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Babeş-Bolyai University, Cluj-Napoca

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The Contribution of the Pre-Military Education Program to the Success of Its Graduates

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1. Relevant Theories of Learning and Development

The cognitive development theory of Piaget, the cultural social theory of Vygotsky, and the mediated learning theory of Feuerstein are central theories in the understanding of the role and significance of different figures in the learner's near environment and the promotion of the learner's cognitive development and different learning processes.

1.1 The Cognitive Development Theory of Piaget

Jean Piaget, a biologist by education, extensively researched the theoretical and empirical development of intellectual constructs and in this framework the different stages of thinking that children experience until they reach the logical thinking that characterizes adult thinking. In the cognitive development theory, Piaget formulated the main idea that children develop knowledge about the construction of reality and attempt to invent explanations of phenomena they encounter through the use of logic. These cognitive constructs are not arbitrary, since they are based on the physical reality and the development of the brain.

At the basis of Piaget's theory is the behavioral development, from an early stage to a more advanced stage (Geron, 1996; Plibel, 1970). As a biologist, Piaget compared the development of the intelligence to the physiological development. The person's cognitive abilities function and develop like the biological system.

One of the areas of Piaget's research focused on the study of the structure of the development of intelligence, with the differentiation between content and performances. Piaget saw intelligence to be a process of active adjustment to the environment, which is composed of two processes. The first process is the process of **assimilation**, in the framework of which the organism assimilates the conditions of the environment to the needs. The second process is the process of **accommodation**, in which the organism accommodates itself to the conditions of the environment (Ziv & Ziv, 2010).

The intelligence experiences natural development in certain regular stages. The order of the stages is common to all children, and every child has reciprocal activity between him and his environment, in the gradual transition from stage to stage. The age at which every child reaches each stage is not set.

1.2 The Sociocultural Theory of Vygotsky

The sociocultural theory of Vygotsky focuses on the environment as promoting learning. The sociocultural theory of Vygotsky was developed in the years 1924-1934 and emphasized the importance of society and culture in the individual's cognitive development. Vygotsky, unlike Piaget who identified universal stages of development, maintained that the child's cognitive development depends primarily on the influence of the lingual, cultural, and social environment.

According to Vygotsky (1962, 1978), the individual's cognitive role is built on the background of cultural structures. The differences between different people reflect differences that lie in cultural, social, and historical factors. In addition, Vygotsky proposed a developmental explanation of the high mental functions, including perception, attention, memory, thinking, and awareness as a part of his interest in the development of the awareness and the higher mental functions.

According to this explanation, the high mental functions are not innate and are not the product of exposure or maturation, but rather they are a product of the development of the brain, and this development depends on cultural, historical, and social contexts. The cognitive development, according to Vygotsky, is a product of the combination between the spontaneous development and the social interaction, until the stage of the lower psychological functioning, as in the example of feeling and movement. The development of the individual is a result of spontaneous internal processes that exist during the exposure to direct environmental stimuli. The next stage in which the individual acts to achieve high mental functioning requires social interaction with a skilled person.

1.3 The Mediated Learning Theory of Feuerstein

The Mediated Learning Theory of Feuerstein is a theory that addresses one of the most basic ways of learning, which explains the individual's cognitive development. It focuses on differences between individuals regarding their cognitive functioning (Feuerstein et al., 1979). Like Vygotsky's theory, at the basis of Feuerstein's theory is the assumption that the individual's cognitive structure develops in a dynamic process of interaction with the environment. For the environment to cause significant development, there is a need for a human mediator to assume a position between the stimulus and the learning organism, which will change and organize for him the sources of the stimulus and will provide them with meaning according to the certain intentions or goals that the mediator wants to convey to the child.

In the framework of the theory, Feuerstein (Feuerstein, Klein & Tannenbaum, 1991; Feuerstein, et al., 1979) added the significant distinction between two expressions of learning through which the individual develops: (1) learning under conditions of direct exposure to stimuli that does not include a process of mediation and (2) mediated learning. Learning that does not occur through direct exposure to stimuli is the result of a direct and unmediated encounter with the environment (S-R, a relationship of stimulus-response). In this encounter, the stimuli force themselves on the organism and flow into its system in a direct and unmediated manner.

Learning of this type is the most common in the person's life. It is especially active in the first years of life but lasts throughout the entire life.

The indirect learning or the mediated learning occurs when between the organism and the environment, which is flooded with stimuli, there is a figure, a parent or any other adult, with knowledge and experience, who aims to mediate for the organism the world around it and to make it more understood and meaningful. This is done through the changes that the mediating figure causes in the stimuli, so that they will suit the learning organism and enable it to absorb its environment and to respond easily to stimuli, thus leading eventually to the mental development (Feuerstein et al., 1979; Feuerstein, Rand, & Rynders, 1988).

2. Motivation , Self-Efficacy and Learning

2.1 Motivation and Learning

Motivation is a very important multidimensional structure in different learning processes. In recent decades, there is increasing recognition of the main role of the different processes of motivation in the success of students in their studies, including in processes of adjustment, attitudes towards the learning and the school, and so on (Pintrich & Schunk, 1996).

Different research studies in the educational field identify a consistent relationship between different measures of motivation and scholastic achievements (Braten & Olausen, 2005; Finney, Pieper, & Barron, 2004; Gottfried, 1985). As a rule, there is the trend that indicates that intrinsic motivation is linked to higher achievements in the studies, when extrinsic motivation is linked to less consistent performances. Most of these research studies provide support of the model of the continuum between intrinsic motivation, extrinsic motivation, and amotivation (Dweck, 1988; Gottfried, 1985; Waugh, 2002).

The motivation to enlist and the attitudes of youths to the military service have changed over the years as a result of the influence of political events and sometimes as a result of the general atmosphere (Strole, 2001; Tiargan, 2015). Nevertheless, over the years a certain trend of decline is apparent in the motivation to enlist displayed by the candidates for military service.

Research studies performed in the past indicate that the motivation to enlist will continue as long as the youths perceive the service as relevant and meaningful to the national security (Helman, 1999), which constitutes a source for the satisfaction of desires and personal needs, such as the example of experiences and professional and personal promotion. Other researches that examined the attitudes towards enlistment of graduates of pre-military programs identified that these programs constitute significant predictors of the individual's motivation for military service (Bachman, Segal, Freedman-Doan, & O'Malley, 1998, 2000; Cuttler, 2007; Eighmey, 2006; Griffith, 2008; Woodruff, Kelty, & Segal, 2006).

2.2 Self-Efficacy

The concept of self-efficacy was coined by Bandura (1977). It addresses the way in which the person evaluates and believes in his ability to perform a variety of behaviors that will lead to

a certain result in his life. Self-efficacy is defined as "the individual's degree of belief that he has the ability to organize and perform the behaviors that are required to achieve the results he desires" (Bandura, 1977, p. 3).

2.2.1 Components of Self-Efficacy

Self-efficacy is built and influenced by a number of sources related to the personal experiences and the influence of the environment on the individual. The perception of the self-efficacy is dynamic. According to Bandura (1997, 2012), there are **four sources** of information that influence the individual's sense of self-efficacy:

Performance Accomplishment

This source of this information is the most significant source and has the strongest influence on the determination of the degree of self-efficacy in the framework of which the self-efficacy is estimated and built. The self-efficacy is the outcome of the individual's experience.(Bandura, 1986; Zeldin & Pajares, 2000)

Vicarious Experience

This source of information constitutes another factor for the construction of self-efficacy, on the basis of the individual's observation and learning from the experience of others. (Bandura, 1997).

Verbal Persuasion

This source of information originates in feedback and assessment that the individual obtains from others. In the framework of this source of information, the influence on the degree of self-efficacy occurs when the individual is convinced by people who are perceived by him as believable and as experts in the ability to perform the task successfully.

Physiological States

The individual in the framework of the evaluation of his ability relies on different sensory, physiological, and emotional information (tremors, perspiration, pain, happiness, concern, worry, etc.). The individual's interpretation of his emotional and physiological arousal will constitute a

basis of information regarding his self-efficacy and will increase or reduce the sense of self-efficacy as a result.

2.2.2 Self-Efficacy in the Contexts of Education

Knowledge and cognitive competences are necessary for the attainment of academic achievements, but they themselves are not enough. Sometimes students have difficulties bringing themselves to invest the efforts required to cope with complicated tasks (Bandura, 1997), even when they know what to do. The student's belief in the mastery of study subjects and the successful performance of specific tasks in specific areas of knowledge and in the regulation of the learning and learning actions derive from the person's belief in his ability to perform a certain task in a certain context (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bong & Skaalvik, 2003; Schunk, 1991).

Self-efficacy is an important predictor of scholastic motivation and is found related to a wide variety of learning outcomes, as in the example of effort and perseverance in difficult tasks (Bandura, 1997; Caraway et al., 2003; Pintrich & Schunk, 2002) among high school students it was found positively related to involvement in learning, devotion, and scholastic performances (Pajares, 2003; Schunk, 1997, 2003).

2.2.3 Factors Related to the Decision to Continue to Post-High School Studies: The Social Cognitive Career Theory (SCCT)

The implementation of the idea of self-efficacy for the field of career development was first performed by Betz and Hackett (1981, 2006) on the basis of the concept of self-efficacy
They created the social cognitive theory for the career (SCCT). The theory proposes an explanation of way in which personal variables, as in the example of gender and achievements, act together with environmental variables, such as support, through focus on self-efficacy and expectations of results as personal cognitive variables as a part of the shaping of the person's career path. The theory assumes that self-efficacy, expectations for results, and areas of interest lead to the choice of career behavior (Lent et al., 1994). Different research studies based on this theory provided empirical support (Lent & Brown, 2008).

3. Technology, Education, and Military – The IDF in the Position of Mediator

3.1 Challenges of Manpower in the IDF

The technological system in the IDF is one of the critical systems in terms of strategy and size to the operations of the IDF on the battlefield (Zadok, 2009). The staffing of this system is complicated and very challenging. The system is characterized by low attractiveness in the recruits' opinion. The training of the soldiers serving in the technological system is based on previous technological knowledge and the engagement in it includes physical labor (Behavioral Sciences Division of the IDF, 2014).

The quantity and quality of the learners in technological education in the State of Israel, which have decreased in recent decades, directly influences the ability of the IDF to perform its tasks, both routine and emergency, in light of the gaps of staffing. The challenges of staffing manpower in the different IDF systems in general and in the technological systems in particular broaden as a result of the different processes that occur in the State of Israel, including the introduction of shortened service (from 36 months to 32 months) for the population of men in the IDF starting in the year 2015 (Elran & Shefer, 2015).

3.2 Pre-Military and College Education

The history of the institutionalized pre-military organizations is relatively short and vague, and they were not recognized as educational institutions until the beginning of the 20th century. In the Middle Ages, there was special education for the knights in training, and in the 18th century in Germany academies for knights were founded, essentially schools for noblemen's sons.

Different pre-military organizations were known in Germany under the Nazi regime, in the Soviet Union, and in Italy under the fascist regimes, as well as in most of the Arab countries, as a result of tendencies towards change and social revolutions, and in different societies around the world in this era. The rationale of the establishment of pre-military institutions is explained in the need for the protection of the country and the advantages innate in early pre-military training for the security of the State.

3.3 Pre-Military Education Programs - The IDF as Mediator

In the State of Israel, there is compulsory conscription for military service, as a result of the security reality of Israel since its establishment. This conscription is anchored in the Security Services Law [Consolidated Version], 1986, which arranges the directives on the enlistment into the IDF. The law defines and arranges the duty to perform military service of the citizens and permanent residents of the State of Israel. According to the Security Services Law (also known as the Defense Services Law), every person has the duty to appear according to the draft summons for registration, examinations, and recruitment into the security services (Knesset Website, 2014).

The term pre-military activity includes a wide range of definitions that derive from a comprehensive view of the different processes and the different factors. The military activity is a part of a wide constellation of preparatory activity for the military service that derives from the State Education Law, 1953.

The IDF defines the pre-military activity as a constellation of educational activities intended for candidates for the security service. The goal is to prepare young people for full service in the IDF and to educate them for social and civilian involvement.

Goals of the Program as Defined by the IDF – Education and Youth Corps

The main objective is to prepare the conscripts for the service in the IDF and to encourage them for meaningful service with emphasis on the roles of warfare and active participation in the processes of classification, placement, and recruitment to the IDF. The intermediate goals are:

1. To strengthen the value-based infrastructure – the love of the homeland and loyalty to the country, the value of service, and the feeling of mission.
2. To provide professional information and active experience of the candidate for security service in the components of the program.
3. To provide individualized accompaniment throughout the process of the recruitment of the processes of classification, placement, and recruitment.

CHAPTER II: RESEARCH DESIGN AND METHODOLOGY

This chapter presents the goals of the study, the research questions, hypotheses and methodology and the researcher considerations for choosing this research design and methodology.

1. Research Aims and Questions

1.1 Research Objective

The main goal of this research study is to examine the contribution and influence of the pre-military education program on the learners in the dimensions of self-efficacy, academic efficacy, academic motivation, motivation for military service, and motivation to continue to post-high school technological studies, as well as to complete the gap in the knowledge that exists in this unique field.

The research study seeks to examine the attitudes of the teaching and management staffs that work in the schools where the technological PMEP is implemented in the aspect of the contribution to the learners and to focus on the contribution of the PMEP as it is reflected in the eyes of the learners.

1.2 Research Questions

The research questions are:

- What are the factors involved in the decision to continue to post-high school technological studies before enlistment among students of the pre-military education program?
- What are the perception of the school principals and teachers regarding the contribution of the pre-military education program to students who learn in it?
- What is the contribution of the pre-military education program to the learners in the aspects of self-efficacy, academic efficacy, academic motivation, motivation for military service, and motivation to continue to post-high school technological studies?

To answer these questions, the research combined the quantitative and qualitative methods: questionnaires and in –depth interviews.

1.3 Research Stages

Stage Number		Goal	Research Population	Research Instruments	Methods of Data Analysis
Stage 1: Qualitative Research	Pilot	To examine the questions in the framework of the in-depth interview	5 students	In-depth semi-structured interviews	Qualitative content analysis – extraction of categories / main themes
	To examine the factors involved in the decision to continue to post-high school technological studies before enlistment among the students of the pre-military education program		10 students in the 10th, 11th, 12th grades 12 students in the 13th, 14th grades 11 teachers/school principals 8 military staff (accompanying officers, class commanders, area commanders)		
	To examine the perception of the school principals and teachers regarding the contribution of the pre-military education program to students		11 teachers/school principals		
Stage 2: Quantitative Research	Pilot	To find difficulties that may arise in the research itself	10 students	Questionnaires	Statistical analysis
	To examine how the pre-military education program influences the decision to continue to post-high school technological studies		100 students who learn in the framework of the pre-military program in the 10th-14th grades 100 students who learn in the regular technological program framework in the 10th-14th grades		
	To examine how the pre-military education program influences the self-efficacy, academic motivation and academic efficacy of the students of the pre-military education program				
	To examine how the pre-military education program influences the motivation for service in the Israel Defense Force				

2. Research Population and Sampling Method

The research study is a two-staged mixed methods research. In the framework of the research study, the researcher used both qualitative research instruments and quantitative research instruments. The analysis of the findings collected in the qualitative method was intended to shed light on the findings obtained in the quantitative part so as to support them or doubt them and was intended to contribute to the understanding of the process.

2.1 Population of the Qualitative Research

In the framework of the qualitative part of the research study, principals, teachers, military staff, and students who could contribute to the understanding of the contribution of the PMEP were interviewed. The school principals and teachers who were chosen have cumulative experience of a number of years in the PMEP (between four and ten years, when the decisive majority have more than seven years of experience), have performed different roles (homeroom education, grade coordinator, management) that enable a broad perspective of the influences of the PMEP, and they have a contribution to the understanding of the topic.

The military staff in part (with emphasis on the area commanders and the adopting officers), like the teachers and principals, have a number of years of experience in the PMEP (between five and eight years) in different institutions and have great cumulative experience. The class commanders as a result of their being soldiers in regular service have relatively limited[1] maximum experience, and for the purpose of the research study, commanders (men and women) who have the maximum contribution were chosen, in light of their experience and cumulative seniority.

The population of students interviewed by the researcher was chosen with the help of the principals, teachers, and military staff and is a population that can contribute to the research. The number of tenth grade students interviewed in the research is lower than the number of students interviewed in the other grades, from the understanding that the contribution of the interviewees

[1] Compulsory service in Israel: three years of service for males, two years of service for females in the discussed period of this research study.

from the lower grades is relatively low and the cumulative knowledge is relatively low, in light of the limited stay as students in the PMEP.

Therefore, the research population at this stage included[2]:

- 22 students in the 10th to the 14th grades, who learn in the PMEP framework.
- 11 teaching staff members (teachers and principals) who work in the school where a PMEP is operated and who are experts in this field, as a result of their cumulative experience.
- 8 military staff members who accompany the students in the PMEP framework.

Preliminary Research Study

Before the full research study was performed, interviews were conducted for five students, so as to examine the questions in the framework of the semi-structured interviews. After the interviews were held, the researcher made a slight change in the list of questions built ahead of time in light of the lessons learned.

2.2 Population of the Quantitative Research

To focus on the influence of the PMEP in the aspects of the motivation for further studies, motivation for military service, and the influence on the self-efficacy, academic efficacy, and academic motivation, questionnaires were distributed (which will be described in detail in the research instrument section) to two different groups of students who have an identical pedagogical profile. The goal is to examine the differences between them.

The first group includes the students of the PMEP (high school and post-high school students) and the second group includes the students of the regular technological program (high school and post-high school students).

The research population in this stage included:

[2] Further discussion of the research population will be presented in the framework of the qualitative research.

- 100 students in 10^{th} to 14^{th} grades, from two schools in the north of the country (a high school for students in the 10^{th} -12^{th} grades and a post-high school for students in the 13^{th}-14^{th} grades) who study in the PMEP framework.
- 100 students in the 10^{th}-14^{th} grades, from two schools in the north of the country (a high school for students in the 10^{th} -12^{th} grades and a post-high school for students in the 13^{th}-14^{th} grades) who study in the regular technological program.

The number of students who study in the PMEP chosen is a representative number relative to the general number of learners. The researcher in the framework of the research study turned to the different school principals who were included in the research, and the school principals welcomed the research study and cooperated fully.

Preliminary Study

Before going to perform the full research study, a pilot study was performed for a group of ten students. In this framework, the research questionnaires were examined in different aspects, so as to discover possible problems in advance possible problems that may arise. Analysis of the results of pilot study did not indicate issues that required the researcher to make any change. All the students agreed to participate and filled out the questionnaires.

3. Research Instruments

This research study is built as a mixed research study including a quantitative research and a qualitative research. This mixed research study, which includes different research methods for the collection of data, is steadily becoming more popular in the social sciences and psychology (Hanson, Creswell, Clark, Petska, & Creswell, 2005).

The starting assumption in this work argued that the understanding of the researched phenomenon, namely the contribution of pre-military activity, requires the combination between quantitative measurement instruments and qualitative measurement instruments.

The quantitative research instruments may provide precise and measurable quantitative data (research questions for the population of students who learn in the PMEP framework and students who do not learn in this framework) and qualitative research instruments (semi-structured in-depth interviews) will enable the completion of the picture for the experience of the research participants that cannot be measured in quantitative means (Shkedi, 2003). The combination of the different methods will enable a broader range of results.

3.1 Qualitative Research Instrument: In-Depth Interviews

The in-depth interview enables the respondents to express their perceptions and is one of the common ways through which it is possible to understand people's behavior. "The interview is a means with weight to help people make open things that had been for them concealed – to express their perceptions, thoughts, and their implicit understandings." (Arksey & Knight, 1999, p. 32). The interview enables the creation of empathy and connection and enables the interviewee and interviewer flexibility in the coverage of the researched phenomenon (Fontana & Frey, 2005).

In the qualitative part of the research, 22 students, 11 teachers and principals, and 8 military staff were interviewed, from the understanding that each one of the participants is a unique case that presents the researched phenomenon from his unique perspective (Stake, 2005) and that each one of the participants may contribute significantly (Polkinghorne, 2005).

In the framework of the interviews, an attempt was made to learn about the contribution of the pre-military activity to its graduates and the perceptions of teachers and principals, students, and military staff with characteristics that represent the research population and to focus on in-depth processes that occur in it. This part of the research examined the following questions:

- What are the factors involved in the decision to continue to post-high school technological studies before enlistment among students of the pre-military education program?
- What are the perception of the school principals and teachers regarding the contribution of the pre-military education program to students who learn in it?

3.2 Quantitative Research Instrument: Questionnaires

As aforementioned, the quantitative part of the research study included two hundred students in grades ten to fourteen. One hundred students in grades ten to fourteen studied in the PMEP framework, while another one hundred students studied in grades ten to fourteen in the framework of the regular technological program. In the framework of the quantitative analysis, the researcher sought to examine the differences between the two groups, in self-efficacy, academic efficacy, academic motivation, motivation for the continuation of the post-high school studies, and motivation for military service.

The research instruments used by the researcher in the framework of this research study were questionnaires. In the framework of the quantitative chapter, the researcher used six different questionnaires, when each one of them examines another field in the contribution of the pre-military activity to the learners. Therefore, the researcher sought to answer different questions and hypotheses. The questionnaires were translated into Hebrew, with the exception of the self-efficacy questionnaire of Chen and Gully (1997) and the attitudes towards enlistment questionnaire (Behavioral Sciences Department, 2016), which already existed in the Hebrew language and did not require translation. The questionnaires were chosen in light of their possible contribution to the present research study.

The questionnaires that were distributed in the present research study are the following:

- Self-Efficacy Questionnaire for Children (SEQ-C), Muris (2001)
- General Self-Efficacy Scale, Chen and Gully (1997)
- Propensity to Serve and Motivation to Enlist among American Combat Soldiers, Woodruff, Kelty, and Segal (2006)
- Autonomous, Controlled, and Amotivated Types of Academic Motivation: A Person-Oriented Analysis, Ratelle, Guay, Vallerand, Larose & Sene'cal (2007)
- Self -Efficacy, Stress, and Academic Success in College, Zajacova, Lynch, and Espenshade, (2005)
- Attitudes of Candidates for the Defense Service towards the Military Service, Department of Behavior Science, 2016

4. Method of Data Analysis

4.1 Quantitative Analysis

All the statistical analyses conducted in the research study and described here were performed by an expert statistician.

- Descriptive statistics – Distributions, means, and standard deviations
- Analysis of internal consistency – The internal reliability of the research questionnaires was examined by the calculation of Cronbach's alpha indices.
- T-test analysis – This was performed between the means of the different research variables on general data
- Calculation of correlations – Pearson correlations were calculated to find relationships between the research variables and the sub-variables of the research study. Pearson correlations were also calculated to find the relationship between the differences of the research variables.

4.2 Qualitative Analysis

Givton (2001) maintains that the analysis of the data in qualitative research is an "analytical process, generally not statistical, with intuitive elements or characteristics, the goal of which is to provide meaning, interpretation, and generalization to the researched phenomenon" (Givton, 2001, p. 195). In the framework of the process of the analysis of the data, the researcher seeks to provide an answer to different questions such as 'what?' 'how?' and 'why'? (Dey, 1993).

This process is a process of the structuring of information collected and its re-arrangement through the creation of interpretation and the understanding of the derived meanings. In this framework the researcher used a semi-structured interview, which enables a methodical examination of the main ideas that arose in the research setting, from the flexibility that enables extension and focus on the unexpected points that were not planned ahead of time.

In the work, the researcher presented passages of data collected from the semi-structured in-depth interviews that appear to belong to the same phenomenon for groups and in this

framework created categories based on classification and enabling the findings of the meaning of the data and identification of different patterns of action of the respondents (Shkedi, 2003). The different categories were built on the basis of the research questions.

5. Ethical Issues

In qualitative research there is especial meaning to the issue of the relations between the interviewer and interviewee. This reality obligates the researcher to have maximal relations of trust as a starting point for the comprehensive and complete understanding. “As the researcher is found more among the subjects, his relationships with them become less official, the researcher is found between them not as a person who wants to be similar to them but as a person who wants to know who they are” (Sabar Ben Yehoshua, 1990, p. 47).

When conducting the research, the researcher had two main work assumptions. The first was to maintain the anonymity and privacy of the research respondents, while the second was to prevent harm to the respondents or the trust they placed in the researcher. (Dushnik & Sabar Ben Yehoshua, 2001). The research participants have the freedom to choose whether to participate in the research and the freedom to leave it at any time.

The statistical data processing in this research study was performed without mention of the names of the students and institutions that participates in the research. Rather, pseudonyms were used. All the information was saved on the researcher’s computer under a password that only he knows and that prevents access to this information. The research study was performed after the approval of the school principals was obtained, as customary. All the participants in the research study received detailed explanations about the research study and its goals and about confidentiality and anonymity. They were promised that their data would remain anonymous.

All the research participants consented to participate in the research study and signed a document of informed consent before the research study was held. Not a single participant refused to fill out the question or be interviewed.

CHAPTER III: RESEARCH FINDINGS

This chapter presents the research findings regarding the research questions and research hypotheses. The chapter presents quantitative and qualitative findings about the contribution of the PMEP to the learners

1. Quantitative Findings

1.1 Data collected in relation to the research population

The research population included two hundred (200) students, who are divided equally between students who learn in a technological program in the pre-military education program (PMEP) and students who learn in the regular technological program. The research population is divided by age. Every group (every sampling) is divided equally into five age groups on the basis of the grade in which the students learn: high school students from the tenth to the twelfth grades and students who learn post-high school studies for the degree of technician (thirteenth grade) or practical engineer (fourteenth grade).

1.2 Discussion on Findings Emerging From the Research Hypothesis

1.2.1 Discussion on Findings Emerging From the Research Hypothesis 1

The level of motivation for military service, the level of motivation for the continuation of post-high school technological studies, the level of self-efficacy, academic efficacy and the academic motivation, and the level of achievement of students in the pre-military education program will be higher than that of students in the regular technological program..

To examine this research hypothesis, the attitudes of the students from both research groups were compared using the t-test for independent samples. The results of the comparison are presented in the following table.

Table Number 1: t-Test for the Comparison of Means between Independent Samples regarding Academic Motivation, Self-Efficacy, Stress, Self-Confidence, and Attitudes towards the Service in the IDF according to the Research Group

		Group				t
		Regular Technological Program		PMEP		
		Mean	SD	Mean	SD	
Academic Motivation	Intrinsic	3.02	0.97	4.02	0.80	7.929**
	Identification	3.39	0.82	4.27	0.67	8.349**
	Introjected	2.58	0.95	3.05	1.05	3.278**
	External	3.76	0.88	4.19	0.77	3.589**
	Lacking motivation	1.83	0.88	1.17	0.43	6.747**
Stress	Stress from interactions in the school	3.23	1.43	1.59	0.87	9.764**
	Stress from performances outside the class	4.47	1.57	2.19	1.20	11.575**
	Stress from performances in the class	5.72	1.87	3.21	1.89	9.443**
	Stress from home & family	4.46	1.72	2.34	1.34	9.695**
Self-Confidence	Self-confidence in interactions in the school	6.65	1.84	9.34	0.81	13.405**
	Self-confidence in performances outside the class	6.31	1.52	9.25	0.73	17.483**
	Self-confidence from performances in the class	6.11	1.65	9.03	0.94	15.374**
	Self-confidence in the home & family	6.13	1.57	8.95	1.02	15.044**
Self-efficacy	Academic self-efficacy	3.32	0.56	4.42	0.41	15.954**
	Social self-efficacy	3.69	0.63	4.57	0.40	11.960**
	Emotional self-efficacy	3.36	0.61	4.41	0.47	13.749**
	Self-efficacy	3.55	0.55	4.69	0.32	17.939**
Motivation for military service	Attitudes towards IDF enlistment	3.22	0.78	4.57	0.39	15.470**
	Patriotism	3.27	0.82	4.21	0.61	9.263**
	Livelihood & employment	2.78	0.86	2.96	0.94	1.448

p<.05 * ,p<.01 **

The finding is that the level of academic motivation of PMEP students is significantly higher than that of students of the regular technological program. The finding is therefore that the level of stress of the PMEP students is significantly lower than that of the students of the regular

technological program. The finding indicates that the level of self-confidence of the PMEP students is significantly higher than that of the students of the regular technological program.

The finding is that the level of self-efficacy of the PMEP students is significantly higher than that of the students in the regular technological program. The finding is that the attitudes towards the enlistment in the IDF are more positive among the PMEP students and thus too the perception of patriotism as a motivational factor for military service in relation to the students of the regular technological program. Simultaneously, the findings do not indicate a significant difference in the perception of the consideration of future livelihood and employment between the two groups as a motivational factor of military service.

In addition, it was found that a statistically significant higher percentage ($\chi^2_{(1)}$=26.611, p<.01) of PMEP students (90%) reported the intention to continue to technological studies before the enlistment in the IDF, as opposed to a percentage of 58% of the students in the regular technological program. It is possible to conclude from these findings that there is greater willingness to continue to post-high school technological studies before the enlistment among the PMEP students than among the students in the regular technological program.

To examine the existence of the differences in the achievements of the students from the two research groups, their grades were compared in the three subjects using the t-test for independent samples. The results of the comparison are described in the following table.

Table Number 2: t-Test for the Comparison of the Means between Independent Samples regarding the Students' Achievements according to the Research Group

	Group				t
	Regular Technological Program		Pre-Military Education Program		
	Mean	SD	Mean	SD	
English	82.1	(10.5)	85.2	(9.4)	2.181*
Mathematics	80.6	(12.2)	85.3	(10.6)	2.887**
Leading Technological Subject	81.8	(10.7)	86.0	(9.4)	2.945**

p<.05 * ,p<.01 **

The finding is that the level of academic achievements of PMEP students is significantly higher than that of the students of the regular technological program. The findings indicate that the research hypothesis was confirmed.

1.2.2 Discussion on Findings Emerging From the Research Hypothesis 2

A positive relationship will be found between the level of academic efficacy and level of self-efficacy of the students of the pre-military education program.

To examine the hypothesis and in the continuation of the following table, the correlation coefficients were examined between the dimensions of self-efficacy and the dimensions of academic efficacy for both research groups. The following table presents the results of the analysis.

Table Number 3: Correlation Coefficients (Pearson) for the Examination of the Relationship between the Perception of Self-Efficacy and Academic Efficacy

	Regular Technological Program			Pre-Military Education Program		
	Academic Self-Efficacy	Social Self-Efficacy	Emotional Self-Efficacy	Academic Self-Efficacy	Social Self-Efficacy	Emotional Self-Efficacy
Self-Efficacy	.486**	.431**	.438**	.551**	.528**	.416**

p<.05 * ,p<.01 **

Regarding the PMEP students, the analysis shows that there is a significant positive correlation between the level of self-efficacy and the level of academic self-efficacy (r=.551, p<.01), the social self-efficacy (r=.528, p<.01), and the level of emotional self-efficacy (r=.416, p<.01). These findings indicate a close positive relationship between the perception of self-efficacy of the PMEP students and the perception of their academic self-efficacy, according to the second research hypothesis. Similarly, regarding the students of the regular technological program, the analysis indicates that there is a significant positive correlation between the level of self-efficacy and the level of academic self-efficacy (r=.486, p<.01), the social self-efficacy (r=.431, p<.01), and the level of emotional self-efficacy (r=.438, p<.01).

These findings constitute confirmation of the existence of a positive relationship between the perception of personal self-efficacy and the perception of academic self-efficacy among students from both groups. The findings show that the second research hypothesis was confirmed.

1.2.3 Discussion on Findings Emerging From the Research Hypothesis 3

A positive relationship will be found between the level of self-efficacy and the motivation for military service of students of the pre-military education program..

To examine the hypothesis, the correlation coefficients between the dimensions of self-efficacy and the attitudes towards the military service were examined.

Analysis of the data regarding the attitudes of the PMEP students regarding the enlistment in the IDF found that there is a significant positive correlation between these attitudes and the level of academic self-efficacy ($r=.384$, $p<.01$), the level of social self-efficacy ($r=.310$, $p<.01$), and the level of emotional self-efficacy ($r=.312$, $p<.01$). Similarly, among the PMEP students it was found that there is a significant positive correlation between motivation, patriotism, and enlistment and academic self-efficacy ($r=.368$, $p<.01$), level of social self-efficacy ($r=.385$, $p<.01$), and level of general self-efficacy ($r=.432$, $p<.01$).Analysis of the data regarding the students in the regular technological program in relation to the enlistment in the IDF found that there is a significant positive correlation between these attitudes and the academic self-efficacy ($r=.199$, $p<.05$) and the level of general self-efficacy ($r=.256$, $p<.01$).

Similarly, a significant positive correlation was found among the students in the regular technological program between patriotic motivation to enlist and level of general self-efficacy ($r=.209$, $p<.05$) These findings constitute confirmation of the existence of a positive relationship between the students' perception of efficacy and their attitudes towards the enlistment, as well as towards the patriotism as a factor that motivates enlistment. However, it is clear that among the PMEP students the aspect of patriotism is more significantly expressed than among students of the regular technological program. The findings show that the research hypothesis was confirmed.

2. Qualitative Analysis

In the present chapter, the main findings are presented as they arose from the analysis of the interviews performed with the teaching staff (principals, teachers) in the school where there is a pre-military education program (PMEP), with students who learn in this framework and with the military staff (class commanders, area commanders, accompanying officers) who accompany them as an inseparable part of the program. The findings of this chapter come to answer two main questions, as follows:

- What are the perception of the school principals and teachers regarding the contribution of the pre-military education program to students who learn in it?
- What are the factors involved in the decision to continue to post-high school technological studies before enlistment among students of the pre-military education program?

For the purpose of this chapter, 22 students in grades ten to fourteen, 11 teachers and principals, and 8 military staff members were interviewed. In the framework of the interviews, the interviewees described in their language the contribution of the pre-military activity as it is reflected in their eyes. All the interviews were recorded and transcribed, and in the framework of the process of the analysis main themes were extracted that will be described in the present chapter. The products of this chapter will constitute the basis of interpretation in the chapter of the discussion.

Division into Categories

Question	Categories	Secondary Categories	Secondary Subcategories
What are the perception of the school principals and teachers regarding the contribution of the PMEP to students who learn in it?	The influence of the PMEP on the professional and personal life	Supportive setting	• Change and influence • Resources • Learning and achievements • Accompanying staff • Uniqueness
		Future horizon	• Military service • Post-high school studies • Profession and occupation

2.1 Finding on the Perception of the School Principals and Teachers regarding the Contribution of the PMEP to the Students Learning in It

The research findings, as arising in the framework of the interviews on the perceptions of the school principals and teachers about the contribution of the PMEP in the different aspects, address the influence of the PMEP on the individual's professional and personal life. These findings focus on two main dimensions: supportive setting and future horizon.

- The first part focuses on the contribution of the PMEP to the individual himself on the personal level as deriving from the supportive setting.
- The second part focuses on the future horizon on the individual in the dimensions of the military service, post-high school studies, and employment.

The supportive setting, as reflected in the statements of the teachers and the principals, touches directly on different issues that cause the influence on the individual himself on the personal level and constitute a significant factor, including in the issue of the financial and human resources that are invested in the individual, which cause a change in the learning aspects and the achievements.

The future horizon, as expressed, addresses the individual's future in the short term and long term and addresses the issues pertaining to the studies, military service, and future employment.

2.2 Factors Involved in the Decision to Continue to Post-High School Technological Studies

In this question, I sought to clarify what are the motives for which the learners continue in the PMEP for post-high school technological studies before their enlistment into the IDF. The interviewees described to me the different ways that led them to this decision. Some of the interviewees brought up reasons that were voiced in some of the interviews, and some were consistently repeated in most of the interviews. Some of the interviewees indicated more than one reason.

Division into Categories

Question	Categories	Secondary Categories	Secondary Sub-categories
What the factors involved in the decision to continue to post-high school technological studies before enlistment among students of the pre-military education program	External Motives	Influential Figures	
		Accompaniment & support	Scholastic & economic support
		Better future	• Military service • Profession & occupation • Education
	Internal Motives	Personal development	
		Curiosity & influence	

The findings of the research study that address the examination of the factors involved in the decision to continue to post-high school technological studies among the graduates of the PMEP are divided into two main categories: internal motives and external motives. The internal motives address the individual's perceptions of the studies in the dimensions of curiosity, interest, and personal development and are directly related on the level of curiosity and interest, which the individual draws from his present studies and in general. The external motives address the reasons related to the individual's future, both in the short term and in the long term, his ability to obtain scholastic and economic support, which make the process of learning and the acquisition of education more worthwhile, and his identification with different figures of influence, such as parents, commanders, and teachers.

CHAPTER IV: DISCUSSION OF FINDINGS

The present research study, titled *The Contribution of the Pre-Military Education Program to the Success of Its Graduates,* sought to examine the influence of the pre-military platform on the individual learning in the program in different subjects, including scholastic achievements, level of motivation for military service, the motivation to continue to post-high school technological studies, academic motivation, self-efficacy, and academic efficacy. In addition, the research study sought to examine the attitudes of the teachers and principals who work in the program.

The research findings indicate the improvement of the students in the PMEP relative to other students in different dimensions and shed light on the contribution of the program and the reasons for which students choose to continue to study in post-high school studies before they enlist as a result of their participation in this program.

1. Discussion of Findings Related to the First Research Question

What are the perceptions of the school principals and teachers regarding the contribution of the pre-military education program to students who learn in it?

Analysis of the research findings indicates that the contribution of the PMEP to the students who learn in it is expressed, in the opinion of the principals and the teachers, as a model that empowers the individual in different areas. The program constitutes a supportive framework both in the economic dimension and in the scholastic dimension.

1.1 Finding 1: Supportive Setting

The supportive setting constitutes a supportive factor that helps and influences the student. The supportive setting in the PMEP is primarily economic resources and personnel resources that support the individual in the framework of his studies and constitutes an empowering and motivational factor in the personal and scholastic dimensions as an inseparable part of the existence of the PMEP and preparation for the military service.

The research findings support the previous research findings that indicate that the accompaniment and support constitute a factor that influences the individual as found in the research study performed by the Research Institute of the Israeli Knesset (Vargan, 2008) about the pre-military preparatory programs and their influence on the adolescents who participate in them. The study presented that the preparatory program is an empowering platform that increases the young people's fulfillment in the IDF twice as much as that of the rest of the population.

The conclusion from the discussion is that the supportive setting is perceived by the principals and the teachers as a factor that helps the individual and has a positive impact.

1.2 Finding 2: Change and Influence

The teachers and the principals see the program to be a factor that induces a change in the student in different areas.

Analysis of the interviews indicates that this field that addresses the individual himself is perceived as important and significant for the principals and the teachers. The increase of the sense of efficacy and the creation of discipline, order, and organization around a regular daily order cause a change in the individual, according to the statements of the teachers and principals, which is expressed clearly and even influences additional different areas such as learning and achievement.

The principals and the teachers attributed the change in the increase of the discipline as a whole both on the personal level in the student and in the class constellation. The increase of discipline is performed 'hand in hand' and in synergy with all the combined factors, so as to create uniformity. This change enables the promotion of the individual and the general in different dimensions.

The professional literature greatly discusses self-efficacy and its influence on the individual. The student's sense of self-efficacy is a significant component with influence on the continuation of his personal and academic development in the continuation of his life. A person with high self-efficacy is characterized by great perseverance with the goals he has set for himself (Bandura, 1997).

The quantitative findings support and reinforce the qualitative findings that arose from the interviews with the teachers and the principals. It is possible to see from the comparative examination of the research groups that the level of stress of the PMEP students in the aspect of interactions in the school, the level of stress in the performances outside and inside the class, and the level of stress from the home and the family are significantly lower than those of students in the regular technological program. In addition, the levels of self-confidence of the students of the PMEP in the aspects of interactions in the school, performances inside and outside the class, and with the home and the family are higher significantly than those of students of the regular technological program.

Examination of the level of self-efficacy indicated that the general level of self-efficacy, the level of academic self-efficacy, and the level of emotional and social self-efficacy of the students in the PMEP are significantly higher than among the students of regular technological education.

The conclusion is that the PMEP creates a change in the student and influences him in different dimensions, including self-efficacy, academic efficacy, discipline, learning, self-confidence, personal responsibility, and so on.

1.3 Finding 4: Learning and Achievements

The PMEP enables learning processes that lead to achievements. The school, since it is an educational institution that aspires to instill an education and values, measures the learner in its walls in different ways. The interviewees' statements indicate that the PMEP as a result of its configuration and the possibilities it instills enables learning processes that lead to clear achievements.

The ability of the principals and the teachers to examine the change that is performed and to quantify it indicates the educational scholastic process that is occurring. "In scholastic terms in the past about 60% of the students in the class were eligible for the high school matriculation certificate, and today with the military cover we reach the situation of 90-5% eligibility for the high school matriculation certificate, and this is wonderful."

The interviewees' statements indicate that there is agreement regarding the positive change experienced by the individual on the one hand and the class constellation on the other hand in the dimensions of learning and achievement.

The findings of the research study support the findings of previous research studies that show that pre-military programs enable learning processes that lead to achievements, as found in a research study conducted in Israel on behalf of the Ministry of Employment, Trade, and Industry, which examined the percentage of the people eligible to obtain the degree of practical engineer among the learners in the PMEP in relation to the general population.

This research study found that the percentage of people entitled to a diploma of practical engineer among the pre-military program graduates was 37% higher than this percentage among those who did not study in the framework pre-military program (Porat, 2012). This fact indicates the learning processes that occur and enable the maximization of the scholastic achievements.

2. Discussion of Findings Related to the Second Research Question

What are the factors involved in the decision to continue to post-high school technological studies before enlistment among students of the pre-military education program?

The analysis of the interviews with the students, military staff, and teachers and principals indicates that the factors involved in the decision to continue to post-high school technological studies before enlistment into the IDF as expressed and reflected in the interviewees' statements pertain to two main motives, extrinsic motives and intrinsic motives, as well as their influence on the making of the decision to learn before the enlistment. The external motives addressed the figures of influence, the accompaniment, and the support (in the dimensions of the scholastic and economic assistance) and a better future (in the dimensions of the military service, occupation and profession, and education). The intrinsic motives addressed the personal development and curiosity and interest.

2.1 Finding 8: External Motives

The external motives have significant influence for the students in the making of the decision whether to learn before enlistment. The external motives, as arising from the interviewees' statements, are some of the reasons for which the students who learn in the PMEP choose to continue to post-high school studies.

It is apparent that the desire to imitate or alternatively to become similar and to replicate to a certain degree the life path of the **influential figures** that are significant for the learner as a result of his identification and evaluation constitutes an important part in the making of the decision.

The learner's understanding that he can receive **accompaniment and support** that include significant scholastic support in the post-high school continuation studies that have high financial value, similar to the support he received in his high school studies, including the possibility of receiving considerable financing of the tuition, constitutes a point in the framework of which the student understands that in the balance of cost and benefit he is found at a point at which he cannot lose. The potential possibility of the students to improve and better their lives and to open for themselves additional possibilities that did not necessarily exist for them beforehand in the dimensions of the military service and the acquisition of a profession and a job in the future, including the ability to acquire an education, constitutes additional satisfactory reasons for their choice to continue to learn.

The external motives as a category were segmented by the researcher as deriving from the process of qualitative analysis into secondary categories, in the framework of which the interviewees expressed their feelings.

2.1.1 Finding 8A: Influential Figures

The different figures found in the environment of the student in the PMEP have significant influence on the decision whether to learn before enlistment. The influential figures are the figures that the individual seeks to imitate and that are defined in the professional literature as figures "that act as an example or source for imitation for others" (Merton, 1995).

One of the reasons for which the student seeks to continue to post-high school technological studies before conscription revolved around this point. The findings of the research study support the findings of previous research studies as found in the research study of Gershgoren (2014), which proved that figures of imitation constituted a significant factor for students in the aspects of professional choices, scholastic achievements, and feeling of self-efficacy. The use of the interviewees of statements such as "I decided that I wanted to be like Orel" and "He is a person who understands the matter" and others clarify the depth of the relationship and the importance that the students give to their commanders, including their advice and recommendations. It is possible to see from the aforementioned that the students are influenced in their decision by different influential figures, who constitute figures of imitation. The conclusion that arises from the discussion is that the student's desire to be similar to different figures to whom he is exposed and with whom he holds different relationships constitutes for him a meaningful factor in the decision whether to study before he is conscripted.

2.1.2 Finding 8B: Accompaniment and Support

The learning and financial support constitutes for the student a very important factor in the decision whether to study before the enlistment.

The economic reality in Israel among certain populations and in certain cases constitutes a barrier that does not allow the continuation of studies. The economic and scholastic support that the students receive constitutes a main factor in their decision to continue to post-high school studies. Despite the learning challenge that is not simple the student understands that at his disposal there is available learning support that on the one hand enables him to succeed in the learning challenge and on the other hand enables him a safety net when required. (Vargan, 2008; Wininger, 2017) support the findings of this research study.

The conclusion that arises from the discussion is that the financial support and the overall accompaniment (financing of a considerable part of the tuition, scholastic assistance) constitute for the learner a significant 'safety net'. The challenges with which the student is required to cope significantly lessen, thus reducing the uncertainty and facilitating the making of the decision to learn significantly.

2.2 Finding 9: Internal Motives

The internal motives constitutes a complementary factor of the external motives in the student's decision whether to study before enlistment.

The internal motives constitute another component in the decision of the learners in the PMEP to continue in the post-high school studies. The desire of the learners to develop personally and to enrich themselves, including to satisfy their curiosity and the interest that they display in the technology on the one hand and the technological studies on the other hand, constitute a reason for the decision to continue to learn.

These motives, as expressed in the statements of the interviewees, engage in the 'soft' and less concrete areas and do not constitute an exclusive factor for which the learner will make the decision whether to continue to learn.

The internal motives as a category were segmented by the researcher as a process of the qualitative analysis into secondary categories in the framework of which the interviewees expressed their feelings.

2.2.1 Finding 9A: Personal Development, Curiosity, and Interest

The personal development and the technological scholastic challenge constitute for some of the students a factor in the decision whether to study before enlistment. Some of the interviewees presented their personal development as a point for which they made the decision to continue in their post-high school studies. The scholastic challenge and the desire to develop in the professional dimensions constituted an important part in their decision.

Their personal experience and their understanding that through the studies they develop and advance and in parallel shape and develop their personality is significant for them.

The conclusion that arises from the discussion is that the experience and professional and scholastic interest constitute for some of the students a factor in the decision whether to learn before they are conscripted into the IDF. Therefore, the choice of a profession that meets the individual's needs and follows his personal inclinations leads to personal wellbeing that is

expressed in motivation, satisfaction, perseverance, and achievements (Rounds & Tracey, 1990; Spokane, 1994). In addition, the individual's level of efficacy is one of the important predictors of scholastic motivation and has direct impact on performance (Graham & Pajares, 1999), on the degree of effort and perseverance (Pajares & Schunk 1999; Zeldin & Pajares, 2000), and on the degree of interest in academic issues among students (Schunk, 2003). This is commensurate with one of the research findings addressing the level of self-efficacy of the students in the PMEP that was found significantly high relative to the students of the regular technological program.

The primary finding, as expressed with regard to the present research question, indicates that the PMEP constitutes a factor with influence on their desire to continue to post-high school studies in the opinion of the students, the military staff, teachers, and principals as a result of the possibilities that it enables the learners in the material and support dimensions and in the ability to improve the future opportunities they face.

Summary of qualitative findings that address the first two research questions indicates that the attitudes of the teaching workers in the school where the PMEP operates are positive and that they see the PMEP as a positive and significant platform that constitutes a factor that empower and promotes in the different dimensions. In addition, it is possible to see that the PMEP, in its derivatives and influences, constitutes a significant factor that influences the individual's desire to study post-high school technological studies before his enlistment.

3. Discussion of Findings Related to the Third Research Question

What is the contribution of the pre-military education program to the learners in the aspects of self-efficacy, academic efficacy, academic motivation, motivation for military service, and motivation to continue to post-high school technological studies?

3.1 Discussion of Findings Relating to Hypothesis 1.

The level of motivation for military service, the level of motivation for the continuation to post-high school technological studies, the level of self-efficacy and academic efficacy, the level of academic motivation, and the level of achievement of the PMEP students will be higher than those of the students of the regular technological program.

The research findings support the previous research findings, which are taken from the different empowerment programs that present that the empowerment program leads to high levels of self-efficacy, fulfillment of potential, and improvement of the self-confidence. The research studies of Passmore and Brown (2009) and Gould (2007) showed a significant increase in the level of self-efficacy, an improvement in the self-confidence, and the fulfillment of the potential among students who were examined in the framework of the academic coaching they experienced. Additional research studies in the field of self-efficacy (Baron & Morin, 2010; de Haan et al., 2013) found an increase in the level of efficacy of workers who underwent coaching processes. Other research studies showed that learners with high self-efficacy persevere in their studies, participate more actively in academic tasks, attain higher achievements, and experience a meaningful improvement in their emotions (Garcia & Pintrich, 1993; Linnenbrink & Pintrich, 2003; Schunk, 1994;; Zimmerman, 2000).

The findings of the qualitative research broaden the findings of the quantitative research relating to the influence of the PMEP on its learners. The different interviewees (students, teachers, principals, and accompanying staff) described in their words the contribution of the program as reflected in their eyes in the different dimensions. Statements such as "*We reach a situation of 90-95% eligibility for the high school matriculation certificate*" and "*increases the student's sense of responsibility and self-efficacy and increases his self-confidence*" indicate the contribution of the program in scholastic dimensions and the influence on the individual in additional fields, such as service. The conclusion from the discussion is that the level of motivation for military service, the level of motivation for the continuation to post-high school technological studies, the level of self-efficacy and academic efficacy, the level of academic motivation, and the level of achievement of the PMEP students is higher than those of the students of the regular technological program. Therefore, the findings of the quantitative and qualitative research confirm the research hypothesis.

3.2 Discussion of Findings Relating to Hypothesis 2.

A positive relationship will be found between the level of academic efficacy and level of self-efficacy of the PMEP students.

Analysis of the research findings indicates that there is a significant positive correlation between the level of self-efficacy and the level of academic self-efficacy of students of the PMEP. This indicates a close positive relationship between the perception of self-efficacy and the perception of academic efficacy.

The findings of the quantitative research are commensurate with the research hypothesis. Explanation of this finding can be found in the term self-efficacy, coined by Bandura (1977), and in its extension academic self-efficacy (Zimmerman, 1995). Different research studies indicated the contribution of self-efficacy among students and in connection to the increase in scholastic achievements (Bandura, Caprara, Barbaranlli, & Pastrolli, 1996; Chemers, Hu, & Garcia, 2001; Greene, Miller, Crowson, Duke, & Akey, 2004; Pintrich & DeGroot, 1990; Schunk, 1994; Sharma & Silbereisen, 2007; Zimmerman & Bandura, 1994). It is possible to see from the research literature that there is a relationship between level of self-efficacy and level of academic efficacy and that this supports the research findings.

The qualitative research findings broaden the findings of previous studies. The interviews indicate that the principals, the teachers, and the students together indicate the change in the sense of self-efficacy, which has implications on the individual's improvement in the different scholastic dimensions. Statements such as "*contributes to the student's sense of efficacy and empowers him and even changes him"* and *"My average rose from 70 to 88"* used by the principals, teachers, and students indicate that as a result of the participation in the program there is an increase in the students' belief and ability to achieve progress beyond the goals they set for themselves.

The conclusion from the discussion is that there is a relationship between the level of self-efficacy and level of academic self-efficacy of students who learn in the framework of the PMEP. The findings of the quantitative and qualitative research confirm the research hypothesis.

3.3 Discussion of Findings Relating to Hypothesis 3.

A positive relationship will be found between the level self-efficacy and the motivation for military service of students of the PMEP.

Analysis of the research findings about the attitudes of the students who learn in the framework of the PMEP indicates a significant positive correlation between the students' attitudes toward enlistment and the level of self-efficacy and level of academic self-efficacy, including the level of emotional and social self-efficacy. In addition, a significant positive correlation was found between patriotism and level of general self-efficacy, level of academic self-efficacy, and level of social self-efficacy.

The findings confirm the positive relationship between the students' perception of self-efficacy and their attitudes towards the enlistment and patriotism as a factor that motivates recruitment to the IDF. Self-efficacy was found to be an important predictor of scholastic motivation and was associated with a wide variety of scholastic outcomes (Bandura, 1997; Pintrich & Schunk, 2002), as in the example of effort and perseverance in difficult tasks (Caraway et al., 2003) and among high school students was found positively linked with involvement in learning, perseverance, and learning performances.

The influences of motivation, beyond the different learning dimensions, is expressed and sheds light on the individual's attitudes towards the military enlistment and service. Research studies that examined their attitudes towards the recruitment of the PMEP graduates identified that these programs constitute significant predictors of the individual's motivation for military service (Bachman Segal, Freedman-Doan, & O'Malley, 1998, 2000; Cuttler, 2007; Eighmey, 2006; Woodruff, Kelty, & Segal, 2006).

The conclusion that arises from the discussion is that the PMEP program empowers the individual's abilities in different dimensions in relation to students who learn in the regular technological program, including dimensions of motivation for military service. The findings of the quantitative research and the qualitative research confirm this research hypothesis.

CHAPTER V: RESEARCH CONCLUSIONS

The research study examined the contribution of the PMEP according to the research questions and the research findings. The findings presented that there is significance in the parameters examined for the students of the PMEP relative to the students of the regular technological program.

This chapter will present the factual and conceptual conclusions that derive from the research study and will present a work model that addresses the contribution of the PMEP. The chapter will focus on the contribution of the research to the knowledge in Israel and in the world. Last, the chapter will present the research limitations and will propose possible continuation researches.

1. Factual Conclusions

The discussion of the findings yielded the following conclusions.

1.1 The Accompaniment Setting and the Future Horizon as Causes of the Success of the Individual and the Program

The research findings indicate that the PMEP contributes to the individual in different dimensions, including motivation, self-efficacy, scholastic achievements, military service, and so on. The research findings indicate that the **relations between the student and the class commander** has considerable importance and that the accompanying military staff constitutes a most significant factor in the success of the program and in its ability to effect a change in the individual. These findings lead to a conclusion about the importance of the class commander, his personal abilities, and primarily his ability to fit into the school system as an equal, with the fulfillment and promotion of the shared vision.

1.2 The Making of Decisions among the Students as Deriving from External and Internal Influences

The research findings indicated the importance of internal and external factors to the decisions of the students in different areas. The division according to the research findings

indicated the importance of the external motives, which primarily referred to the possibilities the students have and their influence in different areas in the near and distant future.

1.3 Improvement and Empowerment as a Result of the Participation in the Pre-Military Education Program

The research findings indicated the contribution of the PMEP to the individual in different areas relative to the students of the regular technological program. One of the significant areas, as deriving from its importance in the professional literature, where an improvement is apparent, is **self-efficacy**.

The findings lead to the conclusion that the program as a whole, both because of the accompanying figures and because of the entire setting, enables the empowerment of the program students in relation to the other students in additional dimensions that allow the coping with learning challenges and other challenges, thus promoting the maximization of the individual's abilities. Another finding indicates the improvement in the students' achievements as a result of their participation in the PMEP.

2. Conceptual Conclusions

- The model that is the basis for the implementation of the program was proved to enable empowerment and improvement and to increase the motivation to serve and to continue to post-high school technological studies and thus outlines a possibility for a future technological career.
- The factors found to influence the success of the program and the learners included the relationship between the student and the commander. This relationship created security and built trust in the student and even constituted a catalyst in additional fields, as in the example of post-high school studies and military service as a part of the learner's identification and his desire to be similar to his commander.

3. Research Limitations

The research limitations are presented as follows:

1. Research Participants. The research participants do not represent the entire population, since most of the participants (86%) were boys. A minority of the participants (4%)

defined themselves as religious. These data limit the ability to generalize the research results to the population of women and the population that defines itself as religious.

2. Sampling.
   A. The quantitative research examined two groups of students, when one of them learns in the framework of the PMEP. The two groups were sampled from schools situated in the north of the country. It is necessary to address the possible influence of the research findings as deriving from the place of the school relative to different geographic areas as an outcome of unique phenomenon related to the geographic location.
   B. The nature of qualitative research is interpretative and subjective, thus constituting a point that should be addressed. In addition, the qualitative research included a relatively limited sample relative to the size of the population. It is necessary to address the aspect of the ability of limited generalization and concern for bias as a result of the phenomenon of social desirability.

4. Research Contribution to Knowledge

The IDF greatly engages in the promotion of PMEPs, with the investment of considerable financial and human inputs. However, few research studies have addressed the topic of the contribution and influence of the pre-military educational programs in Israel on their graduates. The present research study constitutes an innovation, for it enables an observation of the contribution of the pre-military educational programs to the graduate on the one hand and to the IDF on the other hand.

This research study is a pioneering research study in these issues in Israel. The present research study indicates the contribution of the pre-military educational program to its learners in different dimensions. It is possible to conclude from the research results that the pre-military educational program is effective among the high school and post-high school learners. The research findings strengthen the understanding that an outside platform, which includes mentoring, accompaniment, and support with resources, including symbolism (uniforms, etc.) enable the creation of a change that leads in a large number of cases to success.

The research study will enable the development of insights about the increase of the motivation for technological post-high school studies and the influence of the pre-military educational activity on its graduates' success. The realization of the research insights will allow the prevention of failures and barriers in the formation of instruments for the betterment of the process. This research study will enable the researcher and the Israel Defense Force to focus on the contribution of the pre-military activity, with the use of the research results as a tool for the improvement and betterment of the existing situation.

The research results will add knowledge about the possibilities embodied in the different preliminary programs to the professional literature and will allow these insights to be duplicated for other areas.

5. Recommendations for Future Research

1. It is necessary to plan the continuation studies that examine the level of initial self-efficacy of the students with their entry into the PMEP relative to their level of self-efficacy at the end of the program and its different influences relative to their success in the academic studies.
2. It is necessary to plan a continuation research study that examines the differences between the two groups of respondents in this research study (students in the PMEP, regular students) relative to their attitudes in the different dimensions and their integration into the IDF in the aspects of command, instruction, officer corps, permanent service, dropping out from service, and so on. A research of this type will enable the existence of a model that leads to meaningful service intended for defined objectives (such as officer corps, permanent service, etc.).

REFERENCES

Arksey, H., & Knight, P. T. (1999). *Interviewing for Social Scientists: An Introductory Resource with Examples*. Sage.

Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (1998). Does Enlistment Propensity Predict Accession? High School Seniors' Plans and Subsequent Behavior. *Armed Forces & Society*, 25, 59-80.

Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (2000). Who Chooses Military Service? Correlates of Propensity and Enlistment in the U.S. Armed Forces. *Military Psychology, 12*(1), 1-30.

Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavior Change. *Psychological Review*, 84, 191–215.

Bandura, A. (1986). Self-Efficacy/ In: A. Bandura, *Social Foundations of Thought and Action. A Social Cognitive Theory.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Bandura, A. (1997). *Self-Efficacy: The Exercise of Control.* New York: Freeman

Bandura, A. (2012). On the Functional Properties of Perceived Self-Efficacy Revisited *Journal of Management, 38*, 9-44.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted Impact of Self-Efficacy Beliefs on Academic Functioning. *Child Development*, 67, 1206-1222.

Baron, L., & Morin, L. (2010). The Impact of Executive Coaching on Self-Efficacy Related to Management Soft-Skills. *Leadership & Organization Development Journal, 31*(1), 18-38.

Behavioral Sciences Division of the IDF (2016). *Model of Compulsory Military Service: Examination of Processes of Change.* (Hebrew)

Betz, N. E., & Hackett, G. (1981). The relationship of career related self-efficacy expectation to perceived career options in college women and men. *Journal of Counseling Psychology*, 28, 399-410

Betz, N. E., & Hackett, G. (2006). Career Self-Efficacy Theory: Back to Future. *Journal of Career Assessment, 14*, 3-11.

Bong, M. & Skaalvik, E.M. (2003). Academic Self-Concept and Self-Efficacy: How Different Are They Really? *Educational Psychology Review, 15*, 1–40.

Braten, I & Olausen, B. S. (2005). Profiling Individual Differences in Student Motivation. *Contemporary Educational Psychology*, 30, 359-396.

Caraway, K., Tucker, C.M., Reinke, W.M., & Hall, C. (2003). Self Efficacy, Goal Orientation, and Fear of Failure as Predictors of School Engagement in High School Students. *Psychology in the Schools, 40*, 417–427.

Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic Self-Efficacy and First-Year College Student Performance and Adjustment. *Journal of Educational Psychology*, 93(1), 55-64.

Chen, G., & Gully, S. M. (1997, August). Specific self-efficacy, general self-efficacy, and self-esteem: Are they distinguishable constructs. *In 57th annual meeting of the Academy of Management, Boston.*

Cuttler, L. (2007). *Processes of Development of Leadership: Case Study of the Military Command Boarding School*, Haifa University. (Hebrew)

de Haan, E., Duckworth, A., Birch, D., & Jones, C. (2013). Executive Coaching Outcome Research: The Contribution of Common Factors such as Relationship, Personality Match, and Self-Efficacy. *Consulting Psychology Journal: Practice and Research*, *65*(1), 40.

Dey, I. (1993). *Qualitative Data Analysis*. London: Routledge.

Dushnik, L., & Tsabar Ben Yehoshua, N. (2001). Ethics of Qualitative Research, In Tsabar Ben Yehoshua (Ed.) *Traditions and Genres in Qualitative Research* (pp. 343-367), Dvir Press. (Hebrew)

Dweck, C. S., & Leggett, E. L. (1988). "A Social-Cognitive Approach to Motivation and Personality*, "in Psychological Review, 95*", pp. 256-273.

Eighmey, J. (2006). Why Do Youth Enlist? Identification of Underlying Themes. *Armed Forces & Society*, *32*(2), 307-328.

Feuerstein, R., & Feuerstein, S. (1991). Mediated Learning Experience: A Theoretical Review. In R. Feuerstein, P. S. Klein & A. Tannenbaum (Eds.) *Mediated Learning Experience* (pp. 3-51). London: Freund.

Feuerstein, R., Rand, Y., & Hoffman, M. B. (1979). *The Dynamic Assessment of Retarded Performers: The Learning Potential Assessment Device, Theory, Instruments, and Techniques*. Baltimore: University Park Press.

Feuerstein, R., Rand, Y., & Rynders, J.E. (1988). *Don't Accept Me as I am.* New York: Plenum Press.

Finney, S. J., Pieper, S. L., & Barron, K. E. (2004). Examining the Psychometric Properties of the Achievement Goal Questionnaire in a General Academic Context. *Educational and Psychological Measurement, 64*, 365–382.

Garcia, T., & Pintrich, P. R. (1993). *Self-Schemas, Motivational Strategies and Self-Regulated Learning*. Paper presented at the meeting of the American Educational Research Association, April, Atlanta, GA.

Geron, E. (1996). Intelligence of Child and Adolescent Participants in Sports. In: *The Child and Adolescent Athlete (Vol. 6).* Oxford: Blackwell Science Ltd.

Givton, D. (2001). The Theory Based in the Field: The Meaning of the Data Analysis Process Research and Theory in Qualitative Research. In Sabar Ben Yehoshua N. (ed.) *Traditions and Genres in Qualitative Research* (pp. 195-227), Tel Aviv: Dvir.

Gottfried, A. E. (1985). Academic Intrinsic Motivation in Elementary and Junior High School Students. *Journal of Educational Psychology, 77*, 631-645.

Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting High School Students' Cognitive Engagement and Achievement: Contributions of Classroom Perceptions and Motivation. *Contemporary Educational Psychology*, 29(4), 462-482.

Griffith, J. (2008). Institutional Motives for Serving in the US Army National Guard: Implications for Recruitment, Retention, and Readiness. *Armed Forces & Society*, *34*(2), 230-258

Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed Methods Research Designs in Counseling Psychology. *Journal of Counseling Psychology*, 52(2), 224.

Helman, S. (1999). Militarism and the Construction of the Life-World of Israeli Males: The Case of the Reserves System. *The Military and Militarism in Israeli Society*, 191-221.

Lent, R. W., & Brown, S. D. (2008). Social Cognitive Career Theory and Subjective Well-Being in the Context of Work. *Journal of Career Assessment, 16*, 6-21.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice and Performance. *Journal of Vocational Behavior, 45*, 79-122.

Linnenbrink, E., & Pintrich, P.R. (2003). The Role of Self-Efficacy in Student Engagement and Learning in the Classroom. *Reading and Writing Quarterly: Overcoming Learning Difficulties*, 19(2), 119–137.

Merton R. (1995). *On Theoretical Sociology: Five Essays, Old and New*. New York: The Free Press.

Muris, P. (2001). Self-Efficacy Questionnaire for Children (SEQ-C). Key References: A Brief Questionnaire for Measuring Self-Efficacy in Youths. *Journal of Psychology and Behavioral Assessment*, 23, 145-149.

Pajares, F., & Schunk, D.H. (1999). Self-Efficacy, Self-Concept and Academic Achievement. In: J. Aronson & D. Cardova (Eds.). *Psychology of Education: Personal and Interpersonal Forces*. N.Y.: Academic Press.

Pajares, F., (2003). Self-Efficacy Beliefs, Motivation, and Achievements in Writing: A Review of the Literature. *Reading & Writing Quarterly*, 19: 139-158

Passmore, J., & Brown, A. (2009). Coaching Non-Adult Students for Enhanced Examination Performance: A Longitudinal Study. *Coaching: An International Journal of Theory, Research and Practice*, *2*(1), 54-64

Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and practice*. Chapter, 5, 153-197.

Pintrich, P. R., & Schunk, D. (2002). *Motivation in Education: Theory, Research, and Applications* (2nd ed.). Upper Saddle, NJ: Prentice-Hall, Inc.

Pintrich, P.R. & DeGroot, E.V. (1990). Motivational and Self Regulated Learning Components of Classroom Academic Performance. *Journal of Educational Psychology*, 82, 33-40.

Plibel, J. H. (1970). The Developmental Psychology of Jean Piaget. Tel-Aviv: Ozar Hamore. (Hebrew)

Polkinghorne, D. E. (2005). Language and Meaning: Data Collection in Qualitative Research. *Journal of Counseling Psychology*, *52*(2), 137.

Porat, A. (2012). *The Graduates of the RAKIA Project of MAHAT (Government Institute for the Training in Technology and Sciences) and the IDF – The Satisfaction with the Studies for the Degree of Practical Engineer and the Occupational Situation of Graduates about Five Years after the End of Their Studies*. Ministry of Employment, Trade, and Economy. (Hebrew)

Ratelle, C. F., Guay, F., Vallerand, R. J., Larose, S., & Senecal, C. (2007). Autonomous, Controlled, and Amotivated Types of Academic Motivation: A Person-Oriented Analysis. *Journal of Educational Psychology*, 99 (4), 734-746.

Rolo, C., & Gould, D. (2007). An Intervention for Fostering Hope, Athletics and Academic Performance in University Student Athletes. *International Coaching Psychology Review*, 2(1), 44-61.

Rounds, J. B., & Tracey, T. J. (1990). From Trait and Factor to Person Environment Fit Counseling: Theory and Process. In: W. B. Walsh & S. H. Osipow (Eds.), *Career Counseling: Contemporary Topics in Vocational Psychology*. Hilldale, NJ: Erlbaum.

Sabar Ben Yehoshua, N. (1990). *Qualitative Research in Teaching and Learning*, Tel Aviv: Modan Press. (Hebrew)

Schunk, D. H. (1991). Self-Efficacy and Academic Motivation. *Educational Psychologist, 26*, 207-231.

Schunk, D. H. (1994). Self-Regulation of Self-Efficacy and Attributions in Academic Settings. In D.H. Schunk & B.J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 75-99). Hillsdale, NJ: Erlbaum

Schunk, D. H. (1997). *Self Monitoring as a Motivator Instruction with Elementary School Students.* Paper presented at the Annual Meeting of the American Educational Research Association. Chicago.

Schunk, D. H. (2003). Self-Efficacy for Reading and Writing: Influence of Modeling, Goal Setting and Self-Evaluation. *Reading and Writing Quarterly*, 19, 159-172.

Sharma, D., & Silbereisen, R. K. (2007). Revisiting an Era in Germany from the Perspective of Adolescents in Mother-Headed Single-Parent Families. *International Journal of Psychology*, 42, 46-58.

Shkedi, A. (2003). *Words that Attempt to Touch: Qualitative Research – Theory and Implementation*, Ramot Press, Tel Aviv University. (Hebrew)

Spokane, A. R. (1994). The Resolution of Incongruence and the Dynamics of Person-Environment Fit. In: M. L. Savickas & R. W. Lent (Eds.), *Convergence in Career Development Theories* (pp. 119-137). Palo-Alto. CA: Consulting Psychologist.

Stake, R. E. (2005). *Qualitative Case Studies*.

Strole, D. (2001). *The Proper Sources for Recruitment among Youths in light of the Security and Social Situation*, Lecture at the Conference on the Issue of Military and Youth, May, Ramat Gan: Bar Ilan University. (Hebrew).

Tiargan, R. (2015). Different Reflections of the Motivation to Serve in the IDF. In: M. Elran & G. Sheffer (Eds.) *Military Service in Israel: Challenges and Ramifications*. INSS: The Institute for National Security Studies, Strategic, Innovative, Policy-Oriented Research.

Vargan, Y. (2008). *Pre-Military Preparatory Programs*. March 25. Jerusalem: HaKnesset Center of Research and Information. (Hebrew)

Vygotsky, L. S. (1962). Language and thought. Massachusetts Institute of Technology Press, Ontario, Canada.

Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Waugh, R. F. (2002). Creating a Scale to Measure Motivation to Achieve Academically: Linking Attitudes and Behaviors Using Rasch Measurement. *British Journal of Educational Psychology*, 72, 65-86.

Wininiger, A. (2017). *Pre-Military Preparatory Programs*. October 23. Jerusalem: HaKnesset Center of Research and Information. (Hebrew)

Woodruff, T., Kelty, R, & Segal, D. R. (2006).Propensity to Serve and Motivation to Enlist among American Combat Soldiers. *Armed Forces & Society,* 32 (3), April.

Zadok, S. (2009). *Technological Education in Israel and Its Influence on Ordnance Corps*, Center of Research, College of National Security, Haifa University. (Hebrew)

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-Efficacy, Stress, and Academic Success in College. *Research in Higher Education*, 46 (6), September.

Zeldin, A. &. Pajares, F. (2000). Against the Odds: Self-Efficacy Beliefs of Women in Mathematical, Scientific, and Technological Careers. *American Educational Research Journal*, 37(1), 215-246.

Zimmerman, B. J. (2000). Attaining Self-Regulation: A Social Cognitive Perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of Self-Regulation (pp. 13-39). San Diego: Academic Press.

Zimmerman, B. J. (2000). *Self-Efficacy: An Essential Motive to Learn*, Graduate School and University Center of City University of New York

Zimmerman, B.J. & Bandura, A. (1994). Impact of Self Regulatory Influences on Writing Course Attainment. *American Educational Research Journal*, 31, 4, 845-862.

Zimmerman, B.J. (1995). Self Regulation Involves More than Metacognition: A Social Cognitive Perspective. *Educational Psychologist*, 30, 4, 217-221.

Ziv, A., & Ziv, N. (2010). *Psychology in Education in the 21st Century*. Cooperative Association Press. Israel. (Hebrew)