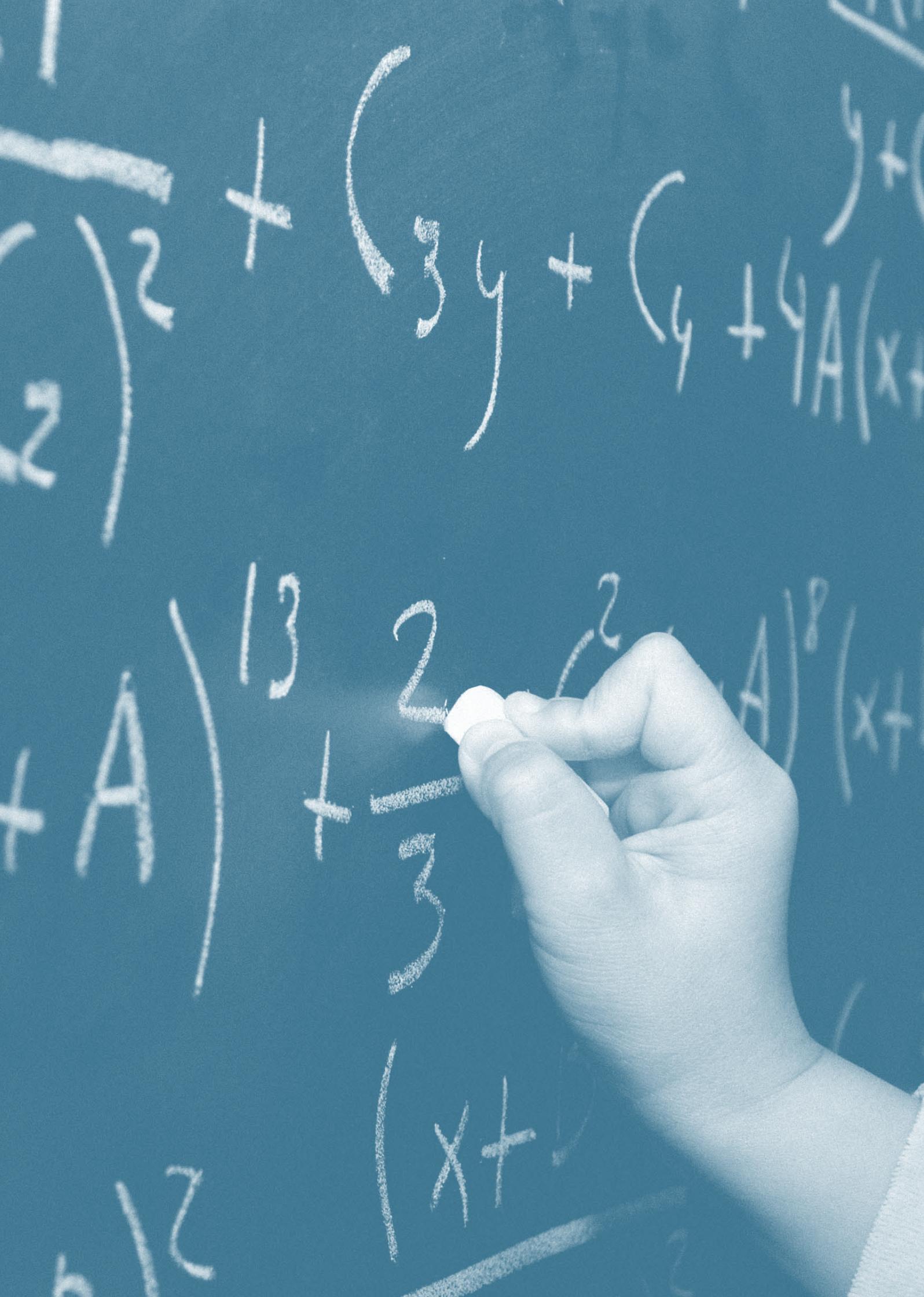




# STRATEGIC ROADMAP

*October 2011*





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The Trump Foundation  
aims to serve as a catalyst for improving  
educational achievement in Israel  
by cultivating high-quality teaching  
in schools with a focus on  
Mathematics and the Sciences

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## EXECUTIVE SUMMARY

The Trump Foundation is a new philanthropic foundation that will devote its resources over the next 10-12 years to the improvement of educational achievement in Israel.

The foundation seeks to cultivate effective teaching that caters to the needs, abilities and individual learning progress of students in secondary education, particularly in Mathematics and the Sciences.

Through instrumental and pro-active grant-making, the foundation will implement three strategies which directly influence classroom instruction focusing on the talent, expertise and practice of teachers.

Experience from other countries reveals that each of these three factors is immensely important; however systemic improvement is feasible only when they are combined.

### TALENT

Improving the public image of teachers while harnessing excellence into the teaching profession.

### EXPERTISE

Creating the knowhow and the professional cadre to support practical teacher learning.

### PRACTICE

Collaborating with municipalities and school networks to demonstrate high-quality instruction.

In order to pursue these three objectives, the Trump Foundation will support organizations and entrepreneurs with a proven track record of success, whose mission is aligned with the foundation's strategy. It will work transparently and in close coordination

with the government, local authorities, universities, colleges, the teachers' unions, schools, and fellow philanthropists. The foundation will strive to ensure that its actions are sustainable, and its impact is long-term and broad in scope. <sup>1</sup>

[ 1 ] We are grateful to the colleagues and experts who kindly volunteered their time to read the draft version of this paper; those who offered comments, remarks, and suggestions, and those who contributed from their wisdom and experience to improve our plan. Special thanks are hereby attributed to: Shlomit Amichai, Zvika Arica, Bea Bearman, Gila Ben-Har, Nava Ben-Zvi, Barbara Chow, Ramon Cortines, Itzik Danziger, Avital Darmon, Shlomo Dovrat, John Ewing, Michael Feuer, Joel Fleishman, Chester Finn, Susan Fuhrman, Michael Garrett, Pamela Grossman, Katie Haycock, Jane Hannaway, Haim Harari, Joel Klein, Irwin Kra, Sabrina Laine, Richard Laine, Adam Lefstein, Jennifer Lewis, Sivan Mclethie, Lowell Milken, Roy Pea, Ofer Rimon, Jon Schnur, Rich Shavleson, Shimshon Shoshani, Judy Shulman, Lee Shulman, Yossi Vardi, Daniel Zajfman, Elaine Wolfensohm, and Zvi Zameret.

## EXPENDITURE ON EDUCATION IN ISRAEL 2010

	ISRAEL	OECD	HUNGARY	IRELAND	BELGIUM	FINLAND
Population (Millions)	7.7	/	10.5	6.2	10.8	5.4
Expenditure on Education % GDP	7.4	5.7	4.9	4.7	6.1	5.6
0-14 years old % Population	26.5	/	15.8	20.9	16.9	17.3
(\$) Annual Investment per High School Student	5,741	8,267	4,225	9,375	7,363	7,829
(\$) Annual Salary per High School teacher	18,199	32,563	13,226	32,657	28,992	32,731

- Israel invests a significant portion of its GDP in education, nevertheless the investment per student is relatively poor
- Partial explanation for this unique phenomenon is the high percentage of children in Israeli society
- The salaries of teachers in Israel are low, however recent agreements with the teachers' union will gradually increase them to just under the OECD average

" THE FOUNDATION WILL IMPLEMENT THREE STRATEGIES WHICH DIRECTLY INFLUENCE CLASSROOM INSTRUCTION FOCUSING ON THE TALENT, EXPERTISE AND PRACTICE OF TEACHERS."

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## THE OPPORTUNITY

Israel, hailed as a “Start-up Nation”, and renowned for its achievements in scientific research and technology, cannot afford to ignore the educational decline it is facing.

In response to this wake-up call, the government has increased the budget allocation for education and adopted ambitious objectives for student achievement. The government's desired outcome is for Israel's students to jump twenty places in the PISA rankings, with fifteen percent of students achieving top results.

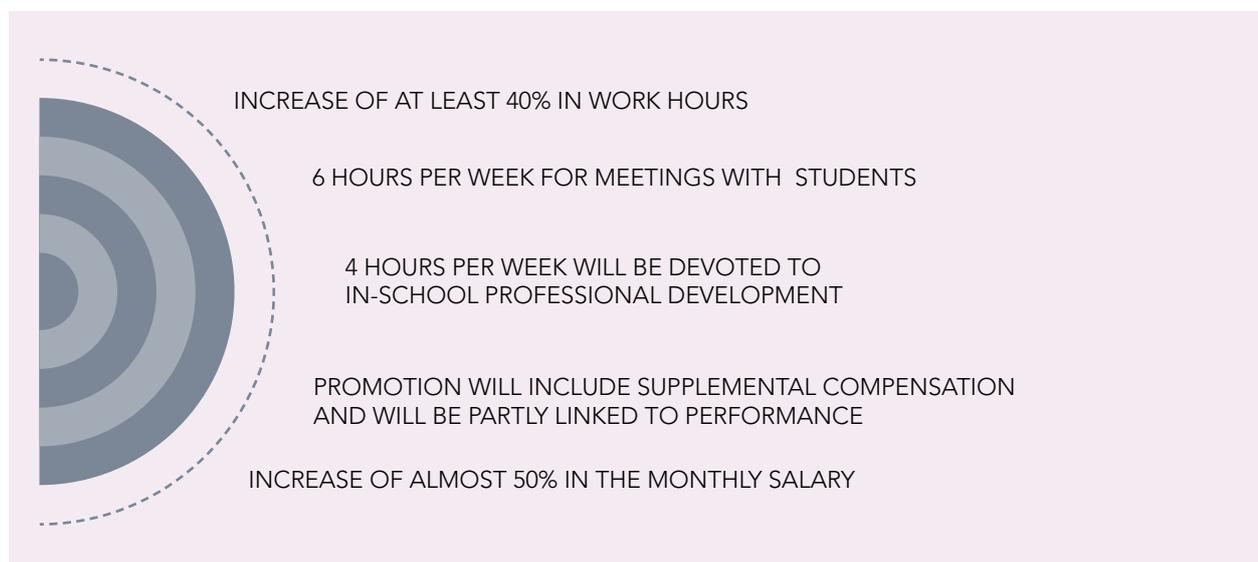
While the current downturn in Israel's achievement ranking is cause for concern, more and more Israelis, particularly after the social protest of summer 2011, are beginning to embrace the notion that it is reversible.

The dramatic improvement in educational achievement of other countries in recent years is encouraging. While some of these countries differ significantly from Israel, others are comparable in many respects and can therefore serve as replicable models. **Israel has some outstanding teachers to rely on.** These teachers work relentlessly, believe in their students' abilities and encourage them to fulfill their potential. Therefore, any effort to improve education in Israel must build on the talent, expertise and practice of our most successful teachers.

The recent wage agreements, which will gradually increase teachers' salaries by approximately 50%, promise to restore the role of teaching in our society and pave the way for better education outcomes.

### NEW AGREEMENTS WITH TEACHERS' UNIONS

#### Gradual Implementation Over Five Years



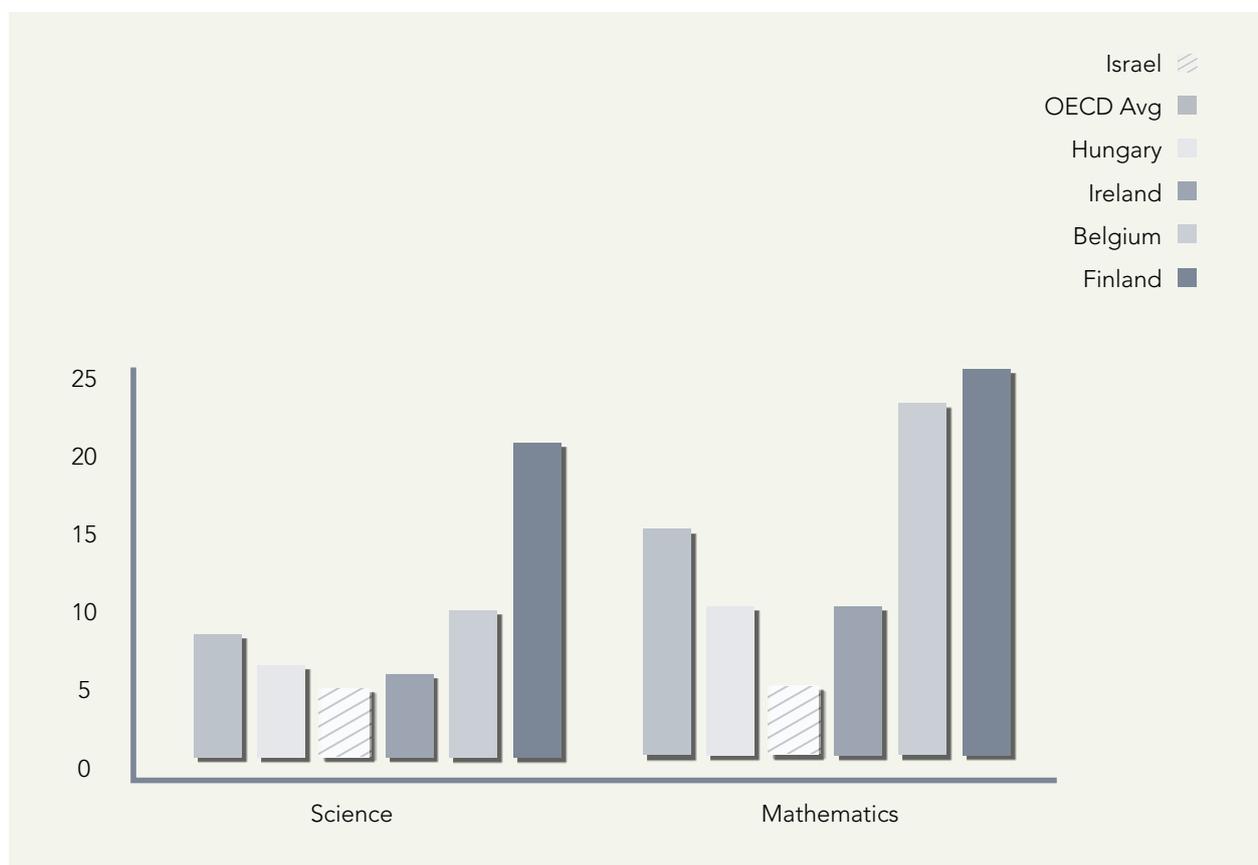
Despite this renewed dedication, education remains just one of several complex issues with which Israel and its government must contend. Since education reform is dependent on active collaboration between many stakeholders, and requires profound

and sustainable solutions, philanthropy has an opportunity to play an important role. Relying on private resources, it can act as a stabilizing force, a convener for dialogue, and a catalyst for innovation and change.

#### ACHIEVEMENT IN OECD TESTS / PISA 2009

PISA TEST	ISRAEL	OECD	HUNGARY	IRELAND	BELGIUM	FINLAND
Reading	(37) 474	493	(26) 494	(21) 496	(11) 506	(3) 536
Mathematics	(42) 447	496	(29) 490	(32) 487	(14) 515	(6) 541
Science	(42) 455	501	(22) 503	(20) 508	(21) 507	(2) 554

#### PERCENTAGE OF TOP-ACHIEVERS (LEVELS 5 AND 6) / PISA 2006



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## THEORY OF CHANGE

"THE QUALITY OF TEACHING IS AN INFLUENTIAL FACTOR  
IN ACCOUNTING FOR DISPARITIES IN STUDENT OUTCOMES."

The Trump Foundation will focus its efforts primarily on the study of Mathematics and the Sciences, with an emphasis on the way these subjects are taught in Israeli secondary schools. We aim to change the troubling course of performance in these areas, confronting the decline in the number of high schools which offer Physics studies; the deteriorating number of students taking advanced tracks in Mathematics; and the sidelining of Science studies in middle schools.

The foundation recognizes that there are no shortcuts to improving outcomes in a sustainable manner without a substantial investment in the professional development of the teaching corps. It intends to help ensure that students in Israel, particularly those learning Mathematics and the Sciences, benefit from the most effective instruction, thus enabling them to fulfill their potential and reach the highest level of achievement.

The decision to focus on teachers and instruction as a means to improving academic success is based on solid evidence that the quality of teaching is an influential factor in accounting for disparities in student outcomes.

Studies have shown that expert teachers set high goals for each student, diagnose their needs and abilities, tailor teaching methods, and monitor individual student progress.

They then provide positive and reinforcing feedback, and assistance in real time.

Instruction that focuses on student learning requires a consistent and organized approach by the teacher and a collaborative action by the whole school. At the classroom level the teacher is supported by fellow teachers, tutors and teaching assistants who help the student overcome difficulties. At the school and municipal levels teachers share resources and operate routinely within a community of practice, which focuses on the learning progress of their students.

Countries that have successfully boosted their educational achievement in recent years have learned from these best practices and developed a system-wide reform designed to improve classroom instruction. These reforms are very different from traditional reforms which concentrated almost exclusively on structure and finance. **Classrooms previously perceived as a type of a "black box" whose secrets could not be deciphered, have now been opened.**

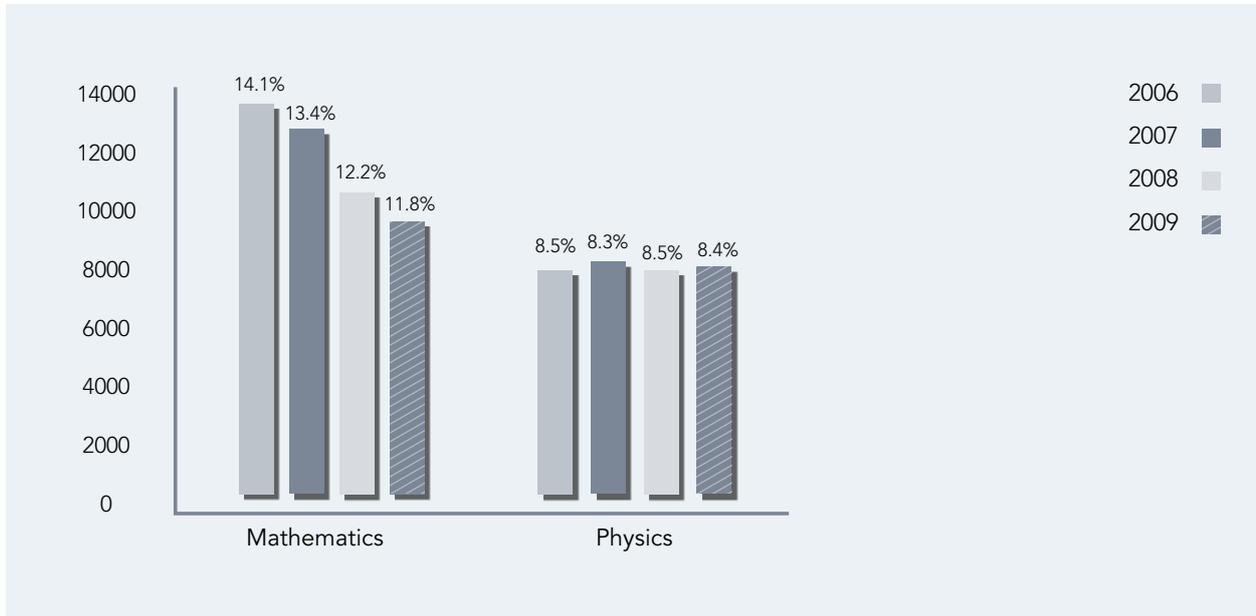
In light of the successful reforms in these countries, the Trump Foundation will intervene at three entry points proven to be vital for catalyzing excellent teaching. The first will concentrate on attracting a new generation of talented teachers, the second on building their expertise and skill for student-centered teaching, and the third will focus on showcasing effective practice of high-quality instruction.

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## ADVANCED TRACKS IN MATHEMATICS AND PHYSICS

Number of Students in 12th Grade & Percentage of Cohort



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## STRATEGY CHOICES



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## STRATEGY NO. 1 / TALENT

### ATTRACTING A NEW GENERATION OF TEACHERS

High-performing education systems recruit from the top third of university graduates. In these societies the teaching profession is perceived as prestigious; salaries are attractive and admission criteria for teaching are competitive. In Korea, teachers come from the top 5% of graduating students, and in Finland from the top 10%. Partial data indicates that in Israel, this is not the case.

Israel has a relatively sizable body of educators. However, a large group of experienced teachers, many of whom immigrated to Israel from the Former Soviet Union during the 1990s, are now nearing retirement age. Young teaching candidates are deterred from filling their shoes due to the poor salary, the exhausting work and the inferior public image of the profession.

Positive conditions for change, including the recent wage agreements and Israel's social protest are vital, but not sufficient to increase the interest in teaching. Talented people will only choose to become teachers when teaching is perceived as a worthy profession; when they feel support and encouragement from society as a whole; when they become convinced that their work yields results; and that education in Israel is changing course.

For this reason: **a comprehensive and profound change is required in the public image of the teaching profession.**

The relationship between the public and teachers must be transformed into one based on mutual trust and the teaching profession should be rebuilt as a professional craft emphasizing clinical skills, with a focus on student learning.

" A COMPREHENSIVE AND PROFOUND  
CHANGE IS REQUIRED IN THE PUBLIC IMAGE  
OF THE TEACHING PROFESSION."

The Trump Foundation aims to serve as a catalyst for **igniting the momentum which will attract a new generation of teachers to the field.**

The foundation will strive for a greater presence for teachers and teaching in the public sphere in order to spur increased interest and appreciation. Exposure through multiple media and communication channels will allow the public a closer look at the challenges, opportunities and rewards that teachers experience on a daily basis.

Similarly, a National Prize recognizing excellent teaching would present teachers as cultural heroes and convey to the public a clearer sense of what constitutes effective teaching. Master-teachers will be introduced as role models, in order to encourage other teachers and those who are interested in teaching to follow their example.

The creation and promotion of an “elite force” of teachers is another means to make teaching more attractive. The foundation will support highly competitive and selective programs modeled on Teach for America and Teach First. Teacher training for career changers and for part-time high tech employees will also be considered, following surveys and focus groups among potential candidates.

As a result of our work, within 5-7 years we expect to see a growing interest among talented Israelis to engage in teaching Mathematics and the Sciences. Through public surveys and focus groups, we aim to reveal a higher regard for the teaching profession, a mutual trust between parents and teachers, and a greater confidence in the education system's ability to improve student outcomes.

TEACHING RESOURCES IN ISRAELI ELEMENTARY SCHOOLS 2010 \*\*

	ISRAEL	OECD	HUNGARY	IRELAND	BELGIUM	FINLAND
Size of Class	27.6	21.3	21.2	24.3	20.2	19.8
Teacher/ Student Ratio	16.3	16.4	10.6	17.8	12.6	14.4
Hours of teaching per year for teacher	755	786	611	915	810	677

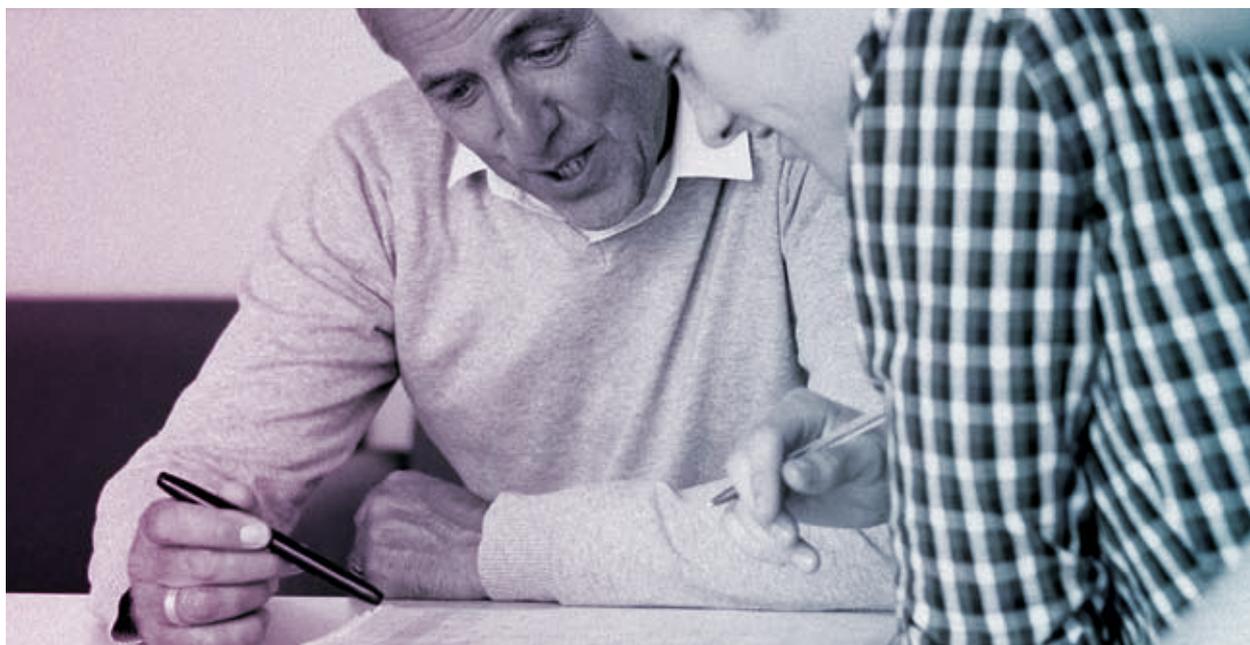
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- The average number of teachers per student in Israel is just above the OECD average, but Israel has larger number of students per class
- This is partly due to students spending many hours in the classroom and being taught by a large number of teachers, each of which teaches relatively little time
- In Finland, the structure and method are different - the permanent classroom teacher can diagnose students' challenges and abilities and direct them to work in small groups with expert teachers
- New wage agreements with teachers will enable schools in Israel to operate more like the Finnish system

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## TEACHERS OF MATHEMATICS IN HIGH SCHOOLS

- The number of teachers in the State Secular Schools increased from 1,745 in 1996 to 2,920 in 2009 (an increase of 67%) A similar trend is evident in the Jewish-Religious and the Arab School Systems
- 50% of high school Mathematics teachers graduated their own high school studies with the advanced level (5 points) matriculation in Mathematics
- The average score in the Psychometric Exam (SAT) of Mathematics teachers is 570 (out of 800) compared to a score of 616 for the average Israeli university student and 497 for a trainee teacher in an Academic Education College
- 15% of the teachers of Mathematics in high schools have not majored in Mathematics or a closely related subject in their academic studies, and have not graduated with a teaching diploma in Mathematics
- The percentage of Mathematics teachers over the age of 50 has increased from 20% in 2005 to 41% in 2009
- In 2005 less than 1,200 candidates received a teaching diploma in an Israeli university, of which 75 majored in the teaching of Mathematics (and only 45 eventually became teachers)
- In 2003 867 students graduated with a BSc in Mathematics from an Israeli university. In 2008 this number decreased to 523 students



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## STRATEGY NO. 2 / EXPERTISE

### PREPARING TEACHERS FOR STUDENT-CENTERED INSTRUCTION

Countries with high performance in education invest substantial resources in the professional development of their teachers. Their training is based on a student-centered approach and focuses on infusing practical skills for classroom teaching. In these systems, the clinical is prioritized over the theoretical, and teachers-in-training engage in real-life simulations, peer learning and internships with master teachers in schools.

In Israel, teacher training is conducted mostly in universities or education colleges, where only a small amount of time and resources is dedicated to practice. The curriculum is very comprehensive, with a natural tendency towards knowledge which is not necessarily translated into skills needed for classroom instruction. There are more than sixty different training institutions in Israel, all with their own curricula and policies, making it extremely difficult to influence teacher training across the board.

#### TEACHER TRAINING IN ISRAEL

- Teacher Training is conducted in 8 universities, 29 Academic Colleges and 29 Haredi institutions
- In each cohort 6,000 candidates study in the Academic Colleges, 4,000 in the Haredi institutions and about 1,000 in the universities
- University programs comprise of 76 annual hours of study, in comparison to 108 annual hours in an Academic College
- The practical portion of pre-service programs in the Academic Colleges is 18 hours long, whereas in universities it is no more than 2-3 hours in total. A recently published Public Committee report requires between 9 and 15 hours of practical work
- Upon completion of their teacher training 40% of the top graduates each year choose a different career and do not become teachers
- 50% of the new teachers in Israel leave the teaching profession within the first five years. They are considered more talented and capable compared to their colleagues who remain teachers

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" THE FOUNDATION'S WORK WILL INITIATE  
THE DEVELOPMENT OF CONTENT, TOOLS AND PERSONNEL  
NEEDED IN ORDER TO TRAIN TEACHERS TO PRACTICE  
STUDENT-CENTERED TEACHING "

The foundation's focus on the study of Mathematics and the Sciences in secondary education may help circumvent these challenges. In Israel, high school teachers of these subjects are trained by a handful of research universities, within special and sometimes separate departments or teaching tracks. While Mathematics and Science Teaching Departments flourished during the 1990s, they are now on the decline as government funding has dried up and senior staff approach retirement.

Based on the know-how of these departments developed in previous decades, the foundation will work initially to help them renew their authority and regenerate their capacity as centers of expertise. Learning communities of teachers will be reconvened, online networks will be upgraded, and workshops for teachers will be held to encourage professional interaction.

The next level of the **foundation's work will initiate the development of content, tools and personnel needed in order to train teachers to practice student-centered teaching.**

Case-studies and video banks of classroom instruction will be pilot-tested, and technologies harnessed so that teachers can learn from live simulations. A select group of master teachers and professional developers will form a cadre of teacher trainers to facilitate this process.

At the third stage, the foundation will act as a driver, convening an expert committee with members from Israel and abroad to recommend systematic improvements to teacher training. The committee will look into the need and possibility of creating an Israeli Institute for Advanced Teaching to serve as a central hub of expertise. The vision for this Institute is to work hand-in-hand with universities and colleges to develop innovative training techniques, assemble working-groups of expert teachers, and offer advanced teaching certifications.

In 7-9 years we foresee that an in-depth study of the first graduating cohort of the Institute will indicate that they believe in their ability to improve their student's academic achievement. Evaluation by the National Authority for Measurement and Evaluation and the OECD's TALIS questionnaires will reveal a strong trend of improvement in their instructional practices.

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## STRATEGY NO. 3 / PRACTICE

### SHOWCASING EFFECTIVE PROFICIENCY OF EXCELLENT TEACHING

The ability to practice effective teaching in a classroom is perhaps the most critical factor of being an excellent teacher. While this is primarily dependent on the competence and technique of the individual classroom teacher, it also entails a support system which is school-wide, and sometimes even city-wide and nation-wide. Without such support, even the most talented and well-trained teacher can despair.

In schools where effective teaching is practiced, teachers cater for the individual learning of each student in their classroom while working together with fellow teachers in a professional learning community. The school leadership is mentored by instructional coaches, and new teachers are apprenticed with master teachers. The whole school is enlisted to implement a student-centered approach incorporating policies, routines, and technologies that are practiced on an ongoing basis.

Collaboration across schools is imperative, particularly in the areas of Mathematics and the Sciences, in which teachers and students are scarce and lab equipment is expensive. The Trump Foundation therefore intends to serve as a partner for a select group of municipalities and school networks, who are interested in demonstrating effective applications of student-centered teaching.

We aim to create a competitive selection process in order to choose candidates who will display a deep concern, motivation and capability for improving Mathematics and Sciences secondary education in their city. Candidates will have to prepare a well-thought out plan for improving their schools' performance, including an instructional program, an implementation plan, and a platform for the sharing of pedagogic resources. We will seek to work with a variety of partners, differing in their geographic location, size, ethnicity, and religious affiliation.

Our decision to collaborate with municipalities is rooted in the understanding that mayors are held accountable by their constituency for matters related to education. Mayors have both management and budgetary responsibilities and ultimate authority, as municipalities formally own their high schools, and as such, can provide for the sustainability and the scaling up of effective practices. The larger school networks in Israel share many similar characteristics.

Since municipal elections are due in October 2013, the foundation will focus initially on creating building blocks to prepare for partnering with elected mayors after the elections. These building blocks include:

- **Technology**, comprising adaptive learning systems for the monitoring of classroom learning, web-based networks encouraging teacher collaboration, as well as virtual teaching and digital learning material.

- **High quality personnel management**, which is vital for helping new teachers find employment, integrate into schools and continue teaching beyond their first five years.

- **Instructional coaches**, who will engage with local government and school staff in order to help transform schools into a supportive environment for student-centered teaching.

In 10-12 years, our goal for our partner cities is a twenty percent increase in the number of high school students studying advanced Physics and a fifteen percent rise in students studying advanced Mathematics.

THE ISRAELI EDUCATION SYSTEM - SCHOOL YEAR 2010/2011

	1ST - 12TH GRADES	ARAB COMMUNITY	HAREDI COMMUNITY
Students	1,531,813	408,740	252,929
Teachers	118,174	30,443	7,602
Classes	59,868	14,833	10,997
Schools	4,316	853	1,199

- In 2010/2011 more than 20% of all Israelis attend the public school system
- Vast growth is registered in the Arab and Haredi schools, which constitute almost half of the Israeli education system



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## NEXT STEPS

In the near future the foundation's staff will prepare implementation plans for each track of the strategy outlined above. Implementation plans will include performance measures, sequencing schemes and timetables, as well as risk analysis and proposed budget allocation. These plans will take into consideration the challenges raised by readers and reviewers of this document, in particular the following insights:

1. Israel's social fabric is very diverse and includes two large minority groups, **Israeli Arabs and Ultra-Orthodox Jews**, which constitute almost 50% of the education system. These two groups differ from mainstream Israel in many respects and deserve special attention.
2. Girls in Israel perform better in examinations, however a smaller proportion chooses to study advanced tracks of Mathematics and Physics in high school. Teachers need to be aware of this phenomenon; encourage **female students** to persevere in their studies; and help them successfully complete their schooling.
3. High school students in Israel today are less attracted to the Sciences. It is necessary to expand the pool of students for these subjects, while improving the quality of teaching. It is therefore recommended to **nurture interest and affection** for the Sciences among students at an earlier age, particularly in junior-high school.
4. The concept of student-centered teaching needs to be further elaborated and translated into a specific instructional theory. The **instructional theory** should provide a clear articulation of how expert teachers organize their teaching in order to accomplish individual treatment for each student. These best practices should underlie the foundation's efforts to improve teacher training and practice.
5. Many stakeholders in the Israeli education system are still skeptical about its future prospects. They are not yet aligned with the idea that student-centered teaching and a focused investment in Mathematics and the Sciences are worthwhile. It would be advisable to engage in **advocacy work**, which includes conferences, seminars, workshops, etc., in order to build a growing partnership on these issues in education.
6. As the foundation has a shelf-life of approximately ten years, it should rapidly create a serious reputation for itself, and focus its work on existing demands. It must prefer grantees that are already capable of delivering high quality programs and partner with other foundations in its grant-making. **Sustainability** is a major consideration as the long term viability of ventures funded by the foundation will need to rely on other sources of income.

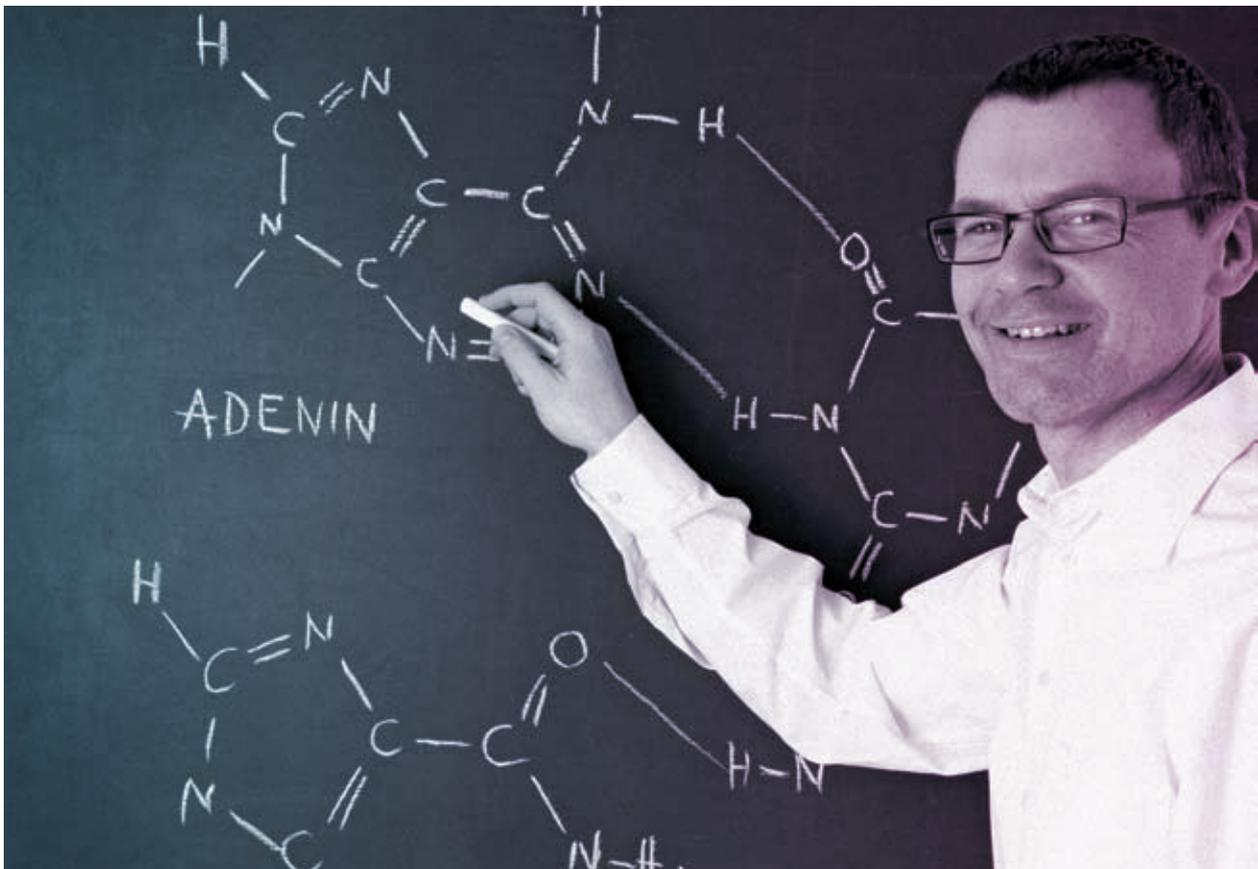
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The first few years will lay the groundwork for better planning and implementation of the overall strategy. The intention is to accelerate activity in raising the demand for teaching and by doing this, set the stage for developing the other strategy elements. This will involve testing the waters with grantees and developing the building blocks and professional infrastructure needed for the more substantial investments.

Grant recommendations will be prepared by foundation staff on a quarterly basis and presented for approval by the Board of Directors. An Advisory Board with members from Israel and abroad will assemble in Israel annually. Its primary purpose will be to advise on overall strategy and direction, to provide insights on appropriate methods of monitoring, assessment and evaluation, and to help establish and develop the foundation's position within networks of practice.

Towards the fifth year of operation, an assessment of the foundation's progress will be executed to allow for mid-course corrections. The foundation's activity will then be documented leading to an overall evaluation which will take place towards the end of the foundation's mandate. This final evaluation will measure the success of the Trump Foundation, not only by the direct results of its grants and projects, but by the rich human capital, improved educational infrastructure, and transformed mindsets it hopes to leave behind.





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