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LONG ABSTRACT

Facilitating Wellbeing by Pedagogical Methods in a High School in Israel

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Abstract

This research examined the relationship between an initiative-oriented project-based learning (PBL) socially oriented school program and the development of students' wellbeing. The definition of wellbeing under study is based on the theory of PERMA developed by Prof. Seligman (2011). The research assumption was that PBL would develop a person with a high-level wellbeing and this level would remain high even when students advanced from one grade to another. With the notion of "from awareness to action", the experimental school where the program was developed sought to develop an original model of meaningful learning that promotes solidarity and initiative in social fields, based on a PBL model.

The mixed methods research used the EPOCH questionnaire to examine the level of adolescents' wellbeing. This questionnaire was distributed among 170 students at the beginning and end of the year. The students were from four age groups from eighth through eleventh grade.

The questionnaire examined the level of wellbeing regarding the various components of the EPOCH questionnaire and the changes that occurred between grades and between the beginning and the end of the year. focus groups were conducted with additional 170 students. These discussions sought to examine the connection between the level of wellbeing and the pedagogy of initiative driven PBL.

The findings show that the students who participated in the PBL program developed a high to very high level of wellbeing. The discussions reveal that the students linked their sense of wellbeing to the special way of learning developed at the school. Furthermore, the students noted that this way of learning equipped them with skills that they took with them to their life after school and even used them in other learning environments.

The conclusions arising from the research show that there is a link between socially oriented project-based learning and acquiring wellbeing characteristics among students. This wellness relates to the EPOCH model based on Seligman's PERMA model. The research contribution to knowledge is in the unique link between a specific pedagogy and wellbeing among adolescents.

Key words: Project-based learning (PBL), positive psychology, positive education, education for the 21 century, intrinsic motivation, constructivism, PERMA, EPOCH, wellbeing

INTRODUCTION

The experimental Ein Karem regional school is a comprehensive six-year high school located in the Jerusalem area of Israel. 700 students in 30 classes, ranging from seventh to twelfth grade, attend the school. The school has developed and adopted a pedagogic approach using project-based learning within its formal curriculum. The school developed a unique high school certification program for social entrepreneurship, which encourages students to take a stance and initiate projects aimed at reducing the social injustices surrounding them.

The experimental program, "From Awareness to Action", is a pedagogic approach to marking social indifference and developing an inner sense of self-efficacy to make things better and lead to genuine change in the reality surrounding the school. The program was initiated against a background of the team's perception that global events cannot be ignored. These include the global environmental crisis, an international economic crisis with an impact on hundreds of thousands of people in the first, second and third worlds and a diminishing of the sense of personal and economic security. The teachers at school were also concerned about the fact that the school curriculum is detached from the real world and students are not involved in the learning process and not properly prepared for life in the 21st century.

Project based learning (PBL) was chosen as the pedagogic way of teaching at school because it can deal with these issues (Autodesk Foundation, 1999; Thomas, 2000). One outcome was a better atmosphere at school. Regarding Seligman's (2011) PERMA Model and implementation of the positive psychology approach at school - positive education – this research will examine the possibility that this way of study (PBL) promote students' wellbeing.

170 students from 4 cohorts (8-11 grade) completed the EOPCH questionnaire at the beginning and the end of the school year, during which semi-structured discussions were conducted in 7 focus groups. The students at school reported a high level of wellbeing in almost all the parameters of the EPOCH model, and they connect this wellbeing to the PBL approach. The students reported that they acquired skills they use outside of school and it helps them to reach their goals in real life.

The results can be explained by constructivism theory, the theory of intrinsic motivation, positive psychology and **positive education**.

Research Background

I have been working in education system for over 40 years. During the years when I taught students of different ages, I encountered the strange phenomenon - they never remembered what they learned from year to year. Another interesting phenomenon I encountered was that my students seldom applied anything that was taught in one discipline to another discipline.

An additional unfortunate fact that has accompanied me for many years is the ""wilted" appearance of students at school. Most students came to school without the joy of learning, their main motivation to be there was mostly social or with the thought that it is important to "get a matriculation certificate" as a key to a good and orderly life.

The education system I have known has never addressed these facts seriously. The students were classified as "good" as "mediocre" or "weak" students according to their achievements in tests and according to their adherence to school rules and regulations.

Many studies have been published, noting the ignorance among graduates of the Israeli education system, even among those who have successfully completed their high school studies and have passed the matriculation examinations at a high level.

In the 1990s, I studied for a master's degree and was exposed to learning theories, and to futurism in education in particular. Studies and researchers that I knew, headed by Prof. Roni Aviram, led me to a research world that provided research validation to my experiences as a schoolteacher. During my studies, I developed a more grounded and rational pedagogical approach and decided to try to introduce a change. In 2006 I was given the opportunity to do so when I was appointed principal of the Ein Karem High School. At the same time, I was invited to visit a school network in San Diego, California, part of a chain of schools from kindergarten to high school. The schools are a charter schools and were set up at the initiative of the San Diego business community. The motivation for the establishment of schools was, in part, similar to the distress I identified in the Israeli education system. To this the concern was added that the California education system does not prepare its graduates to succeed in the outside world and does not help the heterogeneous

population close gaps, thus contributing to ongoing inequality that poses a danger to society and the economy. The school I visited developed a project- based learning model, where all projects were anchored in the real world.

During this visit, I met, for the first time, students for whom the learning experience was positive. They discussed their projects during breaks, were involved and took responsibility for their learning. They learned presentation skills and developed reflective abilities, and mostly, they were committed to their environment and society outside the school. Upon my return, I was completely "recruited" and convinced that a change has to be introduced. My personal awareness made me realize that everything I acquired was on the basis of need to know something so as to provide solutions for a need or answer to a question that preoccupied me.

Together with school staff, we set out on a search for our goals and objectives in our educational framework, our pedagogic beliefs and possibilities of application in the field. From our insights, we have created the experimental "From Awareness to Action" framework. We developed a learning model based on initiatives or projects and took upon ourselves to lead out students through learning processes that would make a difference. Learning processes producing different people who have acquired skills that advance them to worthy lives outside school walls. Underlying these goals was the concept of wellbeing. We did not know what to call this concept until I read Seligman's (2011) book and realized that alongside the defined cognitive goals, we wish to advance our students on the level of their wellbeing.

This research was born with the aim of examining the extent to which project-based learning as a way of learning at school enhances students' wellbeing and their acquired life skills which they can apply outside school in real life.

In recent years, while working on this research, I have encountered reports from around the world, describing attempts to provide students with tools to promote wellbeing. In England, Australia and the United States, and even in Israel, workshops and intervention programs were developed in this area. I was not able to find a place where a specific pedagogy was linked to wellbeing. This is the gap in knowledge which this research sought to examine whether PBL seeking to provide solutions for social needs leads to students' wellness and links wellness to a specific pedagogy, as defined by the EPOCH model based on the PERMA model. In this researcher's opinion, this

examination is critical for the school's future development as a framework that provides academic and emotional wellness to its students.

Research Background: Ein Karem High School

The researched school and the Ein Karmit boarding school reside in the Mate-Yehuda regional council and serves the pupils from the surrounding communities. The body of students constitutes approximately 650 students in grades 7 – 12.

In the last decade, the school has undergone a process during which it consolidated its unique identity. This identity is defined as a house of education seeking to shatter the glass wall separating it and the real world, making the world the arena of learning and acting, focusing on the value of social solidarity.

In this process, a leading pedagogical model was constructed of socially oriented initiative-based learning.

All learning in junior high school, in the humanistic, English and sciences disciplines are learnt in the framework of projects, aspiring to be sustainable projects within and outside the school. In recent years, this model has 'climbed' to the high school as well and serves as grounds for original learning programs towards matriculation. Thus far, the school has gained recognition with regard to two programs: Bible – replacing the mandatory program and social entrepreneurship as a unique 5-point (highest level) program for matriculation. In parallel, teacher work with projects within the regular formal curriculum.

However, pedagogy is not enough...In the process of constructing the school's identity, all school framework were gathered around this identity. Thus, a gradual program was built, for developing social initiatives from grade 7 to grade 12.

The school developed the center to combat indifference – a vibrant center where informal encounters are held between teachers and students in the course of a school day. The center developed many groups of students who act within the school framework: mediation group, delegates group, a group addressing gender, mentors' group, prevention of smoking group and so

forth. These days, an Internet magazine is uploaded, to serve as a social 'alarm clock' for adolescents.

The center integrates the cultural activities of the school, which are all directed at social aspects, social criticism and construction of a future picture – all led by the students.

Research Boundaries

This mixed-methods research comprises qualitative research with focus groups sought to provide explanations for the results of the quantitative research. The quantitative research examined the level of wellness among students. The quantitative research examined the relationship between students' feelings and socially oriented PBL. It is important to note that additional factors at school influence students' feelings, and these factors were not examined in this research – influence of school's physical structure, subjects taught at school, students socio-economic background and more. Since these factors were not examined, this is a research limitation.

CHAPTER I: THEORETICAL PERSPECTIVES

I.1 The Model of Ein Karem High School

The experimental Ein Karem regional school is a comprehensive six-year high school located in the Jerusalem area of Israel. It is a regional public school, in other words, one that does not screen its pupils. 700 pupils in 30 classes, ranging from seventh to twelfth grade, attend the school. The school hosts pupils from all over the country residing at an associated boarding school, and pupils from 20 communities in the area.

The school defined a gap – school, as an educating institution that is meant to prepare its students for their lives as full civilians, only partially provides opportunities to develop thinking and social skills students will need in tomorrow's world.

The experimental program, "From Awareness to Action" is a pedagogical way to address social indifference and develop an inner sense of capability to make things better and lead to a real change in the reality surrounding the school. Pedagogical tools employed to achieve this involve enterprise-related study as part of the formal curriculum, theoretical and practical familiarity with actual social issues, personal involvement in social enterprises that entwine life within and out of

school as well as a unique matriculation program guiding pupils to take a stand and execute a social project from scratch with the intention of diminishing the social injustice surrounding them.

The program was initiated against a background of the team's perception that global events cannot be ignored. These included the global environmental crisis, international economic crisis impacting on hundreds of thousands of people in the first, second and third worlds, and a diminishing of the sense of personal and economic security (Yedidia 2019).

Fundamental principles:

- We live in a world characterized by alienation and indifference.
- Every school is given the right and obligation to develop and direct its school world view towards a desired-optimal world.
- A desired world is one in which humans are committed to others, act to prevent injustice, combat indifference and lead to social solidarity.
- The school's role is to prepare students to be active citizens committed to a just society.
- School is part of the world in which it exists, and therefore the school curriculum integrates questions and experiences in its environment.
- Good learning is learning that derives from intrinsic enjoyment and therefore requires personal strengths, areas of interest and experiences of success to be nurtured.

Project based learning (PBL) – a different learning atmosphere

- PBL is a learning method that allows students to function actively by solving problems through knowledge they hold.
- This learning encourages social experience and learning and acquiring communication skills that improve students' ability to conduct negotiations, collaborate and present outcomes.
- In addition, these learning outcomes reflect a broader understanding of the project topic and knowledge required to carry it out. Students are enabled to learn meaningfully through intrinsic motivation.

Social initiatives – paying attention to social beats

- One of the aims of the experiment was defined as breaking down the traditional walls between school and the world, by including the community and its needs into the learning arena.
- Combination between experiment aim – relevant learning, and its moral imperative – socially involved graduates striving to reform social order, lead to the creation of the “social initiatives model”

Every school graduate will experience during their studies an in-depth acquaintance with Israeli society and its problems, will identify a unique social need on which he/she will choose to focus, and will lead, together with his/her classmates or group a social initiative based on the principal of initiatives: an action plan that leads to a fundamental positive change to the existing reality, that will continue over time.

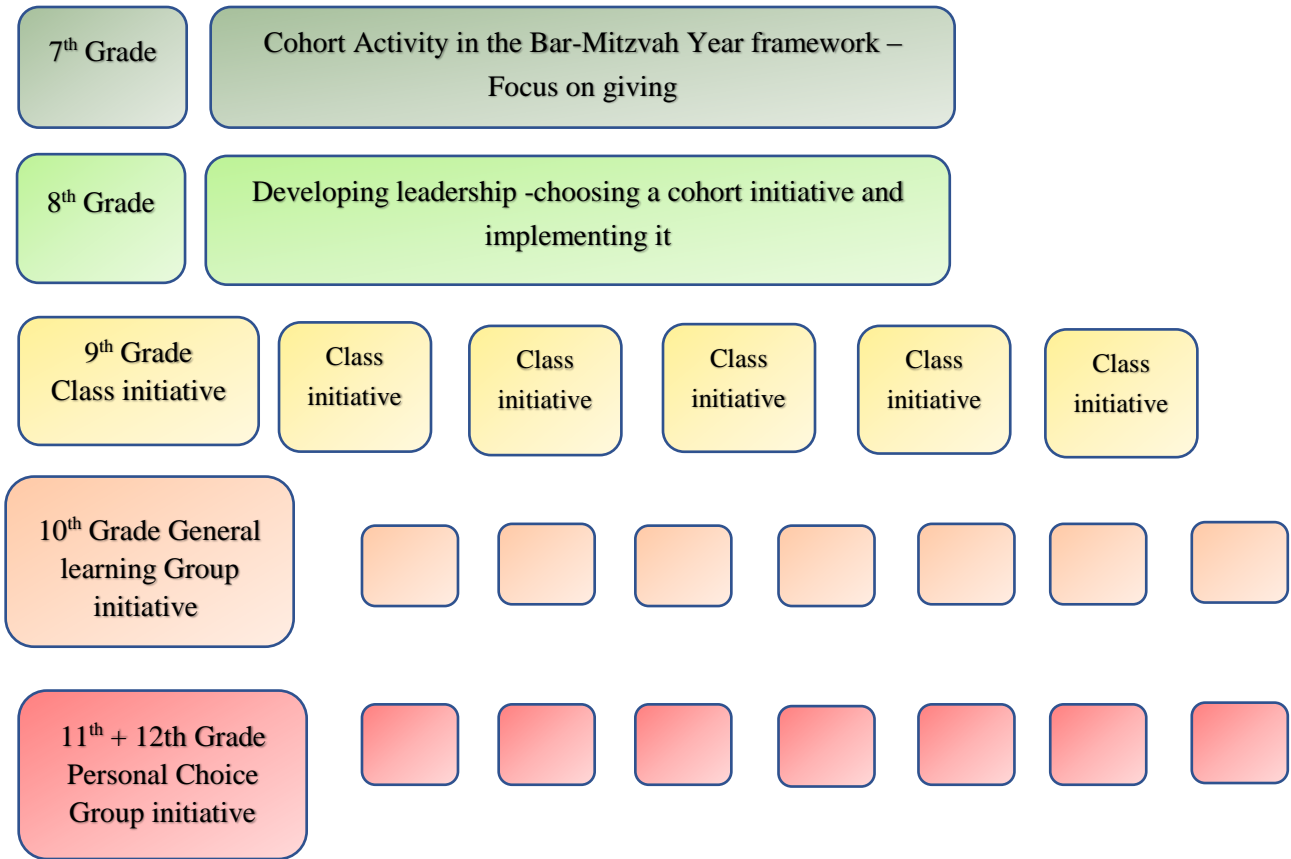
The school’s motto is “From Awareness to Action”. It has developed and adopted a pedagogical approach using initiative-driven and project-based learning within the formal curriculum, alongside social initiative-driven projects interwoven into school life. The school developed a unique high school certification program for social entrepreneurship, which encourages pupils to take a stance and initiate projects aimed at reducing the social injustices surrounding them (Yedidia, 2019).

Table 1.I below presents the school's annual program based on the "rom Awareness to Action" principle.

Table 1.I: The school's annual program details (Yedidia, 2019)

Giving / Contributing	Grade	Translation of the principles to year-round student activity
		From Awareness to action (first semester)
Comprehension of the concepts of Communal Identity and contributing to the community	7 th	The students will be exposed to the four identity circles (personal, familial, Israeli-Jewish and communal) and learn about the Ein Karen community with all its complexities.
Exposure to the concepts of Leadership and Individual Leadership and their interpretation to the concept of Social Leadership	8 th	The students will learn of leaders and of the principles of leadership and personal leadership, discover the concept Social Need and identify unique social in their own environment.
From detection of a social need to social class entrepreneurship	9 th	Students will get thoroughly acquainted with the concepts Social Need and Social Entrepreneurship and will form activity designed to detect and select a singular social need to focus on in class.
Linking personal commitment to the social entrepreneurship model	10 th	The students will learn of the gaps in the Israeli society (using the approved matriculation program) and proceed towards exposure to the concepts of social need and social entrepreneurship through three in-depth learning days throughout the year.
The team stage: A unique matriculation course of social entrepreneurship	11 th	The course students will maintain a team process of selecting a social area of activity, study the subject in depth and formulate a detailed action plan for execution till the end of the school year.
	12 th	The students will continue to expose themselves to advanced content, following the approved matriculation curriculum.
Methodological stage		Translation of the principles to year-round student activity.
		From Awareness to Action (first semester)

Figure I.I below depicts the spread of the program



I.1.1 Pedagogy at Ein Kerem School

The school places an emphasis on groundbreaking pedagogy that combines social entrepreneurship with project-based learning (PBL). All projects implemented in the classes are directed at offering solutions to needs in the real world outside the school. These needs are defined as needs that when met, improve society.

This learning method is based on active learning and linking pedagogy with the reality found outside the classroom (in accordance with the vision of this experiment). Using this method within the formal curriculum, pupils are required to work as teams, planning and executing a practical project, providing a solution for issues that are relevant to the study subject, which they have identified.

From Awareness to Action learning model is presented in the following figure



Figure 2.I: The process that students undergo

The outputs of this learning include broadening horizons and becoming acquainted with Israeli social reality and bureaucracy as well as reflecting a wider, more in-depth understanding of a project and the expertise required for its execution.

The leading principle in constructing projects is that they are based on real need and may be of use to someone. Another tenet is one of ‘transparent walls’, or in other words, learning not limited to school grounds. Hence, for instance, following a meeting with the author Etgar Keret, children who learned about writing short stories wrote, published and sold two original books. A class studying geography during the Nepal earthquake prepared a campaign promoting preparedness for natural disasters, put together information systems and launched the campaign in its respective communities. Pupils who learned about the immigration waves prior to and after the founding of the country in their history lessons issued a stamp for each wave together with the Israeli Philatelic Service. At the end of the academic year, these stamps were affixed to their school certificates. A class that studied Scriptures started a chain of theological study centers in their respective places of residence (Yedidia, 2019).

1.1.2 The Leading Principles of the School

- Day-to-day of the active and initiating citizenship, commitment to a just society while using the learnt contents so as to influence the environment;
- Action is the learning arena;
- Learning is for the purpose of acting
- School activity is characterized by experiences directed at the external world, develop intrinsic motivation and develop social solidarity and struggle against alienation and indifference.

The following figure depicts the school's work model.

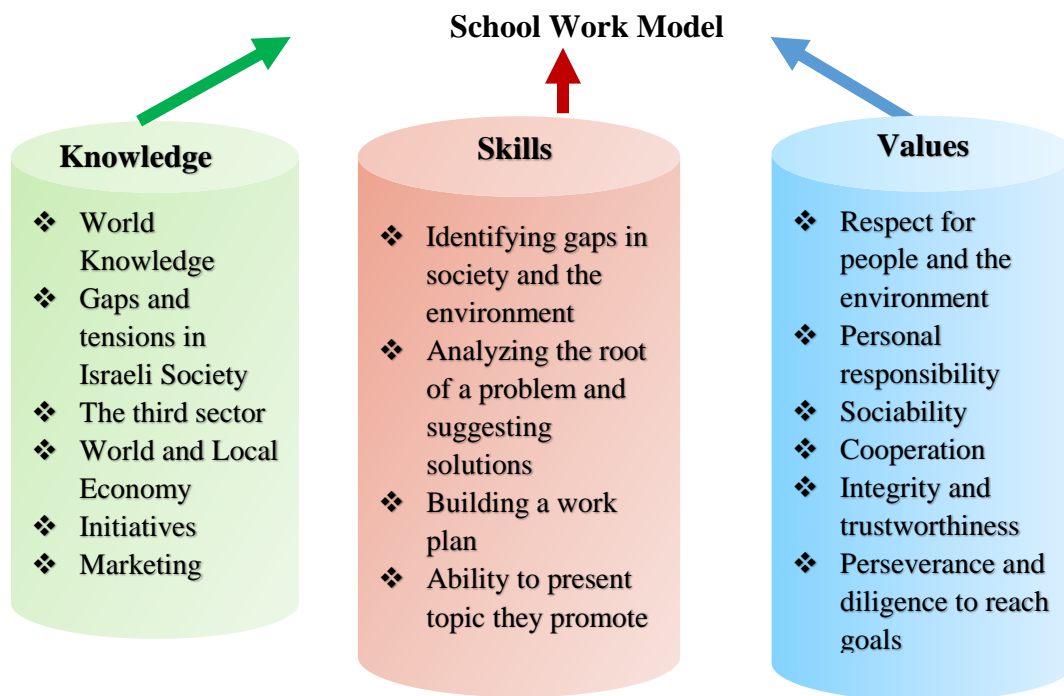


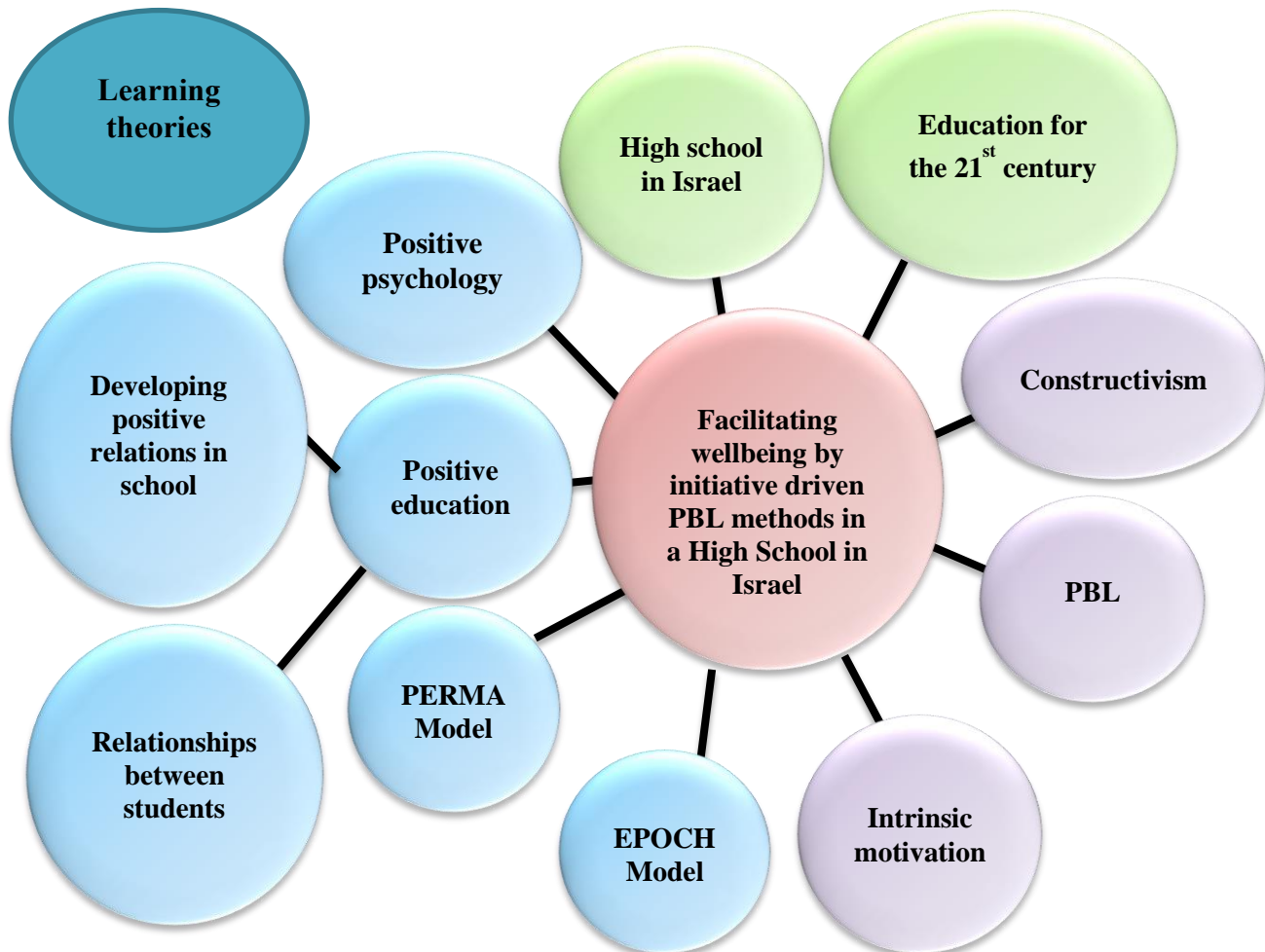
Figure 3.I: the school's work model

1.1.3 Original Matriculation Program to Develop Social Initiatives

Within the framework of the school program, a unique matriculation program was written. The program was intended to invite children to study in higher grades as well as withstanding matriculations exams using learning based on the unique model developed by the school.

The proposed program was based on the pedagogical model of ‘from awareness to action’ presented above.

I.1.4 The Conceptual Framework



This study seeks to examine the effect of socially directed **project-based learning** on the extent of school students’ wellbeing.

The research is based on the theory of wellbeing as defined by Professor Martin Seligman.

The principles of **positive psychology** developed and defined in the past three decades have also reached the education system. Professor Seligman and his colleagues have led studies linked to the possibility of assimilating the principles of positive psychology into the education system.

One of the pedagogies considered as promoting 21st century competencies is **project-based learning**. This form of learning has been known since the 17th century when it was customary to use project-based learning in faculties for architecture in Italy. In the modern world of education at the beginning of the 20th century, John Dewey and colleague outlined a method of learning anchored in sustainable outputs.

What should the nature of change be? What competences should be instilled in our students to adapt to a changing world? What should curricula be and what is the role of teachers? All these and more are at the center of this study concerned with a future education system.

During the 20th century, many have considered and defined project-based learning. Discussions and thoughts about pedagogy promoting learners' skills in the 21st century brought researchers together with this learning method and provided momentum to researching the topic (Blumenfeld et al., 1991). Other studies have proved that this style of learning develops real life competencies (Meyer & Wurdinger, 2016).

Two additional learning theories to which this study refers are theories supporting project-based learning and features of positive psychology in education:

Pupils' **intrinsic motivation** to learn – this theory refers to a number of characteristics that have to exist in the learning process to develop intrinsic motivation to learn. Intrinsic motivation to learn is a condition for meaningful learning, developing a sense of belonging, developing a meaningful self-identity, developing meaningful close relationships with peer groups, and ability to cope better with leisure time (Aarepattamannil & Freeman, 2008; Asor, 2001)

Ryan and Deci's model refers to a number of needs existing in all humans. Meeting these needs that develop intrinsic motivation to learn are: need for autonomy, self-expression ability, independence and ability to choose, ability to develop a sense of self-efficacy, a sense that individuals have the ability to influence and their voices heard and to realize things they imagine, the ability to establish good relationships and a sense of belonging (Deci & Ryan, 2000).

Constructivism - The concept constructivism connects naturally to philosophical and epistemological doctrines. In recent decades, they have been fully ascribed to education. The constructivist approach to learning states that students must be involved in the learning process, to

build knowledge themselves in a process in which they are active participants inviting critical thought, understanding knowledge and creativity (Barron & Darling-Hammond, 2008). Additionally, research refer to a learning process that allows learners free access to information sources, solving relevant and practical problems (Gagon & Collay, 2001).

The world of psychology is also undergoing significant change. About three decades ago, Professor Martin Seligman introduced something new to the area of psychology. He proposed a new point of view in caring for people's soul and the possibility of promoting individuals' **wellbeing**. According to his view, it is essential to look at individuals' abilities and allow them to maximize them instead of looking for places where they can fail.

Seligman, who coined the concept '**positive psychology**' and many others who joined him continues to search for accurate components that would help individuals to express their positive qualities. Seligman and his colleague, Christopher Peterson published a document defining positive personality components, *Character Strengths and Virtues: A Handbook and Classification* (2004) as an alternative to APA's *Diagnostic and Statistical Manual of Mental Disorders (DSM)* (1994).

In his book *Flourish* published in 2011, Seligman proposed his PERMA model. This model defines the areas that must be emphasized to live a good life:

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At the same time as these developments in the field of positive psychology, the question emerged whether it was possible to educate students at school to achieve these traits at school age with the purpose of educating another life perception that would allow people to live optimal lives. Experiments in this area have been conducted in various places around the world. One of the places where a wide-ranging experiment was conducted that included training staff in the principle of positive psychology, constructing an intervention program, transmitting it to students and research examining the effect of the program on students was Australia. This study relies on a tool developed in this framework to examine the level of wellbeing in youth (Norish et al., 2013).

The theories behind this tool developed to measure levels of wellbeing among youth argues that the significant components that it is important to develop among youth during their adolescence are EPOCH traits as defined in the PERMA model: Engagement, Perseverance, Optimism, Connectedness, Happiness (Kern et al., 2016).

This study seeks to bring together pedagogical theory and a theory from the world of positive psychology and examine the extent of the effect of project-based learning and creation of PERMA model wellbeing and the EPOCH model based upon it. Hence, various theories from the fields of education and positive psychology were combined and it is on this combination that the current study is based.

CHAPTER II: RESEARCH DESIGN AND METHODOLOGY

II.1 Research Paradigm: Mixed Methods Research

What is mixed methods research? “A mixed method study involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research” (Creswell & Garrett, 2008 p. 322). “The core meaning of mixed methods... is to invite multiple mental models into the same inquiry space for purposes of respectful conversation, dialogue and learning one from the other, towards a collective generation of better understanding of the phenomena being studied” (Greene, 2007). The use of mixed methods research began in 1959 (Campbell & Fiske, 1959), when a variety of methods was used to study the validity of psychological traits.

II.2 Case Study

A case study is one of the most frequent methodologies in qualitative research. Nevertheless, according to Yin (2002) there is still no comprehensive agreement or organized protocol for conducting such research. For this reason, often researchers employing this method ponder the question what is a case study, and how can it be defined? (Merriam, 1998). In his book, “*The Art of Case Study Research*”, Stake (1995) mainly addressed researchers planning to conduct research using case studies. The key purpose of his book was to define a group of interpretive approaches to case studies including naturalistic, holistic, ethnographic, phenomenological and biographic research methods (Stake, 1995).

(Yin, 2002) presented case study as a legitimate approach in social science studies and as a basis for constructing theories in research. According to him previous analysis methods lack a comprehensive view allowing a means for methodical analysis. For this reason, he tried to fill the existing gap in qualitative research methods controlled by text analysis and formulate ways of case study analysis and even ways of writing research analysis itself (Yin, 2002).

Merriam (1998) argued for inadequate addressing of research employing case studies. As Yin **before** her, she also attempted to enrich analysis means of case studies with the purpose of enabling more efficient use of this method. Merriam referred to the need to distinguish between case studies and other research means in qualitative research and to allow use of these research methods in case studies.

II.3 Qualitative Research - Focus Groups Discussions

The researcher met seven random heterogeneous groups from those that completed the questionnaire: 2 groups from the 8th grade, 2 from the 9th grade, 2 from the 10th grade and 1 group from the 11th grade.

The aim of this research stage was to examine the relationship between wellbeing skills acquired by the students and PBL. Students in the different groups were presented with guiding questions based on the components of the EPOCH questionnaire, but the discussion was guided, but open.

Discussions were analyzed by defining themes and categories, which were cross-checked with data from the quantitative research in the first research stage.

II.4 Focus Groups

In recent decades with the growing use of qualitative research in social sciences and education, there has also been an increased use of focus groups. The literature discusses the advantages and limitation of focus groups. In this context, there is a broad discussion about the importance of discussion in focus groups, the extent of researchers' influence, the importance of interaction between group participants and more.

Cyr (2017) defined a focus group as a method of collected data in whose framework a small group of people (6-8) are gathered to discuss a number of question or topics that interest a researcher. The researcher asks his/her questions and facilitates the discussion. The purpose is to understand how people understand and interpret the research topic.

“Powell and Single (1996) defined a focus group as a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research. Fern (1982) also defined focus groups as small group discussions, addressing a specific topic, which usually involves six to 12 participants, either matched or varied on specific characteristics of interest to the researcher" (Sagoe,, 2012 p.1).

Table 1.II: Research Design

STAGE	AIM	RESEARCH METHOD	RESEARCH TOOL	RESEARCH POPULATION	DATA ANALYSIS
Quantitative	Learn about the mind of the students regarding the EPOCH questions	Survey	Closed ended questionnaire	150 students from 4 cohorts at school.	statistics
Qualitative	To find out if there is a connection between PBL and wellbeing	Focus group	Discussion around questions	150 students in 8 focus groups	Content analysis

CHAPTER III: FINDINGS

This chapter presents the findings of closed-ended questionnaires distributed to 150 students at the beginning of the year, the end of the year and comparing between them and discussions of 7 focus groups. As mentioned, the data collected in this research sought to examine the possibility that a pedagogical approach using initiative-driven **Project-Based Learning** within the formal curriculum, alongside social initiatives, promotes wellbeing according to the **EPOCH model** and to find out the level of student's wellbeing according to the **EPOCH model**

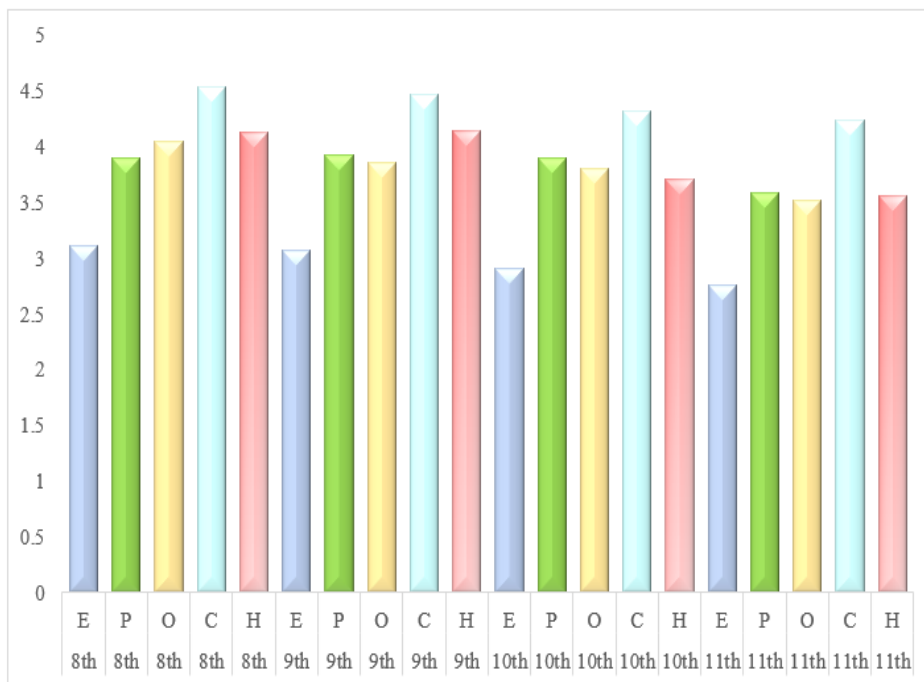
The EPOCH measure of adolescent wellbeing is a 20-items measure that was developed in order to find out the adolescents' progress towards wellbeing as was defined by Prof Seligman's (2011) PERMA model.

III.1 Findings Emerging from Research Questions

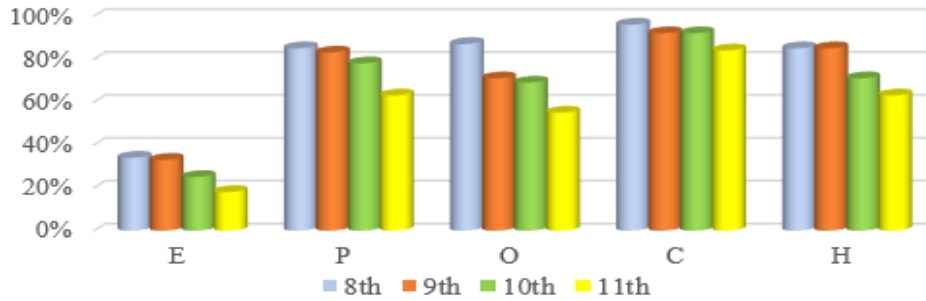
To what extent does a pedagogic approach using **Project-Based Learning** within the formal curriculum promote:

Engagement. **P**erseverance. **O**ptimism. **C**onnectedness. **H**appiness

The EPOCH questionnaire beginning of the year

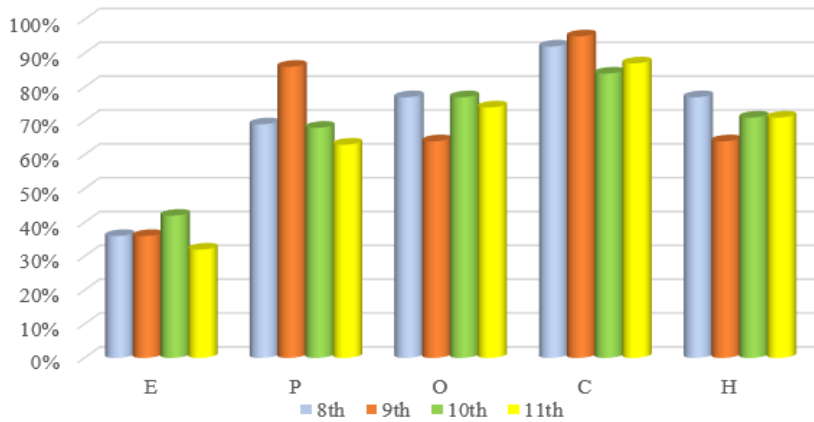


Placing the bar of “High Wellbeing” at 3.5 and above beginning of year
 Percentage of students of various levels whose EPOCH measurement was 3.5 or above



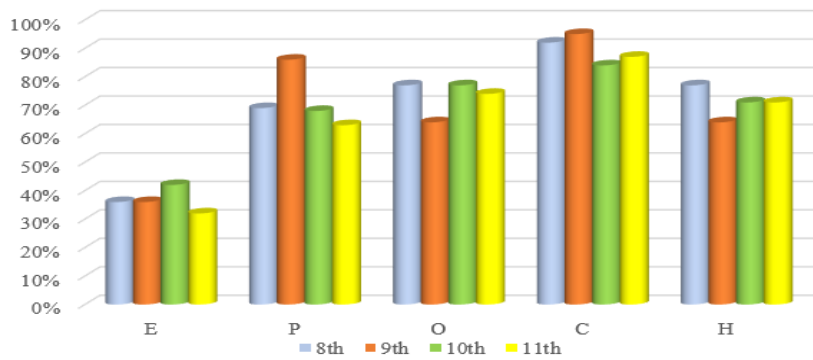
	E	P	O	C	H	WELLBEING
8 th	34%	85%	87%	96%	85%	83%
9 th	33%	83%	71%	92%	85%	87%
10 th	25%	78%	69%	92%	81%	69%
11 th	18%	63%	55%	84%	63%	57%

Percentage of students at different levels who have an EPOCH measurement of 3.5 and above end of the year



Grade	E	P	O	C	H	Wellbeing
8 th	36%	69%	77%	92%	77%	79%
9 th	36%	86%	64%	95%	64%	82%
10 th	42%	68%	77%	84%	71%	68%
11 th	32%	63%	74%	87%	71%	71%

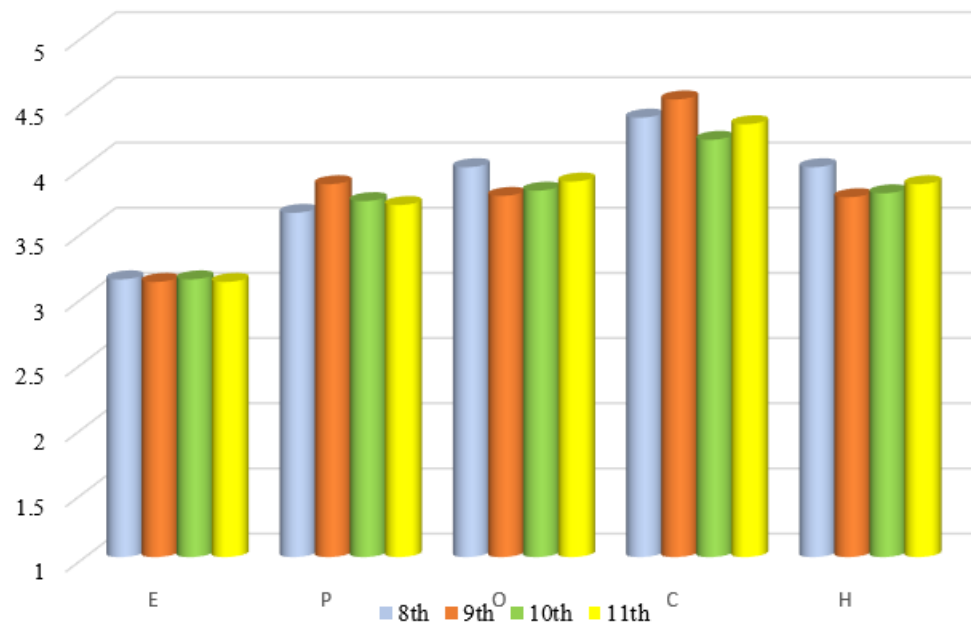
Percentage of students at different levels who have an EPOCH measurement of 3.5 and above end of the year



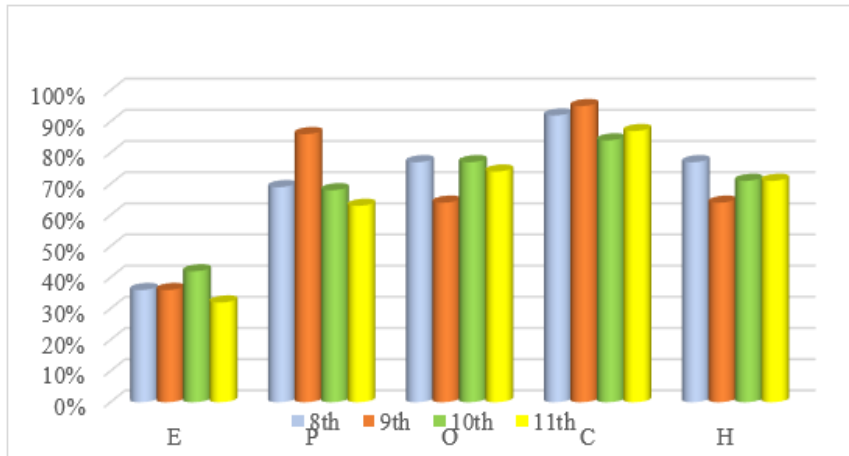
Grade	E	P	O	C	H	Wellbeing
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11 th	32%	63%	74%	87%	71%	71%

Findings Relating to Research Question 2

How are the various EPOCH dimensions expressed during one school year? EPOCH questionnaire end of the year



Percentage of students at different levels who have an EPOCH measurement of 3.5 and above – comparing beginning of the year and end.



	E		P		O		C		H		WELLBEING	
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
8 th	34%	36%	85%	69%	87%	77%	96%	92%	85%	77%	83%	79%
9 th	33%	36%	83%	86%	71%	64%	92%	95%	85%	64%	87%	82%
10 th	25%	42%	78%	68%	69%	77%	92%	84%	71%	71%	69%	68%
11 th	18%	32%	63%	63%	55%	74%	84%	87%	63%	71%	57%	71%

Focus Group Discussions around questions-Content analysis

Summary Tables of themes and categories:

Engagement			
Values	Meaningful learning	interest	Personal autonomy
Perseverance			
Skills of life	Importance of perseverance	Positive feeling	Negative feeling
Optimism			
Teacher for life	Self-efficacy	Investment in the future	Ability to accept criticism
Connectedness			
Opportunity to become acquainted	Learn to collaborate	Ability to empathize	Lifelong relationships
Happiness			
Creativity	Pride	Enjoyment	Goal

Content analysis – focus groups

<p style="text-align: center;">ENGAGEMENT</p> <p>They learned about themselves, their abilities and areas of interest; responsibility and autonomously applied all this outside school</p>	<p style="text-align: center;">PERCEVERENSE</p> <p>Sense of self-efficacy and gave them the tools to cope and persevere in their later studies.</p>
<p style="text-align: center;">OPTIMISM</p> <p>Experiencing skills and processes from real life and colored their school experiences in a bright and positive light and thus contributed to optimistic feelings and thoughts</p>	<p style="text-align: center;">CONNECTEDNESS</p> <p>They feel connected to many friends at school, which increases their sense of belonging The ability to process and accept others' ideas</p>
<p style="text-align: center;">HAPPINESS</p> <p>Be creative, not to work according to accepted models, greatly contributed to the sense of happiness they felt while working. Good feelings due to projects' contribution to society.</p>	

III.2 Integrative Summary of Findings

As an answer to the research question we can see from an analysis of the questionnaires at the start of the year no significant difference was found in students' reporting in the different age groups. In some measurements, a small decrease was even found. In examining students' answers against the measurement determined as optimal (3.5), a high level of satisfaction was found against the components from the EPOCH model, with differences between the various components of the questionnaire:

Analysis of the questionnaires revealed that the level of engagement was the lowest of all the parameters. The level of connectedness was the highest. This data reaffirmed the researcher's sense regarding students at the school and provide an answer that is congruent with the research question addressing the extent to which EPOCH qualities exist or students' wellbeing.

To answer this question, the EPOCH questionnaire was distributed again at the end of the year to the same students. Analysis of the questionnaires at the end of the year reveals a similar picture:

there are no significant differences between students' answers to the various questionnaire components in different age ranges. However, the extent of wellbeing according to the measurement determined in this study is high

the engagement component remains the lowest of all model components. However, in the upper division, there is a significant improvement between the beginning and end of the year in this component.

In the perseverance component, there is a decrease in 8th grade and increase in 9th grade. Something similar can be seen in the optimism measure, where there is a decrease in 8th grade between the start and end of the year and a decrease in 9th grade from the start to the end of the year. In this component there is a decrease between the beginning and end of the year unexpectedly in 8th and 9th grade. In the upper division, there is a significant increase in this component from the beginning to the end of the year.

In the connectedness component it can be seen that at the end of the year, there are also high levels of student satisfaction. Differences between grades are relatively trivial and one can see a certain increase in 11th grade.

In the happiness component, one can see a relatively significant change in 9th and 11th grade. In 9th grade, the decrease is not small and in 11th grade one can see an increase.

Overall, there is a high level of wellbeing among students that is maintained throughout the year and in certain cases even improved.

Analysis of the discussions clearly showed a very high degree of satisfaction with the learning method adopted by the school. This satisfaction was a second thread in all the groups. However, one did hear, mainly among older students, criticism that there are two teaching/learning methods employed at the school, both initiative-driven (projects), which students praised and exam-driven learning implemented in the upper division. Students shared the sense that initiative-driven learning did not always prepare them for what was expected from them in the upper division.

Nonetheless, students often mentioned that initiative-driven learning developed life skills that promoted their sense of self-efficacy and positive self-image. Additionally, they got to know themselves and their unique abilities, to make affiliated social connections and establish

meaningful dialogue with their teachers. Students also mentioned the importance of understanding that what is learned at school helps them to understand the world outside school and can be used in projects that they led. Students particularly emphasized using competences acquired in their lives outside school.

The Hypothesis of this research were:

1. A Pedagogic approach using initiative-driven project-based learning within the formal curriculum will show high results of engagement, perseverance, optimism' connectedness and happiness of students at Ein Karem School.

The results will remain high during the school year in student

As we can see from the findings the hypotheses were confirmed to a great extent.

The level of wellbeing of the students in all cohorts was relatively high. From analyzing the discussions in the focus groups, we learned that the students expressed satisfaction from initiative driven PBL and they emphasized the fact that what they learned at school they use in their life outside of school.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

V.1 Factual Conclusions Emerging from Research Questions

The aim of this study was to examine the extent of wellbeing according to the positive psychology model among students studying at the Ein Karem school in Israel and the correlation with the school's original way of learning, namely, socially oriented project-based learning (PBL).

In the engagement component, the measurements at the beginning of the year and its end showed wellbeing of students using the PBL approach is perceived as linked to skills students acquired during their studies at junior high school, which helped them adapt and cope with the demands of high school as well, and hence raising their happiness component.

The conclusion arising from this finding is that the school climate at Ein Karem is mainly anchored in its original pedagogy that invites students to develop a sense of wellbeing. A further conclusion emerging from the research is that high school students using the PBL approach are characterized by a school climate revolving around pedagogy applied systematically across subjects.

Additionally, the findings showed that the wellbeing of high school students learning with the PBL approach linked to socially oriented project-based learning increases students' satisfaction with their learning process. Another finding revealed by analyzing student discussions is their sense that the learning to which they were accustomed in junior high school did not prepare them properly for what was expected of them in high school.

The conclusion arising from the research is that students have the ability to differentiate between the two learning methods customary at the school and even express firm opinions about which is better for them, namely, project-based learning.

As revealed in this study, project-based learning developed students sense of self-efficacy and positive self-image. Furthermore, regarding initiative-based learning, the findings show that this approach to learning allowed students to develop improved social relationships with their study peers and teaching staff. Therefore, initiative-based learning conducted in a framework of collaborative learning in task groups when teachers become facilitators, allows students to develop better relationships with their friends and teachers at school.

Moreover, the conclusion arising from this research shows that the wellbeing of high school students learning according to the PBL approach depends on collaborative initiative-based learning that increases social unity, and that skills they acquired at school from PBL helped them to understand the world outside school and to promote their projects and initiatives in their day-to-day lives outside school. Therefore, the conclusion is that the wellbeing of high school students learning by the PBL approach is perceived as developing life skills that help students conduct their lives outside school.

The research findings also showed that initiative-based learning directed at and anchored in the real world greatly increased students' motivation to learn. Therefore, the PBL approach is seen as raising intrinsic motivation to learn and thus makes learning meaningful in the lives of students.

A further conclusion that emerged from this research is that the wellbeing of high school students studying according to the PBL approach is perceived as driven by a sense of autonomy, self-efficacy, the need to belong and good relationships. The findings also showed that the wellbeing of these high school students is driven by a sense of belonging to a peer group and their

involvement in choosing learning topics and contents. Additionally, the wellbeing of these students is seen as linked to the skills they acquired during their years in junior high school that helped them adapt to and cope with the demands of high school, and hence to increase their happiness component.

V.2 Conceptual Conclusions: Rethinking Wellbeing of High School Students

The factual conclusions arising from this research allow one to create a new data based conceptual framework about students’ wellbeing in high school. Figure 1.V illustrates the wellbeing model of high school students as revealed in this study.

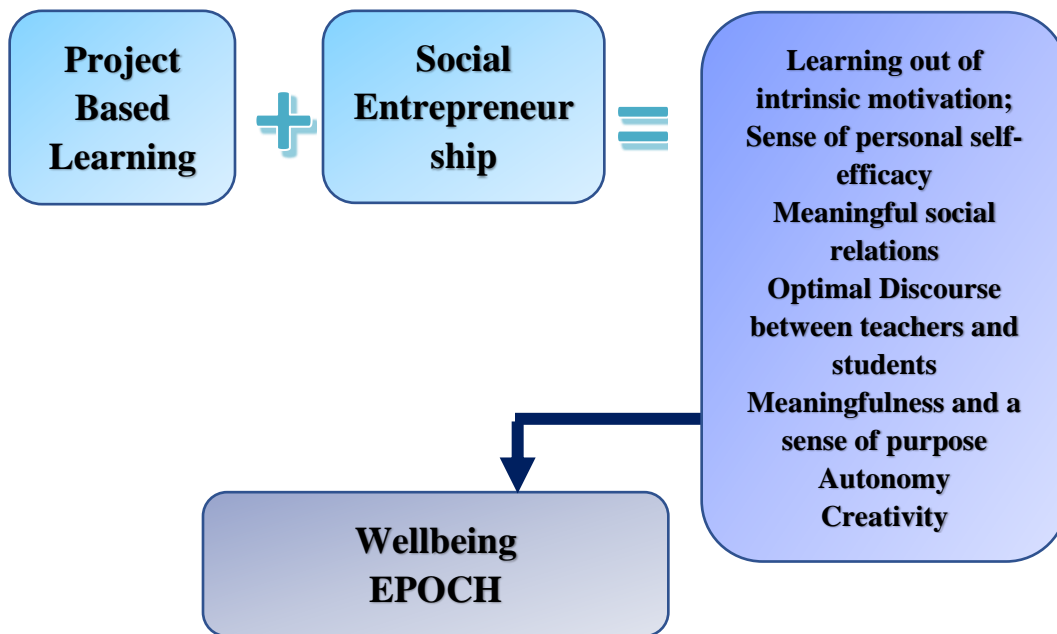


Figure 1.V: The wellbeing model

The high school students’ wellbeing model is made up of unique pedagogy founded on PBL affiliated to considering initiatives to improve society. This is an original model developed at a particular school in a framework of it being an experimental school.

The central aim of the model was: Daily existence of ideal citizenship that establishes a commitment to a just society by using contents learned to influence students’ environment.

The key features of the model developed were:

- School actions characterized by experiences directed at the outside world, develop intrinsic enjoyment and engage the development of social solidarity and war against alienation and apathy.
- Action is the learning arena.
- Learning is the purpose of the action.

Research findings revealed that learning within the model led to wellbeing among students according to the definition of the EPOCH model and Professor Seligman's PERMA model. As shown in the study, the fact that the projects students activated using the PBL pedagogical model were characterized by and directed at sociability is what produced the synergy that led to the wellbeing of high school students who participated in the research.

V.3 Practical Implications and Recommendations

The current research findings and model applied at the school, allow the emergence of a number of recommendations for future application.

V.3.1 Recommendations in the Field of Pedagogy

- a. It is essential to alter the aims of teaching at the most basic level – from teaching directed at memorization for tests to teaching directed at problem solving and comprehension.
- b. It is essential to strive for learning that develops students' intrinsic motivation by enlisting learning to solve the problems of the world around us, a world of which students are also aware.
- c. Collaborative learning develops a sense of autonomy and responsibility; therefore, it is essential to construct teaching/learning around work groups.
- d. A learning process starts with the definition of need and looking for answers together with students develops intrinsic motivation in learning, and therefore it is essential to develop a learning model that enables this.
- e. It is recommended that learning be recruited for sustainable outcome applied in the real world because this strengthens students sense of meaningfulness.
- f. Students must be given the opportunity to choose in every learning step and places in which they can express their uniqueness.

- g. It is essential that teachers change from knowledge transmitters to facilitators and partners in learning groups.

V.3.2 Recommendations for Organizations

- a. It is recommended to break down the existing classroom structure in the Israeli education system and build PBL groups. Groups should be multi-aged to invite many and varied meetings and flexibility.
- b. It is recommended that schools build mechanisms to connect with various bodies outside school and get students to engage with and meet their needs.
- c. It is recommended that learning should not be around lists from one discipline and replaced by PBL demanding learning from various areas of knowledge to complete a project.
- d. Teaching staff will work in small groups – a team for each project or group of projects. Staff will plan projects and constitute a thinking and support group.
- e. Schools will establish a team of instructors whose role it will be to respond to doubts and difficulties faced by planning teams.
- f. Schools will establish workshops that will meet the needs of carrying out projects. Each workshop will contain experts in the workshop topic who will provide advice to project teams in preparation for carrying them out.

It is recommended that teacher training should be work and in-school based.

Every school will create its own training program according to its pedagogical needs.

V.4 Research Limitations

Limitations Linked to Mixed-Methods Research

This is a mixed-methods research combining data acquired from quantitative research and data acquired from analyzing semi-structured discussions in focus groups.

When this research method is used, a number of questions arise:

- To what extent is it possible to explain quantitative research data in qualitative research data?

- Is it possible to generalize conclusions for focus group discussion data to the general population?

The current study tried to overcome these questions by partially structuring the discussions using identical questions to those in the quantitative questionnaire. However, the conversation in the focus groups went in additional directions and did not always remain focused solely on these questions. Hence, one must be cautious as to whether it is possible to transfer the insights from these focus groups onto the general population. In an attempt to reach conclusions two focus groups were conducted for each age group and the number of participating students in each session was large (about 18 students), which provided a broader picture.

Limitations Linked to the Researcher's Role

It is important to mention that the researcher was the principal of the examined school. While she did not serve as principal in the year the data was collected, she was well-known to the students. To neutralize this fact, another facilitator who was unknown to the students participated in the discussions together with the researcher.

One must refer to another important issue, which is the fact that it is possible there are other factors in the learning environment, in relationships within the school, in students' socio-economic status or in the allocation of resources within the school that influenced students' feelings. These factors were not explored in this study.

V.5 Contribution to Theoretical Knowledge

The current research was based on a number of theories:

- Theories from the field of learning:
 - Constructivism (Barron & Darling-Hammond, 2008)
 - Intrinsically motivated learning (Asor, 2001)
 - Project based learning (Tretten & Zachriaou, 1997)

Theories from the field of psychology:

- Positive psychology (Seligman, 2001)

- Positive psychology in education (Seligman et al. 2009)

Theories from the field of futurology:

- Learning for the 21st century (Laar et al., 2017)

The originality of this study is its unique combination of a theory from the field of psychology, positive psychology, to theory from the field of learning – PBL affiliated to social initiatives. Hence this study added another brick to the study of positive psychology in education when it showed that certain pedagogy in a unique model combining PBL with social initiatives promotes students' wellbeing.

The current study shone a light on the possibility of developing students' wellbeing while studying at school and not use through workshops teaching positive thinking tools as currently exists around the world. The high school students' wellbeing model developed through this research is original and innovative and therefore contributes to existing theoretical knowledge about positive psychology in education and PBL.

V.6 Contribution to Practical Knowledge

From this study it is possible to advance thought about examples of school promoting students' wellbeing. The education system remains concerned with promoting students' academic achievements and tends more to ignore students' wellbeing. Richer schools or educational frameworks allow themselves to address positive psychology in education even if it is secondary to learning by establishing workshops to train positive thinking. As proof of this argument, we can find in the research world studies conducted in established countries such as Australia, New Zealand and the United States or England. The current research and proposed model allow regular schools, without special resources, to build a school model that promotes both academic achievements and students' wellbeing by developing intrinsically motivated learning, collaboration, autonomy and meaningfulness.

It is important to note that in the examined school students continued to learn content from the Ministry of Education's curriculum and successfully passed their matriculation exams. In the years during which the experiment was conducted the rate of student success in matriculation exams rose from 37% to 87%.

V.7 Future research

From the research data and limitations, it is obligatory to examine the application of this model in other schools to examine the model's standing and relevance given a different student population, different teaching staff etc.

Additionally, follow-up research is needed to follow school graduates to examine the assumption of the model developers that wellbeing as youths will led to wellbeing in adulthood according to Professor Seligman's model.

Epilogue

The current research was conducted at a unique high school in Israel. The originality of this school in this context is expressed in it being an experimental school that underwent a long process of staff training for alternative pedagogical and ethical thinking. The school adopted as its motto "from awareness to action", developed and adopted a pedagogical means of learning based on initiatives in the formal curriculum alongside social initiative entwined in school life, and developing a unique matriculation program on the subject of social initiatives that encourage students to take a stand and initiate steps to reduce social injustices surrounding them.

This was developed as part of a world view that sees an emotional and practical connection between students' world and the world surrounding them as being supremely important.

There is no doubt that this work influenced the pedagogical and educational actions at school as expressed in students' reports. This fact is important when coming to examine the possibility of transferring the school's teaching and learning model to other schools. The importance of the current research derives from the connection between a certain pedagogy for student wellbeing and the proof that indeed a pedagogical change within classrooms, in a regular learning framework can promote the level of students' wellbeing. It is important to note that in recent years, PBL has become a significant stream in the Israeli education system. Teacher education institutions have opened courses for student teachers and even in-service teacher about PBL.

Research Importance

Many schools implement the method in various learning framework and to different extents from elementary to high school. In the city of Holon in Israel, there are even matriculation exams using this method. Against this background, the importance of this study for the Israeli education system is great by drawing attention to the many advantages linked to student wellbeing and not just cognitive achievements. Another importance of the current study is that it shines a light on positive education based on positive psychology and the obligation and possibility of promoting components of wellbeing among students during their school studies without the need for external workshops cut off from classroom learning. Such workshops are not always achievable both for financial reasons and the burden of weekly studies existing in high schools. One must hope that this study showing research data to improve student wellbeing in an applied and possible pedagogical model will give schools the impetus and courage to adopt and even develop their own models whose aim is learning through wellbeing.

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