source. Example statements: "I use literary sources", "I receive assistance from the people in the PMP administration". Internal cohesion according to Cronbach's alpha was $\alpha = 0.69$.

Data processing

The quantitative data that was collected from the questionnaires in the tools section were coded and processed using statistical analysis methods. We used statistical methods such as calculation of averages, standard deviations, distributions, variation calculations and tests for independent samples and factor analysis.

Findings

Background characteristics of the study population

Following is the description of the background variables of the study population, presented in Table 1 below:

Table 1: distribution (N, %) of the study participants – the mentors – according to personal characteristics

Personal characteristics	Values	N = 51	N = 49	Distribution in %	
				Students who participated in the SC	Students who did not participate in the SC
Gender	Male	1	12	2	24.5
	Female	50	37	98	75.5
Age	18-20	5	7	10	14.3
	21-25	41	35	82	71.4
	26-30	2	5	4	10.2
	30+	2	2	4	4.1
Academic status	Education	36	5	72	10.2
	Social studies	7	18	14	36.7
	Teaching cert.	7	6	14	12.2
	Other	-	20	-	12.2
Occupation	Student	40	45	80	91.8
	Teacher	5	2	10	4.1
	Kindergarten teacher	1	1	2	2
	Informal education instructor	4	1	8	2
Mentoring experience	Yes	15	26	30	53.1
	No	35	23	70	46.9
Seniority in mentoring	1	8	13	29.6	54.2
	2	14	4	51.9	16.7
	3	3	4	11.1	16.7
	4	2	1	7.4	4.2
	5	-	2	-	8.3

The table shows that in terms of the participants' **gender**, in both groups the majority were women. The number of men in the group that did not participate in the SC (24.5%) was much higher than in the group that did participate in the SC (2%).

The most common **age range** in both groups was 21-25. Following it was the age range 18-20. In terms of **academic status**, 72% of the participants in the group that took the SC were students of education, and 14% also studied towards a teaching certificate. In the group without the SC the percentage of students of education was 10.2%, and 12.2% studied towards a teaching certificate. 14% of the students in the group that took the SC studied various disciplines of social studies, and in the group that did not take the SC there was a heterogeneous distribution: 36.7% social studies, 12.2% natural sciences, 14.3% law, 2.0% dentistry, 2.0% computer science, 6.1% engineering, and 4.1% MA studies.

In terms of **occupation**, a high percentage of the students in both groups were exclusively students. In the group that took the SC there were students who were also teachers (10%) or informal education instructors (8%). In terms of **seniority in mentoring**, only 30% of the students in the group that

took the SC were experienced in mentoring, and only 51.9% of them mentored for 2 years or more. In contrast, about half of the students in the group that did not take the SC had previous experience in mentoring, and 54.2% mentored for only one year. There are several differences in the background characteristics of the two groups that may influence the results. In the group that did not participate in the SC there are more males; the participants have more mentoring experience and they differ in their academic status.

Perception of the mentor role – before and after the mentoring

The participants were presented with 11 statements about their role perception before and after the mentoring¹. The mentors were asked whether they perceive the mentor's role as similar to that of a teacher, a parent, an older sibling, a friend and a supervisor, and how they perceived this role at the beginning of the course. Table 2 presents means and standard deviations before the mentoring.

Table 2: The perception of the mentor role before the mentoring – means and standard deviations

Perception	Participation in the SC	Mean	Standard deviation	N
Teacher	Yes	2.59	1.57	44
	No	5.01	0.98	51
	Total	3.89	1.77	95
Parent	Yes	2.77	1.52	44
	No	4.58	1.62	51
	Total	3.74	1.81	95
Sibling	Yes	4.88	1.22	44
	No	2.09	1.30	51
	Total	3.38	1.88	95
Friend	Yes	4.84	1.39	44
	No	2.84	1.30	51
	Total	3.76	1.67	95
Supervisor	Yes	1.68	1.09	44
	No	2.88	1.51	51
	Total	2.32	1.46	95

Table 2 shows that there are substantial differences regarding the role perception between the two reference groups – mentors without the SC and mentors with the SC.

Group 1 (participated in the SC): before the mentoring this group rated the preferred role perceptions as older sibling (mean 4.88) and friend (mean 4.87). The less used role perception was supervisor (mean 1.68). The other categories – teacher and parent – were rated moderately, with no substantial differences in the means (means ranged between 2.59 and 2.77).

Group 2 (did not participate in the SC): this group rated the preferred role perceptions as teacher (mean 5.01), parent (mean 4.58) and supervisor (mean 2.88). The remaining categories – friend and sibling – were rated moderately, with no substantial differences in the means (means ranged between 2.09-2.84)

¹ The categories were derived from in-depth interviews conducted at the beginning of the year with mentors from both groups.

In order to check whether differences exist in the strength of the role perceptions (teacher, parent, sibling, friend, supervisor) among the two groups at the beginning of the mentoring, a two-way analysis of variance with repeated measurements was conducted. The independent (inter-subject) variable was participation in the course, and the dependant (within-subject) variable was the role perceptions. The analysis reveals that there was a significant difference in strength between the various role perceptions. $F(4,90)=49.90$, $p<0.01$. Sequential Bonferroni analyses showed that the mean of the supervisor role perception is significantly lower than the means of the teacher, parent, sibling and friend perceptions, but no significant difference was found between the means of the teacher, parent, sibling and friend perceptions.

The analysis also revealed that a significant interaction exists between the various role perceptions and participation in the SC. $F(4,90)=71.194$, $p<0.01$. In order to check this interaction and to examine whether there is a difference in the various role perceptions between the two groups of mentors, an independent samples t-test was conducted. The analysis showed that there is a significant difference in all role perceptions between the two groups of mentors:

Teacher role perception: $t=9.259$ ($df=94$) $p<0.00$. The mentors who did not participate in the SC perceived their role as teachers ($m=5.01$ $sd=0.98$) more than did mentors which did participate in the SC ($m= 2.59$ $sd=1.57$).

Parent role perception: $t=5.70$ ($df=94$) $p<0.00$. The mentors who did not participate in the SC perceived their role as parents ($m=4.58$ $sd=1.62$) more than did mentors which did participate in the SC ($m= 2.77$ $sd=1.52$).

Sibling role perception: $t=10.547$ ($df=94$) $p<0.00$. The mentors who did not participate in the SC perceived their role as siblings ($m=4.88$ $sd=1.22$) more than did mentors who did participate in the SC ($m= 2.09$ $sd=1.30$).

Friend role perception: $t=7.33$ ($df=94$) $p<0.00$. The mentors who did not participate in the SC perceived their role as friends ($m=4.84$ $sd=1.39$) more than did mentors who did participate in the SC ($m= 2.84$ $sd=1.30$).

Supervisor role perception: $t=4.35$ ($df=90$) $p<0.00$. The mentors who did not participate in the SC perceived their role as supervisors ($m=2.88$ $sd=1.51$) more than did mentors who did participate in the SC ($m= 1.68$ $sd=1.09$).

Table 3: The perception of the mentor role after the mentoring – means and standard deviations

Perception	Participation in the SC	Mean	Standard deviation	N
Teacher	Yes	2.95	1.77	46
	No	3.21	1.29	46
	Total	3.08	1.55	92
Parent	Yes	2.97	1.81	46
	No	2.82	1.43	46
	Total	2.90	1.63	92
Sibling	Yes	5.00	1.28	46
	No	5.04	1.53	46
	Total	5.02	1.16	92
Friend	Yes	5.06	1.18	46
	No	5.52	0.72	46
	Total	5.29	1.00	92
Supervisor	Yes	1.86	1.51	46
	No	1.91	1.13	46
	Total	1.89	1.32	92

The attitudes after the mentoring and the SC reinforced the trend in the group that participated in the SC, and the means of older sibling and friend categories grew higher. The supervisor category still continued to not represent the mentors' preferred role perception. We can also see a small increase in all categories after the mentoring; that is, the role perception is not one-dimensional but more complex following the experience. In the groups that did not participate in the SC, the trend changed and the sibling and friend categories became leading categories, which represent the role perception. The additional categories – teacher, parent and supervisor – displayed a decrease in means, reflecting the mentors' change of opinions.

In order to check whether differences exist in the strength of the role perceptions (teacher, parent, sibling, friend, supervisor) among the two groups **at the end of the mentoring**, a two-way analysis of variance with repeated measurements was conducted. The independent (inter-subject) variable was participation in the course, and the dependant (within-subject) variable was the role perceptions. The analysis reveals that there was a significant difference in strength between the various role perceptions. $F(4,87)=115.09$, $p<0.01$. Sequential Bonferroni analyses showed differences in means (see table 4). Differences were found between the mean of the teacher role perception, which was significantly lower than the means of the sibling and friend role perceptions, and significantly higher than the mean of the supervisor role perception. The mean of the parent role perception was significantly lower than the means of the sibling and friend role perceptions, and significantly higher than the mean of the supervisor role perception. The mean of the sibling role perception was significantly lower than the mean of the sibling role perception, and significantly higher than the means of the teacher, parent and supervisor role perceptions. The mean of the friend role perception was significantly higher than the means of the teacher, parent and supervisor role perceptions. The mean of the supervisor role perception was significantly lower than the means of the teacher, parent sibling and friend role perceptions.

Table 4: comparison between the various role perceptions at the end of the mentoring – means

Role perception		Teacher	Parent	Sibling	Friend
Parent	Parent mean sig	2.90		2.90 *	2.90 *
Sibling	Sibling mean sig	5.02 *	5.02 *		5.02 *
Friend	Friend mean sig	5.29 *	5.29 *	5.29 *	
Supervisor	Supervisor mean sig	1.89 *	1.89 *	1.89 *	1.89 *

* $p<0.00$

The analysis also shows a significant interaction between the various role perceptions and participation in the SC: $F(4,87)=1.47$, $p>0.05$.

Table 5: change in role perceptions following the mentoring – means and standard deviations

Perception change following mentoring	Group participating in SC		Group not participating in SC	
	N=51		N=49	
	mean	SD	mean	S.D.
	*3.76	1.87	*3.10	1.40

In addition, the two groups were asked whether their role perception had changed following the mentoring. We can see that both groups moderately agreed with this statement, the group that participated in the SC with a mean of 3.76 and a standard deviation of 1.87, and the group that did not participate in the SC with a mean of 3.10 and a standard deviation of 1.40. Further support for this finding was provided by an independent samples t-test ($T=1.92$ ($DF=92$) $P<0.05$), which checked whether significant statistical differences exist between the two groups concerning a change in their role perception following the mentoring. The test found that the role perception of mentors who participated in the SC ($m=3.76$ $sd=1.87$) changed more than the role perception of mentors who did not participate in the SC ($m=3.10$ $sd= 1.40$).

Contribution of the mentoring

The mentors were asked about the personal contribution of the mentoring to themselves and to their mentees. Means and standard deviations of the mentors' evaluations are presented in table 6.

Table 6: mentoring performance and its contributions – means and standard deviations

Measure	Participation in SC	Mean	Standard deviation	N
Mentoring performance	Yes	5.02	0.65	45
	No	4.50	0.83	48
	Total	4.74	0.79	93
Contribution to the mentor's personal development	Yes	5.14	0.95	45
	No	4.96	0.85	48
	Total	5.04	0.90	93
Academic contribution to the mentee	Yes	4.38	0.90	45
	No	4.18	0.95	48
	Total	4.27	0.93	93
Social contribution to the mentee	Yes	4.86	0.81	45
	No	4.27	1.22	48
	Total	4.54	1.09	93
Personal contribution to the mentee	Yes	5.10	0.78	45
	No	4.77	2.81	48
	Total	4.92	2.14	93

Table 6 shows that both groups displayed a high degree of agreement in all categories:

In the category **mentoring performance** a high mean was recorded for the mentors' sense of capability concerning their ability to cope with the mentee and for their sense of satisfaction from

their performance of the mentoring. The means and standard deviation reveal that the group that participated in the SC displayed greater sense of personal capability and capability of performing the job than the group that did not participate in the SC.

In the category **personal contribution to the mentor**, a high degree of agreement regarding the ability to cope with children's problems was recorded. The means and standard deviations reveal that mentors in the group that participated in the SC felt that they learned about coping and children's problems, and managed to improve these abilities, more than the group that did not participate in the SC.

The category **contribution to the mentor's personal development** appears to be the most meaningful to the mentors in both groups. The categories **satisfaction from the performance of the job** and **personal contribution to the mentee** are rated higher in the group that participated in the SC than in the group that did not. As for the contribution to the mentee – the mentors who did not participate in the SC felt that their social and academic contribution to the mentee was less substantial..

In order to check whether differences exist according to the type of contribution, a one-way MANOVA analysis was conducted in a simultaneous examination of the sense of the mentoring performance, the sense of personal contribution to the mentor, and the sense of academic, social and personal contributions to the mentee. The analysis shows that there was a significant difference in the simultaneous examination according to the type of contribution: $F(5,78)=2.47, p<0.05$. In separate analyses of variance for each of the dependant variables that were meant to check the source of the significance, significant differences were found in the degree of satisfaction from the performance of the job according to the type of contribution: $F(1,82)=9.708, p<0.01$. Namely, the group that participated in the SC (mean 5.02) felt greater satisfaction than the group that did not participate (mean 4.50). With regard to the sense of social contribution to the mentee, $F(1,82)=6.590, p<0.01$, namely the mentors in the group that participated in the SC (mean 4.86) felt that they contributed a social contribution more than did the mentors in the group that did not participate in the SC (mean 4.27). No significant differences were found between the groups with regard to the sense of personal development to the mentee, $F(1,82)=0.805, p>0.05$, the sense of academic contribution to the mentee, $F(1,82)=0.969, p>0.05$, and the sense of personal contribution to the mentor: $F(1,82)=0.491, p>0.05$.

Support sources for the mentoring process and the mentor

The mentors were asked about receiving assistance and support during the mentoring. Means and standard deviations of the mentors' evaluations are presented in table 7.

Table 7: mentoring performance: mentoring support sources – means and standard deviations

Source of help	Participation in SC	M	SD	N	F	Sig
I am assisted by literary sources	Yes	4.27	1.52	47	43.221	*
	No	2.29	1.41	48		
	Total	3.27	1.77	95		
I am assisted by instructors (including the SC instructor)	Yes	3.74	1.62	47	44.952	*
	No	1.77	1.22	48		
	Total	2.74	1.73	95		

I am assisted by the PMP administration staff	Yes	3.82	1.69	47	0.39	
	No	3.89	1.56	48		
	Total	3.86	1.62	95		
I am assisted by peer mentors	Yes	4.00	1.70	47	7.69	*
	No	3.10	1.43	48		
	Total	3.54	1.62	95		

Table 7 shows that in the group which participated in the SC, the means for using help sources ranged widely, between 3.74 and 4.27. In the group that did not participate in SC the means ranged between 1.77 and 3.89.

The primary source of help for the group which participated in the SC was literary sources. This group received assistance from the whole range of available tools relevant to mentoring. The primary source of help for the group which did not participate in the SC was the PMP administration staff.

In order to check whether differences exist according to the type of help sources used by the mentors, a one-way MANOVA analysis was conducted in a simultaneous examination of both groups of mentors. The analysis shows that there is a significant difference according to the type of help sources in the simultaneous examination, $F(4,90)=14.750$, $p<0.00$. In separate analyses of variance for each of the dependant variables, that were meant to check the source of the significance, significant differences were found according to the groups of mentors (the group which participated in the SC and the group which did not participate in the SC).

In the "I am assisted by literary sources" help source $F(1,93)=43.221$, $p<0.00$, namely, mentors who participated in the SC used literary sources more than mentors who did not participate in the SC.

In the "I am assisted by peer mentors" help source $F(1,93)=7.690$, $p<0.00$, namely, mentors who participated in the SC used peer mentors more than mentors who did not participate in the SC.

In the "I am assisted by the university instructors and the SC instructor" help source $F(1,93)=44.952$, $p<0.00$, namely, mentors who participated in the SC used university instructors more than mentors who did not participate in the SC. In the "I am assisted by the PMP administration staff" help source $F(1,93)=0.039$, $p<0.05$, namely, there was no significant difference in receiving assistance from the PMP administration staff between mentors who participated in the SC use literary sources and mentors who did not participate in the SC.

It was also found that the more the mentors used help sources, the greater were their personal contributions to the mentees, their academic contributions to the mentees and their social contributions to the mentees.

Discussion

All participants in the research went through a process of change in attitudes and beliefs regarding the role of a mentor (Miller, 2000). This change can be a result of the participation in the SC course, but mainly can be attributed to the participation in the mentoring process.

In our research, with regard to the research question examining whether there are differences in the perception of mentoring, both groups tended to ascribe to the mentor role images of "older sibling" or "friend"; the major difference between the two groups concerns the supervisor metaphor. The

supervisor metaphor characterises a perception in which the mentor's role is related to control and authority. The group that throughout the mentoring participated in the SC did not find that this metaphor characterises the mentor's role, whereas at the beginning of the mentoring, the group that did not participate in the SC did characterise the mentor's role with this aspect as well. However, after the mentoring, this group too changed its role perception in this aspect, and the choice of this metaphor as representative of the role was significantly lessened.

There is no intention at PMP for mentors to perceive their role as supervisors, and it seems that at the end of the process the role perception was similar in both groups. The finding that mentors were perceived to be 'supervisors' and the discovery that this misapprehension disappears as it becomes obvious that mentoring involves two way learning between the mentor and mentee, is supported by publication from CUREE, in the UK (Cordingley, Crisp and Bell: 2005).

The literature contains a wide range of definitions for mentoring, from a simple, romantic definition similar to the one found in the Greek mythology, to complex definitions with many variables of interactions structured with established content (Hardcastle, 1998). In our research, the mentors that participated in the SC emphasised that the SC contributed to the fashioning of their role perception, and that they changed their role perception more than mentors who did not participate in the SC.

The impact of the mentoring SC on the students' change of perceptions regarding their role as mentors can be explained when we consider that the course contents and tasks presented the mentors with a wider perspective and so improved their ability to integrate the emotional aspect with the authoritative aspect. The complexity of the role is one of the topics discussed in the course. The changes and development in the role perception are compatible with Lucas's (2001) findings that the mentor role and mentee role are not predefined, but are rather expanded and established by interpersonal interaction and personal perceptions.

As to the question concerning the contribution of the mentoring, we found that in both groups mentoring contributed to the personal development of the mentor. Mentors who participated in the SC displayed greater satisfaction with their performance of the role and their personal and social contribution to the mentee than did mentors who did not participate in the SC. This indicates personal and professional growth on their behalf. The findings support the findings reported in the literature about the contribution of the mentoring to the mentor (Goodlad, 1998; Huling and Resta, 2001; Kiltz and co., 2004; Miller, 2002).

The main contribution of the SC regards support sources. The difference between the two groups is that the group which participated in the SC used more literary sources, university instructors and peer mentors from the SC. Namely, the group that participated in the SC used various sources to receive assistance, unlike mentors that did not participate in the SC, who referred to the PMP administration for help but did not turn to any other support source. The group that participated in the SC displayed skillfulness in integrating diverse support sources, theories and practicum. This reflects professional growth and indicates that the performance in this group was more professional.

In addition we have found that the greater the mentor's use of the support sources, the greater were his or her academic, social and personal contributions to the mentee. Thus, apart from the mentor's personal and professional growth, the support given to the mentee increased as well.

This finding is similar to findings reported in the literature about mentors of novice teachers: teacher mentors are reported to experience professional growth in the following areas: improvement of teaching skills, acknowledgement of educators' need of cooperation and a better understanding of the demands of the supervision and principal. Other contributions of the mentoring are in the psychological domain and in the teacher leadership domain (Huling and Resta, 2001). It seems that the findings of this research reinforce this argument with regard to PMP mentors as well. The professional and personal growth occurs through the workshops, where there is a process of sharing with peers, reflection and support from various sources. In turn it contributes to developing work relations (Miller, 2000).

The students that participate in the course are highly satisfied. The personal addressing of the mentors' needs in the course forum, the emotional as well the academic response given to the students who participate in the SC answers their needs, and hence they are greatly satisfied with it.

Moreover, the professional literature describes the approach claiming that universities must not ignore the students' need of personal support alongside learning contents and attaining achievements (Hanley, 1996). The mentoring of mentor students is a strategy which improves students' accomplishments due to the support net provided to the student throughout the mentoring.

The significance of the finding that student teachers benefit from advice as mentors and that initial mentor training programmes are not sufficient for their professional development is supported by Kagan (1992) who claims that the goals of pre-service programmes did not adequately promote evolution of teaching skills.

Our findings suggest mentoring as an option for the improvement of pre-service programmes. Mentoring should be included as an integral part of pre-service teacher training programmes. The findings of this study reinforce Goodlad's recommendation (1998, p. 16): "Recommended action: build the preparation of the tutors and mentors into their formal education".

The findings indicate that according to the mentors, the contributions of the mentoring and SC are significant both to the mentors (the students) and the mentees (the school children). These findings have important implications regarding budget and administrative decisions made by policy setters. These recommendations are directed towards policy setters in the PMP administration, in the universities, in education school administrations, in teacher training programmes as well as towards managers and directors in the Ministry of Education.

Policy setters might need to understand that creating a permanent structure which would enable students to mentor children, accompanied by a guidance and support course, would give rise to synergism that can immediately reward both sides, the pupil mentees and student mentors. In the long run this would reinforce and reward the organization as a whole (the schools, PMP and universities), due to the growth in the overall professional capabilities of all the individuals in the organization. The result would be an upgrade of the professional human capital.

University staff and professional development staff in all "caring" professions, and teacher trainers in particular, should understand that the contribution to the professional development of the mentoring students is much beyond an average training workshop. Experiencing the mentoring and the course allows an enormous contribution to the professional growth of the educator. Mentoring programmes should be adopted and developed as part of the professional training, not just for the benefit of the mentees but as a valuable resource that advances the growth of professionals.

We would also suggest expanding participation in academic mentoring SC to all mentors, and expanding the mentoring programme to all teacher education students. Mentoring should be included as an integral part of preservice teacher training programmes. The findings indicate that the level of professionalism of teacher education students, as well as their professional level in mentoring, greatly improved following the mentoring and SC experience.

At the national level, we suggest pooling resources, mediating and coordinating the various organizations that handle mentoring and their mentees, and enabling mentors to participate in a mentoring course. This would expand the contribution of mentoring beyond both mentees and mentors, to the level of the general education system. Thus, without investing any further costs, we can receive a product of substantially better quality.

References

- DuBois, D.L. (2005) 'Natural mentoring relationships and adolescent health: evidence from a national study', *American Journal of Public Health*, 95(3), 518-524.
- DuBois, D.L., and Rothwell, W. (2004) 'Competency-based or traditional approach to training?' *Training and Development*, 58(4), 46-57.
- Cordingley, P., Crisp, P., and Bell, M. (2005) Mentoring and Coaching capacity building project. Center for the Use of Research and Evidence in Education (CUREE), presented at ICSEI conference, Barcelona.
- Eisenberg, T., Fresko, B., and Carmeli, M. (1980) *Perach: A tutoring project for disadvantaged children*, Rehovot: The Weizmann Institute of Science.
- Fresko, B. and Carmeli, A. (1990) 'Perach: A nation-wide student tutorial project'. In S. Goodlad and B. Hirst (eds.), *Explorations in Peer Tutoring* (pp.73-81), Oxford: Basil Blackwell.
- Goodlad, S. (1998) 'Students as tutors and mentors'. In S. Goodlad (ed.), *Mentoring and tutoring by students* (pp. 97-101), NY: Knopf.
- Goodlad, S., and Hirst, B. (1989) *Peer tutoring: A guide to learning by teaching*, London: Kogan Page.
- Gray, M.A., and Smith, L.N. (2000) 'The qualities of an effective mentor from the student nurses perspective: findings from a longitudinal qualitative study', *Journal of Advanced Nursing*, 32(6), 1542-1550.
- Hardcastle, B. (1988) 'Spiritual connections: Proteges' reflections on significant mentorships', *Theory Into Practice*, 27, 201-206.
- Huling, L., and Resta, V., (2001) *Teacher mentoring as professional development*, Washington D.C.: ERIC Clearinghouse on Teacher and Teacher Education.
- Kagan, D. M. (1992) Professional Growth Among Preservice and Beginning Teachers, *Review of Educational Research*, 62(2), 129-169.
- Kiltz, G., Danzig, A., and Szecsy, E. (2004) 'Learner-centered leadership: A mentoring model for the professional development of school administrators', *Mentoring and Tutoring*, 12(2), 135-153.
- Lucas F.K. (2001) 'The social construction of mentoring roles', *Mentoring and Tutoring*, 9(1), 23-47.
- Miller, A. (2002) *Mentoring students and young people: A handbook of effective practice*, London: Kogan Page.
- Rhodes, J., Grossman, J., and Resh, N. (2000) 'Agents of change: Pathways through with mentoring relationships influence adolescent's academic adjustment', *Child Development*, 71, 1662-1671.
- Rhodes, L. E., Bogat, A.G., Roffman, J., and Galasso, L. (2002) 'Youth mentoring in perspective: Introduction to special issue', *American Journal of Community Psychology*, 30, 149-155.

References in Hebrew

- Fresko, B., Birenfeld, G., Harel, R., and Sasson, Z. (2001) *Mentoring in Teacher Training*, Tel-Aviv: Mofet Institute.
- Fresko, B. and Kobelski, R. (1998). The involvement of educational counselors in the Perach Mentoring Project. In R. Lazovski and S. Feldman (eds.), *Space and Heritage in Educational Counseling* (pp. 333-355), Kfar Saba: Beit Berl College.
- PMP (1984) *A decade to the mentoring project, 1974-1984*, Rehovot: PMP Administration Press, Weizmann Institute of Science.
- PMP (2003) *The Complete Guide of the Perplexed for the PMP Coordinator*, Rehovot: PMP Administration Press, Weizmann Institute of Science.
- Shiloah, D. (1988) The professional tendencies of the PMP mentor, his areas of assistance, his degree of investment and the type of interpersonal relationship developed with his mentee, Ramat-Gan: Bar Ilan University, Department of Psychology.
- Sasson, Z. (1997) 'Mentoring Project (PMP) in teacher training institutions – a summoning factor in the prospective teacher's training', *Dapim*, 23, 112-116.
- Tzilik, A. (1989) *The influence of the types of organizational commitment on stress and its results among PMP coordinators*, MA dissertation, Tel-Aviv: Tel-Aviv University.
- Werthheim, C., Fresko, B., and Heischrick-Amosi, M.. (2003) *Three models of children mentoring as part of teacher training: differences in activities, contents, guidance and the contribution of the mentoring to the student teacher*, *Research Report*, Kfar Saba: Beit Berl College, Unit of Research and Evaluation in Teacher Education.
- Werthheim, C., and Fresko, B. (2002) *The meeting between mentor and mentee: the contribution of the PMP mentoring to the prospective teacher*, *Research Report*, Tel-Aviv: The Mofet Institute and the Teacher Training Division.
- Werthheim, C., and Fresko, B. (2000) *Prospective teachers' perception of the PMP mentoring in the context of their teacher training*, *Research Report*, Kfar Saba: Beit Berl College, Unit of Research and Evaluation in Teacher Education.