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Preface

Human talent has always been Israel's most important resource — starting with pioneers who made the desert bloom, followed by courageous soldiers who defended the nation, and groundbreaking scientists and entrepreneurs who created the "start-up nation." However, times are changing and there are signs that this relative advantage may be imperiled.

At the threshold of the 21st century, Israel found itself lagging behind in educational achievement, with declining rates of excellence and severe gaps between students. A wakeup call was needed for Israel to be able to maintain its ability to provide the world with innovative solutions in medicine, agriculture, security, and environmental protection.

The Eddie and Jules Trump Family Foundation was founded in 2011 in order to catalyze a national endeavor and help Israel reverse this negative trajectory. The Foundation sounded the alarm that alerted the public, and summoned a collaborative effort with many partners so that we all joined hands to achieve a transformational change.

We relied on great teachers, who sparked motivation and grit among thousands of students of diverse gender, ethnicity, family background and place of residence. These brilliant teachers adopted student-centered pedagogy, creating learning communities and using diagnostics in order to support every student.

Hundreds of new teachers, mostly career changers from the high-tech industry, trained every year in special preparation programs. Municipalities, districts, and school networks created local support for high-quality teaching, and a collective impact coalition provided reinforcement for an ambitious government policy operating at a national scale.

This book documents ten years of working together with our partners. It portrays a story of meticulous planning and rigorous execution, but more importantly, it is a story of people and of friendships eager to fulfill a shared vision. It is a story of an inspiring success, no doubt, though not free of flaws and mid-course corrections.

Above all, it is a story in the making. A joint journey of an ecosystem of organizations and professionals, policymakers, researchers and practitioners, parents, teachers, and students, all working together in dialogue to reach a national goal. It is also a story of philanthropy, a catalytic philanthropy, highly focused on getting things done.

We would like to convey our gratitude to the writers of the case studies presented here, who dove deep into every angle; to the Foundation and its boards, working tirelessly with talent and care, and to the partners who took this courageous leap of faith with us.

We would like to thank Eli Hurvitz, the Foundation's executive director, and the entire Foundation team for their outstanding hard work and dedication. The results speak for themselves.

Most importantly, we wish to thank the Trump family for their immense support, love, devotion to Israel, and their vision for enhancing mathematics and science education in the country.

Eddy Shalev, Chair, Board of Directors
Lee Shulman, Chair, Advisory Council

Built to Catalyze Change

"Fight for the things you care about. But do it in a way that will lead others to join you."
– Ruth Bader Ginsburg

Leslie R. Crutchfield

Every philanthropist seeks to make a positive impact. Traditionally, they've done this by giving grants to charities. Increasingly, donors aspire to be strategic; they develop logic models to address social or environmental problems, then channel resources toward root solutions. Occasionally, some donors go even further: While they form impact strategies and theories of change, they also roll up their sleeves, stand side-by-side with nonprofit, business, and government partners, and join in the messy, unpredictable, and formidable struggle to achieve systemic change.

This chapter tells the story of the Eddie and Jules Trump Foundation of Israel, and how it has forged a coalition of hundreds of partners and catalyzed a successful national movement to improve STEM education excellence and double the rate of high school students matriculating in advanced mathematics and science. This effort is having far-reaching implications for students, teachers, and the entire economy. For by growing the population of future engineers, scientists, mathematicians and other workers with STEM skills, the effort is helping to bolster Israel's national economy and secure its global position as a "Start-up Nation" in a fast-changing and competitive world.

To drive significant change on a national scale, the Trump Foundation (which bears no relation to the former U.S. President) engaged in many of the approaches employed by today's leading donors, including traditional, strategic, and catalytic approaches to philanthropy. While each contributed to success, the catalytic approaches were most pivotal.

In this context, "catalytic" means something very specific. In chemistry, the addition of a small amount of catalyst causes or accelerates a much larger chemical reaction. It contributes to creating a whole that's greater than the sum of its parts. Catalyzing change in Israel's math education system involved seeding a national collective impact effort and building partnerships with hundreds of diverse stakeholders from all sectors — business, government, nonprofit, and civil society.

The Trump Foundation not only gave grants and developed targeted strategies; it actively co-led and participated in collaborations and engaged in other activities that extended beyond traditional arms-length charitable giving.

For instance, to catalyze change, the Trump Foundation engaged in and funded advocacy to influence government policies and priorities. It mounted public awareness campaigns designed to change societal norms and attitudes among the general public, including students, parents, teachers, and more. It leveraged connections to business leaders and directly involved them in the process, instead of separating them from civil society efforts. And throughout the journey, the Foundation's leaders learned: They planned, measured progress, adjusted strategies, and tracked outcomes — focusing not just on their grantees' and partners' progress, but holding themselves accountable to the same goals. Catalytic philanthropy, at the end of the day, is a contact sport.

So, while the Trump Foundation started out in 2011 with a focused grant-making strategy following a clear logic model, its leaders soon recognized that traditional philanthropic approaches alone would not solve the problem. They saw an urgent need to fill mathematics and science teacher shortages and to stimulate student demand for these classes. This would require more than recruiting and training additional math teachers; it would involve influencing government policies, public attitudes, and exciting demand among parents, students, and new teacher recruits. Because the decline in Israel's high school matriculation performance was a complex problem, no single actor could solve it alone — even a new foundation with 600 million NIS that intended to spend down in a decade.[1]

No single solution, no "silver bullet" was available to scale up and — presto! — matriculations in advanced mathematics would rise. Therefore, a collective impact approach was required, and the Trump Foundation dove into catalytic activities such as convening, partnership-building, advocating, and campaigning.

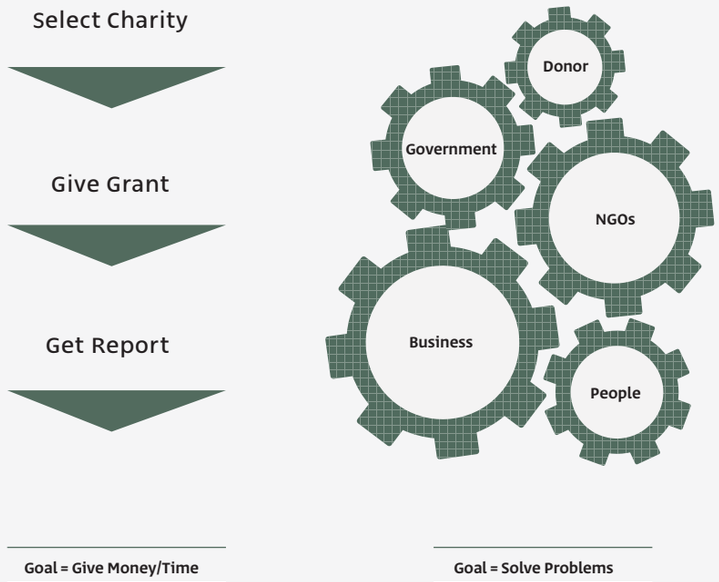
Catalyzing Collective Impact

Catalytic approaches differ from traditional modes of philanthropy because the goal of the catalytic donor is not to give away money, but rather to solve problems. This leads catalytic philanthropists to work with organizations and individuals in each sector of society — corporate, nonprofit, government, and the general public — to forge partnerships and leverage those relationships to drive impact, as illustrated by the framework below from *Do More than Give* (Crutchfield, 2011, p. 8). [Figure 1]

Of all the things the Trump Foundation did to catalyze education reform in Israel, nurturing a national network of cross-sector partners was by far the most important. By building trust and forging relationships with and among its grantees and all its partners, the Foundation created the conditions for a successful collective effort.

The act of fostering collective impact is more art than science. It involves engaging in the emotional, organic, and often messy work of building human relationships, forming bonds of trust, and creating an environment in which solutions can emerge from the bottom up. So, while many philanthropists today aspire to be strategic and get results, few do the things that are truly necessary to drive success.

Traditional vs. Catalytic Philanthropy



Source: Crutchfield, 2011

[Figure 1]

What does this mean on a practical level? Picture this: Every year since 2011, in the days leading up to the Jewish New Year, each member of the Trump Foundation staff sits down with pen in hand and writes personal notes to their grantees and partners. Hundreds of these notes are sealed, stamped, and mailed annually. And throughout the year, Foundation staff join with their partners, attending weddings, funerals, bat and bar mitzvahs, and birthdays. They do this because they understand they are in common cause, and they aspire to have open, authentic relationships with their peers. As author Stephen Covey observed, "Change happens at the speed of trust". Trump Foundation leaders implicitly understood this. By investing in relationships and building trust, the Trump Foundation created an ecosystem of actors suited to take on a big, complex challenge.

Context

At the start of the 2010s, Israel's education system was in flux. Over the previous decade, a major shift had occurred - Israel had prioritized widening access to colleges and universities for more of its students and closed down its tertiary schools for vocational and technical fields. As a result, more than 50% of high school students were enrolling in college and Israel had moved up to the position of seventh worldwide for access to advanced education for all students. However, the rate of students enrolling with advanced achievement in mathematics and science was quietly plummeting. Rates would bottom out by 2012, with 30% fewer students graduating with advanced mathematics than in 2006.

Beginning in the 1970s, Israel was emerging as a "Start-up Nation", birthing thousands of high-technology companies in industries ranging from software, cyber security, and telecommunications to semiconductors, biotechnology, and more. The nation had also attracted global corporations, including Intel, Motorola, IBM, and Microsoft. And its scientific and technological historical roots ran deep: The Technion-Israel Institute of Technology, the Hebrew University, and the Weizmann Institute of Science were established prior to the founding of the State in 1948. The arrival of highly-educated refugees fleeing Nazi Europe contributed significantly to its pool of scientific talent. By 2022, Israel was second only to the United States on a per capita basis in its ability to generate new, technology-based companies with innovative products.

At the turn of the 21st century, however, scientific and technological progress in Israel's commercial sectors was slowing. High tech companies faced a shortage of employees trained in analytic fields such as math and engineering; billboards were plastered with job opening announcements. The precipitous decline in mathematics and science graduates had the potential to hobble the Israeli economy and damage its global competitive advantage as a high-tech industry leader.

Philanthropy Responds

Eddie and Jules Trump founded the Trump Foundation in 2011 to address educational challenges in Israel with a specific focus on cultivating high-quality instruction of mathematics and science in secondary schools. While the Trump family had been philanthropically active for many years, they established the Foundation as an independent entity (rather than a family foundation) governed by a professional board of directors and led by an experienced executive director.

Members of the Foundation's board of directors included business executives from a range of industries. The Board was chaired by Eddy Shalev, a high-tech industry leader and venture capitalist; members included Toby Bernstein, retail and manufacturing industry leader and partner at Canvas and Tent; Caron Bielski, a hedge fund portfolio advisor and CEO and founder of BSP Funds; and Charles Freedman, a leading expert in banking, international government finance, and university governance.

The Trump Foundation hired Eli Hurvitz as executive director in April 2011. Hurvitz was a renowned advocate and entrepreneur in the education sector, as well as a seasoned philanthropy professional. Hurvitz was among the founders of several organizations, including Avney Rosha, the Israel Institute for School Leadership; and the Nachshon project, which provides online tutoring for high school students. Hurvitz had also served as deputy director of Yad Hanadiv, a philanthropic foundation of the Rothschild Family in Israel, where he was schooled in how private philanthropy could partner with the government to create significant national impact in quiet but powerful ways.

Committing to One Cause

Under Hurvitz's expert leadership, the Trump Foundation could have chosen to address a wide array of education issues across Israel's primary, secondary, and/or tertiary (vocational-technical) school systems. They also could have chosen to focus solely on aiding students of families from disadvantaged regions such as those who lived in the periphery or in Arab or ultra-Orthodox communities. Instead, the Foundation decided to focus on one key problem: the decline of advanced mathematics in Israeli high schools. While this was but one of many issues plaguing the education system in Israel, Hurvitz and his colleagues believed that if they could impact this one measure, multiplier effects would follow.

The choice to focus on mathematics excellence was strategic for several reasons: First, learning mathematics had practical applications for students in both work and in life. Second, it was a fundamental building block for all other sciences, and for excelling in professions in the technology sphere and at the university level. Third, advanced achievement in mathematics had ancillary personal benefits: Consider that when students learn to master any difficult new subject and or skill — whether playing complicated piano musical scores, competing at elite levels of soccer, or performing in a professionally-produced ballet — they must develop disciplined habits, maintain focus, and demonstrate determination and grit. Mastering mathematics forces students to confront obstacles, experience failure, and learn how to persevere against challenges.

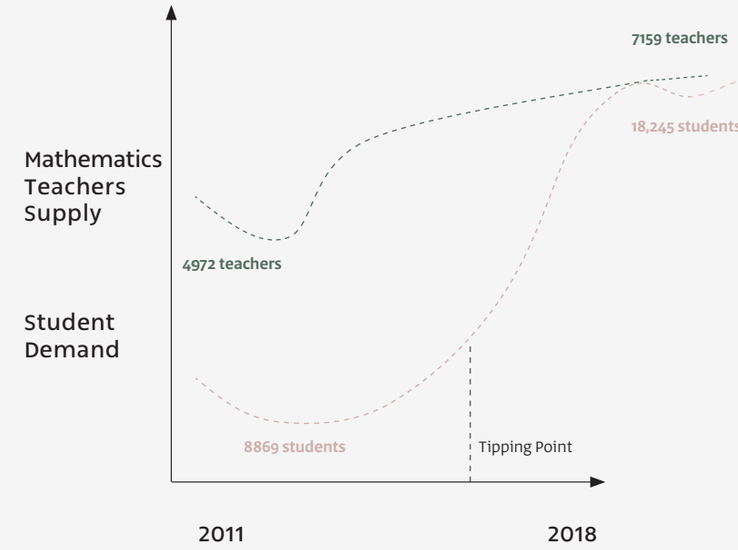
Diagnosing the Problem, Developing a Theory of Change

As the Foundation's vision became fixed on reversing the declining rates of advanced math student enrollment, its leaders studied why the rates were declining, and what approaches might be best suited to reversing these troubling trends. They found that multiple forces were causing the problem, both on the supply and demand side. [Figure 2]

Laws of Supply and Demand

On the supply side, Israel's high school STEM teacher workforce was aging, and high school teaching was not proving to be a popular career choice for younger generations, or for more seasoned workers with a background in mathematics or science.It could not compete with the more exciting and higher-paying jobs in the fast-growing high-tech sector.

Stimulating Supply and Demand



Source: Crutchfield, 2022

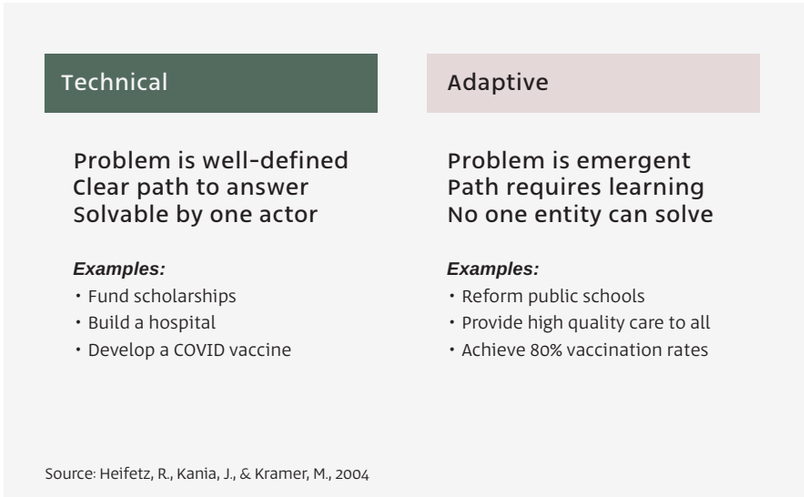
[Figure 2]

On the demand side, fewer students were choosing to enroll in the highest levels of mathematics and science. The courses were hard, required extra levels of time, effort, and focus, and due to education policies at local and national levels that determined credit qualifications, standardized test requirements, and other systemic factors, students felt there were too many disincentives to risk taking challenging advanced courses. Government policies also clouded the terrain. For instance, select Israeli Defense Forces recruitment efforts interfered with some students successfully completing their STEM courses in high school because of schedule conflicts.[2]

Importantly, cultural norms and societal attitudes also contributed to the problem, including on both the supply and demand sides. Students who were successful in mathematics and science were perceived as "nerds" and "geeks." And secondary-school teaching was not perceived as a highly respected profession in Israel. This was different to other countries where mathematics and science secondary school achievement rates were climbing, such as in South Korea and Singapore: In these countries, teaching was considered one of the most prestigious and honorable professions, and students vigorously — even ruthlessly — competed to succeed at the highest levels.

Given multiple interrelated factors, the Foundation understood that decline in math excellence was a complex problem and therefore would require adaptive solutions. [Figure 3] There was no simple "quick fix" or "silver bullet," and making grants alone would not solve the issue.

Complex Problems Require Adaptive Solutions



Source: Heifetz, R., Kania, J., & Kramer, M., 2004

[Figure 3]

In the face of this complex challenge and armed with the knowledge that they would need to be adaptive in addressing it, the Foundation considered various options that included traditional grantmaking as well as strategic and catalytic philanthropy approaches. Ultimately, the Foundation deployed strategies and tactics from across the entire spectrum of philanthropic activities. [Figure 4]

Spectrum of Philanthropy

	Traditional	Strategic	Catalytic
Mindset:	• Help people & the planet	• Help people & the planet • Solve root problems	• Help people & the planet • Solve root problems • Unleash bottom up collective action • Participate in changemaking
Key Actions:	• Give grants, get reports, evaluate retrospectively	• Give grants, get reports, evaluate • Develop "Theory of Change" and use linear logic models • Adapt strategy over time	• Give grants, get reports, evaluate retrospectively and prospectively to inform future choices • Develop "Theory of Change" & use linear logic models • Adapt strategy over time • Unleash collective action - fund and participate in convenings, partnerships, collective impact • Conduct open, transparent progress evaluations of self, partners/grantees, and collective efforts • Hold self (donor/foundation) accountable for same outcomes in same timeframe as grantees
Mode of Scaling Impact:	n/a	• Pilot and scale up solutions	• Pilot and scale up solutions • Government adopts, replicates • Unleash movements to drive systems change through collective action with coalitions of civil, nonprofit, philanthropic,government and business players

Source: Crutchfield, 2022

[Figure 4]

Catalyzing Change: Sparking a Mathematics Excellence Movement

The key to success in Israel was that the Trump Foundation adopted a catalytic approach. Adopting a strategic mindset, the Trump Foundation picked a sharp focus — mathematics excellence — and soon narrowed in on quantifiable goals with a specific, clear and measurable target: double the number of advanced mathematics graduates in 10 years. To accomplish this, the Trump Foundation knew that it would need to establish partnerships with leaders in and leverage the strengths of each key societal sector — government, business, nonprofit, and the general public.

Keys to Success

Six strategies were critical to the success of the Trump Foundation and its partners in Israel; these approaches are based on the "six practices of donors who change the world" in *Do More Than Give* (Wiley 2011), (Crutchfield, 2011, pp. 11-14):

#1: *Nonprofit Networking and Cross-Sector Partnership-Building*: Fostering alliances and engaging in collective impact with business, nonprofit and government partners.
#2: *Policy Advocacy:* Directly engaging in and funding partners to influence government policies and budget priorities at municipal and national levels.
#3: *Public Mobilization + Mindset Shifts:* Educating and inspiring the public — including students, parents, teachers — to stimulate demand and change societal norms.
#4: *Business Engagement*: Leveraging clout and influence of commercial leaders as key stakeholders, and adopting business-like discipline and cadence.
#5: *Adaptive Leadership:* While creating the conditions for partners to collaborate and create collective impact, leading with clear and unwavering focus on shared goals.
#6: *Continuous Learning:* Developing open, transparent communications with partners, including receiving and giving feedback, so strategies can be adapted over time.

While the Trump Foundation engaged in these catalytic approaches, it also undertook activities more traditionally associated with philanthropy, such as making grants to nonprofit organizations in the fields of teaching and teacher excellence. And the Foundation adopted strategic approaches as well: First, by choosing mathematics excellence as its focus, and through developing a theory of change and logic models for achieving impact. The Trump Foundation also went beyond these approaches to catalyze change through advocacy, public mobilization, and other means. As Advisory Council Chair Lee Shulman observed, the Foundation combined linear strategies with "pyromaniac" approaches designed to unleash a movement.[3]

A key element of the Trump Foundation's approach was establishing open, transparent communication with grantees and partners, and intentionally creating learning systems throughout its journey. Within the first year, the Foundation had established an Advisory Council consisting primarily of teachers and other education experts, and the Foundation committed to convening the Council along with other stakeholders annually to inform their approach, review progress, and make recommendations along the way. To promote understanding across all its partners, the Foundation developed and published a series of Strategic Roadmaps, which included a theory of change, laid out potential strategies and paths forward, and provided opportunities for partners to influence progress along the way.

First, Build Teaching Capacity + Teacher Pipelines

While the Trump Foundation's approach eventually hinged on catalyzing change, it started with the more traditional philanthropic process of making grants to nonprofits. The Foundation's grantmaking strategy was informed by a McKinsey Education report published in 2007 analyzing high-performing education systems worldwide, which included a key conclusion: "The quality of an education system cannot exceed the quality of its teachers." (McKinsey & Co., 2007). So from the start, the Trump Foundation formed partnerships with leading teaching and research institutions such as the Weizmann Institute of Science, the University of Haifa and the Hebrew University, and made grants to support the recruitment, training and professional development of teachers. Trump Foundation grants were directed to nonprofits to advance two specific goals: raise the **quantity** of teachers and increase the **quality** of teaching.

To solve the **quantity** problem and address teacher shortages, the Trump Foundation funded efforts to incentivize new talent to pursue mathematics high-school teaching, including attracting professionals from "non-traditional" backgrounds such as high-tech industry engineers and scientists, and re-training them for teaching roles. Knowing it would take years to fill the pipeline, the Foundation also funded shorter-term solutions to expand immediate access to advanced mathematics education, including launching a new Virtual High School.

In terms of addressing the **quality** issue, leaders from the Foundation and others across Israel agreed that the profession of teaching must transform from "factory" modes of instruction which rely on "lecture-test-recite" methods, and evolve to "clinical" teaching modes, which were student-focused and involved teaching how to problem-solve (Trump Foundation, 2016).

The Trump Foundation recognized that to lead in the 21st century, students needed to learn creativity and innovation, not just apply formulas and recite facts. As Albert Einstein said, "Education is what remains after one has forgotten everything one has learned in school."

Expanding the Pipeline of Teachers

Virtual High School: Distance Learning for Schools Lacking Teachers

In Israel in 2012, many students were interested in studying five units of mathematics and science but missed the opportunity to do so, often because they lived in very remote regions where schools lacked teachers and physical infrastructure. To address this gap, the Trump Foundation joined with the Center for Educational Technology and the Ministry of Education to create "Virtual High School," with a joint investment of more than 50 million NIS. By the 2015-2016 school year, approximately 900 students from 128 schools nationwide had studied at Virtual High School, including a majority of students from religious schools, and a significant number of students in the periphery and under-resourced areas of Israel, including the Arab (25%) and ultra-Orthodox (5%) communities, (Trump Foundation, 2016, p. 11).

Teacher Training Programs in Schools

Working with academic training institutions and the Ministry of Education, the Foundation offered special programs with "career retraining for academics," which were designed to train new teachers who were currently employed in high tech companies,

as well as to enhance the teaching skills of current teachers. From 2011 — 2015, the Trump Foundation invested 21 million NIS in twelve programs training 775 mathematics and sciences teachers.

Special Programs for Under-Resourced Communities

The Foundation's commitment to expanding math excellence was framed as "color blind." Yet because of cultural norms and social and economic inequities, special targeted interventions were needed. For instance, in Arab schools, students faced economic challenges, inadequate infrastructure, and language barriers. In ultra-Orthodox schools, "secular" subjects, such as mathematics and science studies had historically been blocked or minimized while the main focus was on religious subjects. And across all of Israel, few female students chose to study physics and computer science regardless of their socio-economic background or where they attended school.

Improving Teaching Excellence

Build Professional Communities of Teaching Practice

Like other professions that involve clinical work, such as medicine or law, teaching has both intellectual and practical aspects. In clinical spheres, professional know-how is accrued not only by studying but also through hands-on work, and sharing best practices and lessons learned. To inject this kind of practical experience into the teaching profession, the Trump Foundation collaborated with the Weizmann Institute, the University of Haifa, Branco-Weiss Institute, Kadima Mada, and the Ministry of Education to establish two new initiatives: 1. Regional communities of practice for teachers, divided by subject matter; some 1000 teachers nationwide participated in working groups for physics, mathematics, and chemistry. 2. School-based communities of practice for 300 mathematics and science department heads and teachers in middle schools and high schools. By 2015, the Foundation had granted 17 million NIS to support these efforts (Trump Foundation, 2016, p. 14).

Improve Teaching Excellence through New Methods and Ways of Learning

Improving *clinical* teaching skills involved teachers using diagnostic tools to evaluate the relative abilities, difficulties, thinking and progress of each student in real time. Based on that knowledge, teachers could then develop individualized goals and personalized learning plans for their students. Because this involved new modes of teaching, the Trump Foundation initially invested 10 million NIS to establish or develop these programs at the Weizmann Institute, Tel Aviv University and the University of Haifa.

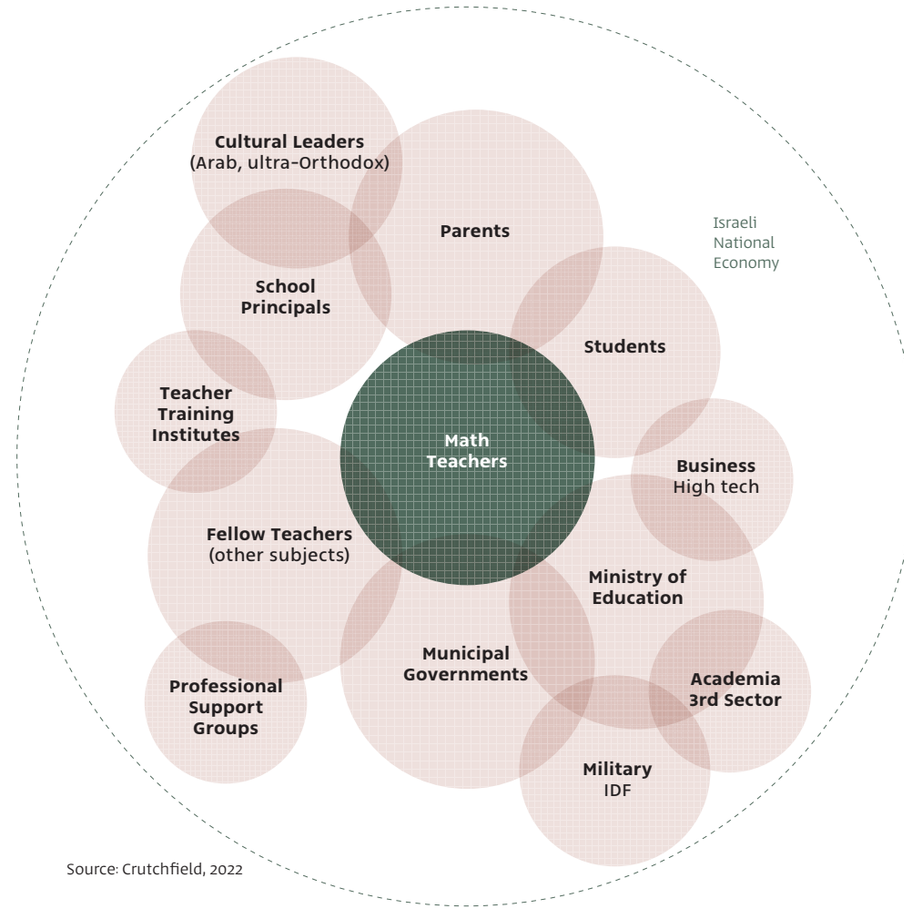
The Foundation also funded programs that enabled teachers to learn from "master" teachers and engage in peer-learning. Expanding excellence for any type of professional — whether an athlete, coach, doctor, or musician, can include hundreds of hours observing best practices demonstrated by masters in their respective fields. So, the Trump Foundation launched a flagship program, "Adasha" at the Weizmann Institute and videos were created featuring high-impact teachers instructing five-unit mathematics.

The Foundation also set out to raise the profile of science and mathematics teachers. It established the **Trump Master Teacher Award** as an annual prize granted by the Prime Minister of Israel and given to great teachers chosen by their professional peers, and based on standards of excellence in clinical teaching.

Catalyzing Systems Change

While the Trump Foundation recognized the importance of funding programs that would raise the quality of teaching and the quantity of teachers in Israel, it also understood the necessity of changing systems around teachers. This included many interlocking systems of school principals and administrators; fellow teachers and guidance counselors; coaches; students and parents; municipal governments which govern local school systems; the Ministry of Education which governs the national education field; and businesses and other employers. Each of these groups had a significant stake in improving mathematics excellence in Israel. [Figure 5]

Mathematics Education in Israel has Many Stakeholders



Source: Crutchfield, 2022

[Figure 5]

For instance, mathematics teachers are employees of schools and members of teaching teams and professional networks. Government agencies define education policy, allocate financial resources, and supervise and measure performance. And business makes up an important part of the "end-user" population of the national education system; employers such as high-tech companies, the military, academia, nonprofit and government institutions ultimately hire graduating students.

The Trump Foundation sought to achieve alignment among these multiple stakeholder groups, because it knew success would require more than priming the pipeline of teachers. They needed to create demand for advanced mathematics and science coursework, which meant influencing student and parent choices. So, within the first year, the Foundation committed to collaborating with stakeholders in the education system at all levels in order to generate momentum and alignment around the vision of expanding the circle of excellence in teaching mathematics and science.

Fostering a National Collective Impact Movement for Math Education Excellence

As it moved into its second year of operation in 2012, the Foundation began to explore convener roles with greater intentionality. As Hurvitz explains, "We knew our success would be the success of our partners. For this to happen, we needed to invest most of our time in forging relationships. But the collective, bottom-up [style] does not come easily in Israel. We are a very DIY [Do-It-Yourself] country. We admire entrepreneurs. Collaboration is not something we do naturally."

Hurvitz and his colleagues had studied the collective impact model for social change, which was gaining traction in the United States with the publication of the influential article, "Collective Impact" (Kania & Kramer, 2011). They sent emissaries to learn from "100Kin10," a new collective impact initiative in the United States. Spearheaded by the New York-based Carnegie Foundation for the Teaching of Science, the initiative was mounting a national movement to recruit 100,000 new STEM educators in ten years in response to President Obama's call to action.

At the Trump Foundation's first Advisory Council meeting held in November 2012, the agenda included discussion of the possibility of building a "coalition-network for collective impact," organized around a shared vision for mathematics and science education. Top figures in education participated in the meeting, including key leaders from the Ministry of Education; teaching colleagues from research institutions and direct-service nonprofits; high school principals and teachers; and others. The consensus was to explore collective impact models further (Trump Foundation, 2012).

By March 2013, the Trump Foundation joined together with the Ministry of Education, the Rashi Foundation and Intel, to commission a study to assess the feasibility of launching a collective impact initiative in Israel to advance mathematics excellence. They engaged Sheatufim, a nonprofit specializing in designing and leading cross-sector dialogue, to conduct a four-month study to assess the collective impact model, map the field of education stakeholders in Israel, and analyze root causes of Israel's STEM education challenges (Ben-David, 2017).

When the study was completed, the Trump Foundation, Sheatufim and other partners invited some 60 leaders to convene in July 2013 at the Hebrew University of Jerusalem.

With Minister of Education Shai Piron in attendance, the forum included representatives from a range of stakeholders including:

- Business — mainly high-tech companies
- Government — national leaders representing the Ministry of Education, Ministry of Defense, Israeli Defense Forces (IDF); and local leaders, such as municipal leaders
- Schools — secondary school teachers and school leaders
- Nonprofits ("third sector") — NGOs and educational organizations; school networks; science museums and philanthropic foundations
- Academia — universities and teachers' colleges

Forum participants described the atmosphere as "festive" and "exciting"; there was a sense that this was the beginning of something powerful. Relationships were formed, bonds deepened, ideas debated, visions honed, and commitments were made that would dramatically alter the trajectory of STEM education in Israel for years to come. In retrospect, this mid-summer forum marked the birth of the collective impact movement for mathematics excellence in Israel. It also symbolized an important turning point for the Trump Foundation, as its leaders realized how critical it was to establish positive collaborative partnerships — not just with their grantees, but also with other foundations, nonprofits, companies, government, and academic institutions.

Strategy #1. Nurture Networks of Nonprofits and Multi-Sector Partners

While the convening in July 2013 ultimately emerged as a pivotal moment for the mathematics and science excellence movement, it was not clear at the outset that success would be in reach.

First, it is important to note that in Israel, leaders from a such a broad range of corporate, nonprofit, government, and academic organizations were unaccustomed to sitting in a conference room with each other, let alone joining together in common cause. Many forum attendees were unfamiliar with the collective impact approach, and some were skeptical about building a cross-sector coalition and doubted its potential to achieve change.

Participants also vigorously debated how broad the focus of the effort should be. Diverse voices emerged — some advocated to expand the focus beyond mathematics to include all the sciences and even humanities. Others pushed to narrow the focus and emphasize developing female engineers or supporting the most disadvantaged students from schools in the periphery (regions outside of Jerusalem, Tel Aviv and other major urban centers) and students in Arab and ultra-Orthodox schools.

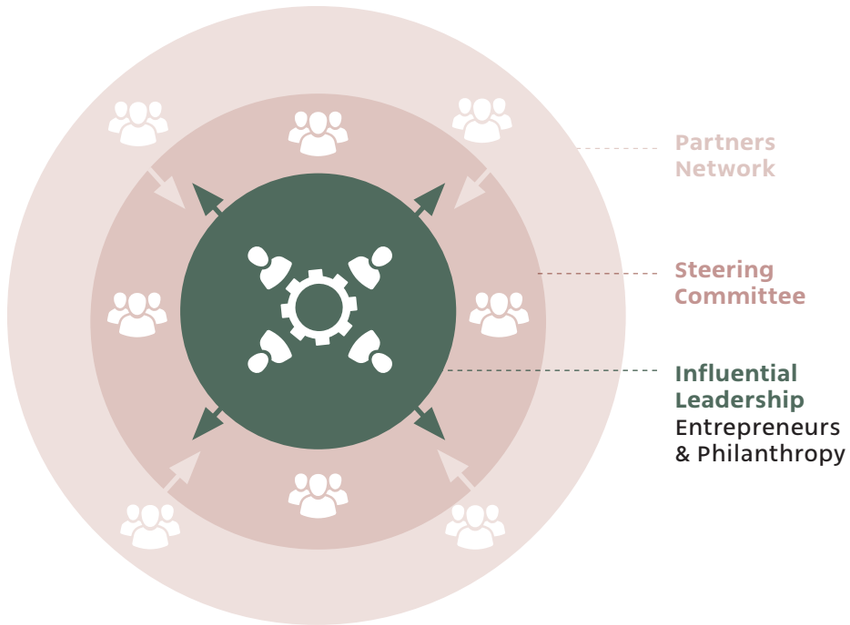
Questions were also raised early on about the Ministry of Education's level of commitment to the collective effort. And disparities between the different sectors also emerged: Some government representatives and teachers thought of industry executives as "greedy" and interested only in financial gain. "I wouldn't teach with an Intel hat on," captured the mindset of some teachers, according to Hurvitz. Conversely, high-tech corporate leaders would accuse the government and nonprofit sector of being "lazy and slow."

Hurvitz recalls from that initial meeting: "They all came up with very different answers. If we were to have voted on what would be the one, we would have lost 90% of members." So as Sheatufim focused on creating a neutral, safe space for all perspectives to come together, the Trump Foundation nudged the participants toward common ideas, eventually building a broad consensus and supporting the emergence of a joint vision:

"By 2020, Israel will be among the top 15 countries in the world based on the quality of excellence in STEM education... High School students from all sectors and by strata of the population will exercise their right to study STEM at a high level..."

The forum also provided a nurturing place for new and existing relationships to blossom, and common ground for the national movement to coalesce. Part of this involved forming governing structures so that the disparate, diverse players could collaborate effectively. At the core, a group of influential entrepreneurs and philanthropic leaders, including the Trump and Rashi Foundations and Intel Israel guided the way. A larger steering committee was formed around the core group, and the entire community included a network of hundreds of partners. [Figure 6]

Circle of Partnership - 5X2 Initiative



Source: Ben-David, 2017

[Figure 6]

The steering committee determined that Sheatufim would act as the "backbone" organization, playing the role of neutral convener and ensuring that processes were inclusive and deliberate. And later, working teams were formed so that participants could collaborate in smaller groups on specific efforts they cared about. After the initial start-up meeting in July 2013, all members of this network continued to meet semi-annually as a whole group, and working teams met more frequently. By the next full partners meeting in early 2014, the mission of the group was agreed upon and the "5X2 Initiative" was born:

5X2 Initiative Mission: ... double the number of students successfully studying and demonstrating research and higher order thinking in the field of mathematics, physics, chemistry and engineering in Israeli high schools. Within ten years, at least 20 percent of students in each class-year will meet the national and international standards of excellence"

(Ben David, 2017, p. 12).

The ambition to double advanced mathematics student matriculation amounted to an enormous BHAG (Big Hairy Audacious Goal) as American business strategist Jim Collins, author of *Good to Great and Built to Last*, might say. To achieve it, the Trump Foundation and its network of partners understood that scaling up nonprofits to deliver more teacher training would not alone be sufficient to achieve this goal. It would be necessary to change policy and harness the power of the Israeli government, industry sectors, and other players to achieve meaningful impact.

Strategy #2. Advocate to Change Government Policies and Budget Priorities

With their newly crafted mission, the 5X2 Initiative partners focused on engaging national and local government leaders in the movement. This two-pronged strategy was critical to the success of the initiative, as the Trump Foundation set out to simultaneously engage the Ministry of Education while also partnering with municipalities at the local level. The Trump Foundation recognized that the Ministry of Education - as recipient of approximately 8% of the nation's budget (more than the military) - is a large and powerful player in Israel, with the resources, reach, and influence to affect systems-level change nationwide. At the local level, the Trump Foundation and its partners focused on forging relationships with municipal government leaders who had direct oversight of schools in their regions and who were important in order to implement local-based interventions and build bottom-up momentum.

Local Government Partnerships

Local governments are responsible for secondary schools in Israel. Addressing the shortage of teachers and lack of access to science laboratories in some regions would require shifts in both municipal policies and resources.

The Trump Foundation started by studying how it could form effective local government partnerships while also experimenting with city pilots. The Foundation hired attorney Moshe Levy, former deputy mayor of Modi'in, who now had responsibility for the city's education portfolio, to assess the feasibility and conditions required for local government partnership. And in 2012, the Foundation mounted pilots with the cities of Ashdod and Haifa, experimenting with expanding programs to advance teaching excellence in mathematics and physics.

Levy set out to speak with key players to understand how local municipalities work, how their education departments function, and the interrelationships between the schools and the Ministry of Education. For instance, Levy interviewed the head of a local municipal council in a small periphery town; an administrative head in a large city; senior officials in local education departments; a senior physics teacher who leads projects in multiple cities; and others. Once the city pilots were up and running, Levy spoke with leaders charged with implementing excellence programs to understand what was working, what was not, and what the Trump Foundation could do differently going forward to ensure success.

The insights surfaced from these inquiries proved instructive. First, they confirmed that municipal "partnerships" would be different than the Foundation's relationships with nonprofit grantees. The Foundation would not be able to dictate to local governments which programs, or program components, to adopt for instance. While the Foundation sought to focus exclusively on improving the quality of teaching in mathematics and science, this was too narrow a scope for local governments, which were responsible for the entire educational curriculum. Also, it became clear that it would not be possible to establish municipal partnerships for the sole purpose of importing and scaling up programs the Foundation had helped develop: Municipalities did not consider schools to be "experimental laboratories." The research also highlighted how the Foundation and local governments would need to share costs, with the Foundation providing more financial support at the beginning to allow time for municipalities to re-allocate resources (Trump Foundation, p. 28).

The Trump Foundation took these findings and applied them to inform their approach as they expanded to more cities and developed multiple types of local government partnerships. By 2016, the Trump Foundation had given 21 million NIS to form collaborative ventures across multiple groups:

- Nine cities: Ashdod, Haifa, Ra'anana, Bat Yam and others
- Five networks: ORT, Amal, AMIT, Darca and Branco Weiss
- Four districts: North, Central, Jerusalem and the Ultra-Orthodox District

Another key insight that emerged from the Foundation's 2012 research on forming local partnerships was the importance of engaging with the Ministry of Education. "The Foundation should understand that the Ministry of Education has powerful influence over what takes places in schools, and that any process that does not include the Ministry will meet with difficulties in the future," advised one former city official.

National Government Partnerships

Many of the 5X2 Initiative partners expressed early on their belief that the Ministry of Education must take a leadership role and plainly state its support. During the first year of the joint effort, outreach was made to top leaders in the Ministry of Education, including Minister Shai Piron, Director General Michal Cohen, and other senior officials. While at the first meeting in July 2013 its commitment was not clear, the Ministry soon became a visible and vocal advocate. By May 2014, the Ministry of Education had announced a new national program, "Math First." Designed to increase the number of students studying advanced mathematics, the program was launched in the 2014-2015 school year with an investment of 15 million NIS, which supported reinforcement hours in about 100 schools, and also helped strengthen the quality of teaching in mathematics.

The national government's sudden involvement was likely sparked by a combination of engagement by the Foundation and its partners in the collective impact coalition, and by the savvy use of national media to capture top government officials' attention. The Trump Foundation and its partners seeded a study, "A Start-up Nation at Risk," and pitched stories to the media highlighting a national crisis. The Foundation also seeded the launch of a new education-focused social media platform, "Time for Education," which contained curated and original content.

By 2015, Naftali Bennett took office as the new Minister of Education, and quickened the national government's commitment to the math excellence cause. Bennett had previously served as Minister of Economy under Prime Minister Netanyahu, and later would become the 13th Prime Minister of Israel. A high-tech industry leader, Bennet had previously co-founded and led an anti-fraud software company, so he had experienced first-hand the shortage of engineers and skilled workers for high-tech industry jobs in Israel. By August 2015, Minister Bennet had launched a new **National Program for the Advancement of Mathematics** with a 75 million NIS investment and new policies to massively scale key programs including:

- 100 new high school math majors created
- 15K additional teaching hours
- 200 teachers received expanded accreditation
- Funding for mentoring

The Ministry of Education made other policy changes to further unleash energy to achieve goals of the 5X2 Initiative. These changes included clearing technical obstacles that discouraged students from taking five units of math, such as increasing the "bonus points" awarded to five-unit math majors so that their extra effort would be recognized when they applied to higher education institutions. The Ministry of Education also established a "safety net" for students who did not receive top grades but performed satisfactorily, and instituted other reforms at the municipal level.

These sweeping changes brought the full force of the Israeli national government and the power of its purse behind the 5X2 Initiative goal. In the process, the education system was reformed. This made it much more likely that the changes would stick, which is particularly important given that the Trump Foundation's investment would end, given its plan to "sunset" after 10 to 12 years.

Timing was Everything

One of the most important things the Trump Foundation got right in advocating to and partnering with government was sequencing its efforts and timing. The Foundation started with localized partnerships and efforts, experimenting with city pilots and using them as an opportunity to learn and adjust. Later it focused on engaging national leaders. If it had been the other way around, the 5X2 Initiative would likely not have succeeded. As Hurvitz explained, if the national government had come out unilaterally with its own policy, the field of education organizations and academic experts would have criticized it. By building consensus and advocating from the bottom up, the Trump Foundation ensured that the field was aligned and ready to accept new government approaches. In Israel, change doesn't start from the top down, it comes from bottom up.

Ironically, by waiting to engage the national government, the movement was gaining momentum, and when the Ministry of Education got involved, it dramatically accelerated the pace by injecting the full force and depth of its resources. "Most of us didn't expect success to come so fast. The government came in with brute force, saved us three years and lots of money," said Hurvitz.

Strategy#3: Mass Mobilization+Mindset Shifts

"There are two ways of spreading light: to be the candle or the mirror that reflects it."

- Edith Wharton

Public mobilization is a key component of catalytic philanthropy — and a lever that is often overlooked by even the most strategic donors. From the start, the Trump Foundation recognized the need to engage the whole of Israeli society — students, parents, workers and employers — as well as leaders with formal authority and influence, such as government officials and high-tech industry leaders.

The Foundation's theory of change was grounded in the need to fuel change on both supply and demand sides of the problem. This meant first stimulating the supply of excellent teachers. So, from the start, the Trump Foundation made grants to education nonprofits to help expand the number and quality of teachers. The Foundation also established partnerships with municipalities to stimulate teacher supply, first with Ashdod in 2013 and later Haifa in 2014. The Foundation and its partners realized they must also expand student demand and awaken the appetite among high school students to enroll as advanced mathematics majors.

Stimulating student demand presented a unique, complex challenge. It required raising awareness of the problem on a national scale, whetting the appetite among the student populations to take advanced mathematics courses, and confronting negative stigmas associated with mathematics excellence. The Foundation engaged a public relations firm to develop and implement national and local campaigns designed to reach target audiences with the messages that would electrify them into action. This involved changing cultural norms and attitudes about the importance of mathematics excellence; and marrying the concept of mathematics achievement with Israeli economic success and its competitive global identity as the "Start-up Nation" in the minds of the population.

The Laws of Supply and Demand

Think of teachers and students as forming the interstices of an education marketplace. Teachers provide the "supply" of math education, and students provide the "demand." Key influences on this marketplace are schools, which employ the teachers and are resourced and governed by local municipal leaders and nationally by Ministry of Education leaders. Other influencers are parents, families, and peers of students, who may or may not choose to major in advanced mathematics when they enter high school. Other indirect influencers include employers — such as high-tech companies, Israel's elite military units, and other government, academic, and nonprofit institutions.

Importantly, cultural norms and societal attitudes contributed to problems on both the supply and demand sides. Students who were successful in mathematics and science were perceived as "nerds" and "geeks"; meanwhile, the profession of teaching at the secondary school level was not seen as highly desirable or respected in Israel. This was different than in other countries where mathematics and science secondary school achievement rates were climbing, such as in South Korea and Singapore: In these countries, teaching was considered one of the most prestigious and honorable professions, and students vigorously — even ruthlessly — competed to succeed at the highest levels and enter the profession.

But perhaps the most important cultural issue was lack of awareness. When the Trump Foundation started out, the general Israeli public had limited knowledge of the decline in advanced mathematics matriculation, and many did not understand the potential negative long-term impacts that this trend could have on the country's economic competitiveness.

To address these challenges, the Trump Foundation and its partners set out to influence the demand side of the equation. They did this by working with and through the media to raise public awareness, sound the alarm, and eventually, to mobilize people across the nation to encourage students to enroll in advanced mathematics and science, and demand that schools provide access to advanced teaching and resources. These efforts involved the use of public relations and marketing strategies, and the media would become a powerful magnifying mirror to reflect and amplify messages to mobilize the public.

Message, Media and Messengers

In 2014, Trump Foundation hired a strategic media consultancy and public relations firm, Ben Horin & Alexandrovitz, to build out multiple public outreach and media campaigns. The first step was to understand who the Foundation was trying to reach, then segment those audiences, and determine exactly what new behaviors and mindsets were desired. The results of this audience research informed the content of campaign messages, the media through which the messages would be disseminated, and importantly, who the messengers would be.

The Foundation and its partners identified several key target audiences:

1. Students — including current and future high school students from every quadrant of society, including the periphery, as well as in Arab and ultra-Orthodox schools.
2. Parents — whom students said have strong influence on their choices.
3. Government leaders — including national and local leaders, from the minister of education to mayors to municipal education department heads overseeing schools.

The PR firm led efforts in three consecutive stages between 2015-2017; in the chapter, "Media as a Lever for Change," these campaigns are more fully described,

Stage One

During stage one, the PR firm helped the Foundation and its partners conduct background briefings with media members, including journalists, columnists, editors, newsroom teams, and other influencers. They raised awareness about the crisis in mathematics education, and seeded stories in local and national media outlets. They also created and joined in major events, putting mathematics excellence messages in unexpected places. Highlights included:

- *Tel Aviv Marathon "Running Together 5" team:* The PR firm helped the Trump Foundation and its partners mobilize 5,000 advanced mathematics students and their teachers to run together in the Tel Aviv Marathon.
- *The Math Excellence Map:* This interactive "heat map" showed advanced mathematics "hot and cool" spots across the country; the tool was developed by the Trump Foundation and the PR firm promoted it through the media so the general public could use and learn from it.
- *Yedioth Ahronoth Education Conference:* A national conference organized annually by Yedioth Ahronoth Group, owner of the leading newspaper and Ynet website in Israel, this forum provided a natural platform for discussing mathematics excellence.

And even before engaging the PR firm to wage national media and event campaigns, the Trump Foundation had begun raising public awareness through innovative public-facing activities designed to capture the attention of "regular" people. For example, in 2012, the Foundation instituted the Trump Master Teacher Award, a prize presented annually by the Minister of Education to a distinguished high school mathematics teacher. And in 2013, the first annual National Teachers Day was inaugurated, and included events, food, wine, and festive, family-friendly activities occurring in towns and cities nationwide. These efforts raised the profile and prestige of teaching as a profession, helped stimulate demand from would-be teachers to enter the profession, and raised awareness about the need for mathematics excellence.

Stage Two

In the second stage, the goal was to make "mathematics excellence" a dinner-table topic in homes nationwide. The concentrated media campaign was spread over a few weeks in the spring of 2016, as the PR firm engaged various media platforms including TV, radio, social, and billboards with two key paid advertisement videos:

- *"Parents Wake-Up,"* featuring the sound of a school bell ringing and contained messages urging parents to encourage their children to choose advanced mathematics and science courses.
- *"Big Opportunities Start with 5 Units,"* which highlighted diverse leaders and celebrities including scientists, CEOs of big tech companies, elite army intelligence agents, athletes, politicians, authors and more, endorsing the idea that students who choose high-level mathematics would have bright futures.

These campaigns garnered millions of views. They also stirred controversy and even backlash. According to Keshet data, approximately 2.7 million households in Israel were exposed to the campaign. And clearly people were talking about the ads: The focus on mathematics excellence spurred reaction from students, parents and adults from all walks of life, many of whom complained that other subjects — such art and humanities - were equally important. This led the campaign developers to tweak the content of the second round of ads, "Big Opportunities Start with 5 Units" and feature "unexpected" celebrities, such as a popular musician speaking about how she believed excelling in mathematics was critical to her success in the entertainment industry.

The campaigns also sparked a strong response from the Ministry of Education. Soon a new government-sponsored advertising campaign launched, "Give me Five." While this campaign was considered too hard-hitting by many in the public, it was a clear signal that the national government was fully behind the 5X2 Initiative goal.

No Such Thing as Bad Publicity

The debate stirred by these campaigns demonstrated a few important things: First, it was possible to fire up the public about a "dry" topic like high school mathematics and science. Second, while people publicly criticized the campaign for being exclusively focused on "hard," formal and natural science subjects, privately parents encouraged their kids to enroll in advanced mathematics majors. And finally, the campaign clearly captured the attention of the masses, and the messages had "stuck." As Oscar Wilde said, "There is only one thing in the world worse than being talked about, and that is not being talked about."

Strategy #4: Business Engagement

From the very start, business leaders had a seat at the table in the Trump Foundation's campaign to catalyze change. Brothers Eddie and Jules Trump were successful business leaders in a range of industries. When they established the Foundation in 2011, they put business leaders on the board, and at each stage of the 5X2 Initiative, Hurvitz encouraged industry leaders to participate.

While some government and nonprofit sector leaders chaffed at working alongside business, there was no question that commercial industry leaders had a large stake in reversing mathematics and science education trends. When fewer than 10 percent of Israeli high school students enrolled in advanced courses in mathematics and science, it was bad for business. Corporate leaders were enthusiastic collaborators in the effort, joining working groups, creating mentoring programs, working with teachers, and tutoring in the schools. They also played convening roles, holding conferences and events such as the annual Intel International Science and Engineering Fair (ISEF) and Intel's inaugural STEM Conference held for this first time in 2014.

Beyond creating conditions so that business leaders could join the collaboration, Hurvitz and the Foundation's partners harnessed market forces and injected more business-like mindsets into the initiative. For instance, when the partners agreed to the "5X2" goal, business leaders around the table jumped immediately to tactics and action plans, whereas nonprofit and government leaders conceived of progress at a slower pace.

Recalls Hurvitz: "Once we agreed to double the number of math majors in five years, a government planner would establish a two-year budget, spread over seven districts, divide it between north and south, appoint the coordinator. Whereas the business leaders asked, 'what would be the quarterly goal? What's the objective for the next 3 months? Let's [enroll] 10,000 kids within a year.' Business thinking brought discipline, urgency, and practical tools to the table."

The collective impact efforts also included market-based solutions to try to shore up teacher supply. For instance, the Trump Foundation seeded a Personalized Learning Plan Challenge, a national competition to develop effective individualized learning approaches to reduce rates of students dropping out of advanced mathematics classes. It also created an HR company to help place high-quality residency teachers.[21] It's rare for a philanthropist to give money to for-profit companies. But when the market for attracting and training educators failed, harnessing market forces and tapping into the competitiveness of business provided an innovative solution.

Strategy #5: Adaptive Leadership

At the end of the day, catalyzing change is an act of leadership. The most important thing a catalytic philanthropist does isn't "philanthropy," its leading. And the most successful catalytic philanthropists embody a specific type of leadership: ***Adaptive leadership*** (Heifetz, Kania, & Kramer, 2004, p. 26).

What is ***adaptive leadership***? It involves elements classically associated with leadership, including setting clear goals and rallying people to achieve them, as well as mobilizing necessary resources, and holding oneself and others accountable for outcomes in the process. But adaptive leaders must do these things without formal authority, which makes it especially challenging. In many traditional leadership

situations, such as commanding a military unit or steering a company, leaders have *formal* authority. They can hire, fire, and direct subordinates. Whereas *adaptive* leaders have mostly *informal* authority (or moral authority), which they must earn from their peers. Adaptive leadership is especially effective when the challenge is complex, the answers are not immediately known, and no single actor can solve it.

Adaptive leadership includes these key elements:

1. Maintaining a clear focus on the goal — and keeping others focused on that goal
2. Creating the conditions so others can conceive and implement solutions to the problem
3. Provoking thinking, learning and prompting innovation

Adaptive Leadership Defined

"Adaptive leadership involves managing the conditions that enable people involved with complicated social issues to figure out and undertake solutions that ultimately require changes in their own ways of working. Adaptive leadership is a highly results-oriented process that requires the leader to play a clear, forceful role in keeping interested parties productively focused on the problem at hand. Adaptive leadership achieves positive change by provoking debate, encouraging new thinking, and advancing social learning. It mobilizes parties to work toward a solution, rather than imposing one. The goal is to encourage shifts in mind-set and provide incentives for stakeholders to invent their own solutions."

— Heifetz, Kania, & Kramer, 2004

Examples of successful adaptive leadership in philanthropy are rare, not because the approach is ineffective, but because it is difficult. It requires leaders be relentlessly focused on the change they seek to create, while remaining flexible, open, and encouraging their partners' ideas and approaches. This inevitably creates tension, because in every cause or movement, multiple program innovations, policy approaches, and personalities come into play. Many stakeholders are deeply invested in the success of the initiative, and each wants to have equal say in strategies and tactics employed. But at the end of the day, some approaches will be ratified and enacted by the group, and others won't. It's the job of the adaptive leader to create the conditions so the best solutions come forward and get taken up by the group.

Trump Foundation Executive Director Eli Hurvitz and his colleagues provide textbook examples of *adaptive leadership* in action. First, they established a **clear goal** and maintained an **unwavering focus** on tackling it. This involved being comfortable with some conflict, as partners could sometimes balk at the Foundation's singular focus on mathematics excellence. "We sometimes played the 'nice bad guy'," recalls Hurvitz. Second, the Foundation created the conditions so that a broad coalition of stakeholders — including ultimately 300 grantees, partners, and other allies - could effectively collaborate and co-create solutions in a national collective impact initiative. And third, they encouraged transparency and open communication, vigorous debate, and provided mechanisms to continuously learn, evaluate and adapt.

To lead adaptively, the Trump Foundation also maintained a clear-eyed view of where their formal authority ended, and informal influence came into play. For instance, Hurvitz knew he had full control over Trump Foundation staff and could influence their grantees and partners. Beyond that, Foundation leaders only had informal authority and had to create the conditions so multiple stakeholders could join forces and collaborate for collective impact. This involved creating a sense of urgency, which the Trump Foundation cultivated by going "all in" on the initiative and declaring that it would sunset (spend down) within 10 to 12 years. This created urgency and momentum.

The Trump Foundation's success also hinged upon choosing credible partners who could lead adaptively, and building open trustful relationships. This required letting go of ego and allowing others to lead and share credit for successes. It's a paradox: To gain power, adaptive leaders give it away. As Lao-Tzu observed, "A leader is best when people barely know he exists. When his work is done, his aim fulfilled, they will all say: we did it ourselves."

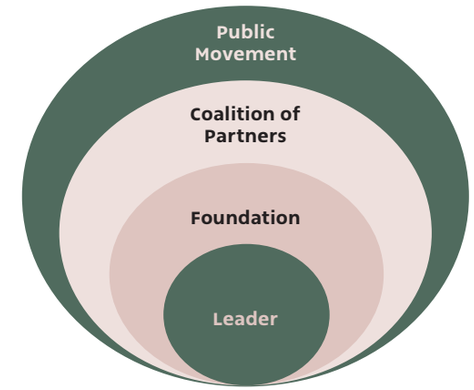
Strategy #6: Continuous Learning

In traditional philanthropy, learning happens mainly through grantee reporting. The donor commits to give a grant to a nonprofit; often, the grant is "restricted" to a specific program or set of services. And the donor expects to receive a written report at the end of the grant period. Whether the evaluation is accomplished independently or self-reported, the efforts are typically conducted *retrospectively*. Catalytic philanthropists approach evaluation differently; they see it as an opportunity to learn and then adapt. They seek to understand from their grantees what worked, what didn't, and what could be done differently to improve performance. Catalytic philanthropists approach their work with a *learning mindset* (Crutchfield, 2011). And they seek to learn not just about their grantees; they also evaluate their own performance.

Perhaps the biggest difference between reporting and learning involves how a foundation sees its own role in the change-making process. Traditional donors with a report mindset seek attribution; they seek to understand if their grant "made the difference," and if their grantee alone "solved the problem." Whereas catalytic donors with a learning mindset seek to understand their contribution. They seek to understand how their grants and in-kind efforts contributed to advancing outcomes.

The Trump Foundation functioned as what systems theorist Peter Senge might call a "learning organization."[25] Learning organizations encourage and facilitate learning so that it can adapt and transform itself to achieve its goals in a dynamic and competitive world. The learning mindset is applied across multiple spheres of leadership. It starts with the individual leader, extends to the foundation or nonprofit that he or she leads, then to the field — the coalition of partners, and ultimately across the broad-based movement. [Figure 7]

Learning & Leading Happens on Many Levels



Source: Crutchfield 2022

[Figure 7]

The Trump Foundation and its partners were committed to learning at every level about how individual organizations and the coalition of partners were advancing progress. Effort was made to conduct learning in real-time as well as prospectively and retrospectively.

Examples of prospective, retrospective and real-time learning:

- Before starting an initiative or making a grant, the Trump Foundation conducted extensive research. Hurvitz and his colleagues sought out the latest theories, models, and best practices for every endeavor. For instance, before launching the 5X2 initiative, Hurvitz traveled to the United States to understand how The Carnegie Foundation for the Teaching of Science designed a successful "100Kin10" campaign to improve STEM education in America.
- Before scaling out government partnerships, the Foundation commissioned a lawyer and former municipal official to understand how the local government system works in partnership with schools, and to unearth best practices.
- Before launching "National Teachers Day," the Trump Foundation team asked, "what constitutes a successful holiday?" Research revealed that events with good food, great wine and other best practices help, as well as rooting it in cultural traditions.
- The Foundation tested pilots, such as the city pilot partnerships with local municipal governments, and tried to assess in real time what worked, what didn't, and how to improve its practice going forward. One key insight that emerged was that it was critical to engage local governments to first build a groundswell of support that could then be used to influence the Ministry of Education.
- The Foundation commissioned the Center for Effective Philanthropy (CEP) to conduct Grantee Perception Reports. These anonymous surveys allowed grantees to provide honest, direct, anonymous input to the Foundation.
- The Foundation developed and openly published online Strategic Roadmaps, inviting partners and the public to comment and critique. The Foundation held National Advisory Council meetings biannually and invited debate and constructive dialogue to strengthen and adapt its strategies along the way. This led to creating second and third versions of its Strategic Roadmaps.

Radical acts of transparency like these are rare in the philanthropy world. But "...it turns out, if you put things online, nothing bad happens to you," reflects Hurvitz. By opening the Foundation up to real-time comments and critiques, they learned, they adapted, and the initiative moved forward with greater efficacy and more trust.

The Cost of Driving Change on a National Scale

Raising teacher quality and doubling the rates of advanced math and sciences matriculation among Israel's high school students was an enormous and complex undertaking. It also required significant financial and in-kind resources. During the seven-year period from 2011 to 2018, the Trump Foundation spent approximately 250M NIS ($75M USD) making grants to partners, payments for services, and on Foundation operations to achieve the 5X2 Initiative goal of doubling high school student advanced math matriculation rates. [Figure 8.]

The one-quarter of a billion NIS in expenditures by the Trump Foundation does not account for the intangible contributions by the Foundation, such as harnessing its influence to host convenings, lead advocacy and public mobilization campaigns, and leverage its networks of influencers for the cause.

Trump Foundation Expenditures

High School Strategy (2011 - 2018)	NIS (M)	USD (M)
Grants to Partners	180.5	54.5
Coalition Backbone Lead (Sheatufim)	3.4	1.03
Other Infrastructure Partners	25.6	7.7
Trump Foundation Operations	40	12.1
Total	**249.5**	**75.3**

Source: Crutchfield, 2022

[Figure 8]

Nor does it account for the additional billions that were ultimately contributed (directly or indirectly) by other foundations, corporations, nonprofits, and the Israeli national and municipal government agencies that all collectively promoted the 5X2 goal. While the Trump Foundation's support and efforts alone did not create the positive educational outcomes in Israel, it's unlikely the nation's mathematics excellence goals could have been achieved without the Foundation's catalytic leadership and financial contributions.

Built to Catalyze Change

Through a combination of classic grantmaking and catalytic approaches to philanthropy, the Eddie and Jules Trump Foundation sparked wide scale change in Israel. Adopting a strategic approach from the outset, the Foundation picked a sharp focus — advancing mathematics excellence — and set a specific, clear, and measurable target: Double the number of advanced mathematics graduates in 10 years. The Foundation successfully established partnerships with leaders of organizations from each sector of society — government, business, nonprofit — and forged a coalition to achieve collective impact while also mobilizing the public to demand change. In the end, the Foundation and its partners not only achieved their "5X2" goal, they surpassed it - in less time and with fewer financial resources than they had planned to spend as a "sunset" foundation. This story of education system transformation in Israel yields important lessons for any foundation leader who seeks to catalyze significant change on a national scale. ■

Timeline of Key Events (2011 – 2020)

2011-2012

Strategy Development
- TTF publishes Strategic Roadmap in October 2011

Program investments
TTF funds teacher programs
- Virtual high school (interim)
- Teacher training programs
- Other grants

2012
- Publishes "Strategic Direction" as a Working Paper
- 1st TTF Advisory Council Convening in Jerusalem
- Partners invited to comment
- Exploring convener role

2012: Trump Master Teacher Award established

2012

Mathematics Nadir:
Students enrolled in 5-units mathematics drops to 8869

2013

Collective Impact Feasibility Study
TTF, Rashi Foundation, and Intel Israel engage Sheatufim

"5X2 Initiative" launches
- Joint Vision announced

Collective Impact Established
- SteerCo
- Joint Task Force
- Work Teams
- Sheatufim is the backbone organization

National Teacher Day established

2014

"5X2" Vision Announced
Joint mission statement, with focus on mathematics, physics, chemistry students and teachers

"Math First" National Program launched by Ministry of Education
- MoE Commits NIS 15M

It's Time for Education
(online magazine launched by TTF)

2015

New Minister of Education Bennett, prioritizes STEM, 5X2

National Program for the Advancement of Mathematics
- Launches Aug. (75M NIS)

New MoE Budget Allocations:
- 100 new math majors in High School
- 15K new teaching hours

Policy changes:
- Additional bonus points for mathematics majors
- Safety net to prevent drop out from 5-units mathematics
- Municipal reforms

CI Coalition of 100 orgs 4 Working Groups Established
1. Students 2. Periphery 3. Tech excellence and 4. Teacher pipeline

2016-2017

Mathematics Rates Trend Upward
- MoE announces summer 2016 15,800 students in 11th grade take 5 units (up from 8869 in 2012)

Media Campaigns (May-June)
- 2 campaigns launched spring '16,1 by TTF at Channel 2; other by MoE
- Public debate [Operation Dinner Table Topic]

Strategic Plan Process II
- Fall '16 — Feb '17
- 5X2 Initiative leaders

2017 "Top15" Announced
- New geographic foci - periphery + Arab sector

2018-2021

Top15 Initiative Launches
- focused on periphery, middle school

2018

Success!
Students taking 5 units doubles

2011 · 2012 · 2013 · 2014 · 2015 · 2016 · 2017 · 2018-2021

TTF Internal Activities

Trump Foundation + Advisory Council
Established July 2011

2014

Commissions GPR reports with CEP

Hires PR Firm for public campaign

2015=5 years

125 Partnerships made and 100 million NIS spent

Moves to new offices; open, light, convening space

Source: Crutchfield, 2022

1 600 million NIS (New Israeli Shekels) was roughly equivalent to about $181 million USD.

2 Video Interview with Eli Hurvitz, executive director of the Eddie and Jules Trump Foundation, June 30, 2022

3 Video interview with Lee Shulman, chairperson of the Advisory Council to the Trump Foundation, July 11, 2022

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The Philantropic Approach of the Trump Foundation

Guy Ravid

Introduction: A Philanthropic Gamble?

An article published in the winter of 2016 in the Stanford Social Innovation Review (SSIR) under the title *Making Big Bets for Social Change* identified a broad gulf between the willingness and desire of donors to promote real social change and their actual commitment to this in practice. According to the article, written by staff members from The Bridgespan Group, while 60 percent of major philanthropic foundations claim that social change is one of their priorities, only 20 percent of them invest significant sums in projects that advance this objective.

It is important to appreciate that simply focusing on an objective does not guarantee success. Indeed, there are numerous examples of substantial investments that have come to nothing, such as the 200 million dollars invested over a decade by the Northwest Foundation. The investment did nothing to change the reality facing hungry people, and actually worsened their dependence on food banks. Conversely, scattering small investments over a large number of goals and projects obviously reduces the probability of a meaningful impact and leads to frustration among donors interested in such change.

How is it possible to secure significant progress in tackling a social problem? According to the Bridgespan professionals, this can be achieved when an investor does not confine themselves to local or random outcomes but examines the causes of the problem in depth and works to develop an organizational infrastructure and decisive capability enabling a real response. The risk this entails is high, since it is rare to find social organizations that have the appropriate capabilities to make real progress. In many cases, the investor will need to roll up their sleeves and provide micro assistance in the development of such organizations. Secondly, it is important to maintain a balance of forces with the supported organization, since the organization has practical experience and enjoys an advantage in the provision of the service. If they who pay the piper call the tune, this advantage may be lost. Thirdly, it would seem that a philanthropic gamble must be built on relations of trust between the investor and the leaders of the supported organizations. Intimacy and proximity help calm both sides and enhance their willingness to take risks.

Investors want to know with a reasonable level of certainty that their investment will yield social "profits." They are willing to make compromises regarding testimonies, measurements, and comparisons in the absence of scientific proof. Conversely, when a very substantial sum of money is invested in a focused objective, it is easier to allocate an appropriate portion for ongoing, high-quality, and in-depth research. Research is also important to document what works and what does not, in order to help similar players in the future who in turn work to reduce the social problem.

An investor considering a philanthropic gamble must also take into account image-related risks. Past incidents — including some in Israel, such as the donation to the Tel Aviv Museum by the Ofer family, which did not come to fruition — show that the media are quick to depict large donations as a failure and lack the patience to wait and see the outcomes. Such stigmatization can accompany the investor for a long time to come.

Precisely because of the unusual gamble they entail, such investments face unusually high expectations. Several conditions are needed in order to overcome this heightened risk, including the added value of the investment — that is, recognition that without the investment no change would have taken place at all. Equally, of course, the investor's objective, values, and beliefs must be compatible with those of the supported organization.

The philanthropic market in Israel is small in comparison to the United States. Is there room here, too, for massive focused donations and for philanthropic gambles that are calculated and considered, but not without an element of risk? Is the Israeli public tolerant of such risks, even when they are made with private money? Is it right to prefer large and focused investment as opposed to dispersing donations across diverse fields and objectives? The example of the Trump Foundation may offer some answers to these questions.

Framework and Context

The Trump Foundation is an Israeli foundation that has been active in the field of education since its establishment in 2011. Unlike most foundations, it is spend-down, and from the outset it set itself the goal of attempting to secure its objectives within one decade. The "strategic roadmap" prepared by the Foundation when it embarked on its activities, notes that after five years it would look back in order to analyze and learn from the decisions made and the initiatives launched, both for the purpose of internal learning and improvement and in order to disseminate its knowledge to the philanthropic and professional community. This report, which seeks to document the Foundation's philanthropic methodology and theory of change, is one of a number of efforts the Foundation is making to engage in this process of reflection.

The literature centers on the concept of success: Has the foundation managed to generate the change it defined when it began its work? It is important to emphasize from the outset that a social investor usually encounters complex difficulties, since it is very difficult to identify a successful investment in the social field.

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It is far from easy to attribute any particular outcome to a specific donation from a single source; in many cases, a very long time elapses between the date of investment and the change it creates; there are almost no testimonies or real evidence that can indicate that change has begun, gauge its degree or strength, or evaluate its impact on the beneficiaries. In the absence of the financial bottom line, various methods are used to evaluate impact, but almost all of these face problems of validation and reliability, as well as difficulties hampering comparisons to other social investments. This complexity leads many social investors to select one of two macro strategies:

Some investors choose to abandon the attempt and to confine themselves to anecdotal successes, or to collating success stories (story telling), thank you letters, certificates of appreciation, estimates of the number of participants in the funded activities, and — above all — gestures and acts that create emotions, provide justification for the donation, and reinforce the affinity between the donor and the recipient. The advantages of this approach include the limited resources it requires, the emotional dividends it provides, and the fact that it is impossible to argue with its conclusions.

Conversely, other investors choose to define measurable objectives, collect data, document patterns and trends, learn lessons, evaluate changes, and attempt to measure at least some of these changes. This enables them to attempt to establish whether and to what extent the desired change has taken place, and whether change has improved the beneficiaries' lives or reduced the social problem the resources were intended to address. This approach is difficult and expensive to implement and demands patience. The resources invested in this process may come at the expense of direct investment in solving the social problem the investor planned to address. Nevertheless, this is the best available way to draw real conclusions regarding the quality of the investment.

Along the axis between these two approaches, the Trump Foundation is a strategic philanthropic foundation that belongs to the second group.

What is Strategic Philanthropy?

A distinction is usually made between traditional philanthropy and contemporary philanthropy, also known by many other names — modern, professional, systemic, formative, involved, entrepreneurial, tactical, and strategic philanthropy. Traditional philanthropy was shaped in the Western world in recent centuries in forms of giving whose common denominator is the relatively low involvement of the donor in the ramifications of their donation, accompanied by an approach that mainly reflects compassion and empathy and does not claim to change social orders or repair social problems. Traditional philanthropy embodies unconditional giving, but makes no pretense of addressing the root of the problem. Instead, it seeks to secure a temporary improvement in the spirit of the needy.

It is difficult to pinpoint the precise stage at which a change began to occur in the character of philanthropy. Moreover, even today many philanthropic bodies, and certainly private donors, act in a way that meets the traditional definition of philanthropy. However, the trend to emphasize professionalism, systemic and rational action, and strategic thought is gathering pace and is being adopted by philanthropic foundations around the world. Today this is the *lingua franca* of the field, even if in some cases it is no more than lip service.

Some foundations, both traditional and strategic, deliberately choose to disperse their resources across diverse fields. They do so due to a genuine desire to solve numerous social problems, without any binding order of priority, or out of concern about putting all their eggs in one basket. In other cases, the motivation is to benefit all the public sectors without discrimination. In some instances, this policy is consistent with their commercial approach and interests. Others choose to focus on a specific field, a single social problem, or a population with distinct characteristics. There are few foundations that can concentrate resources and efforts in a manner similar to governments in an attempt to confront the "big issues," as Harvey and Brest note in their book (*Money Well Spent*, 2008). A single foundation cannot assume responsibility for eliminating poverty and must focus its efforts. It is impossible to overestimate the importance of recognizing the limited power, resources, and capabilities of a philanthropic foundation. Relative to government budgets, the total amount of donations made by philanthropic foundations to society as a whole is negligible.

It has not been easy for concepts from the world of business — such as strategy — to enter the world of philanthropy. Players in the field have done their best, and continue to do so, in order to defend the boundaries of their field, arguing that business tools not only do not bring any benefit, but actually damage the pure qualities of philanthropy, such as the volunteering spirit. The early pioneers who promoted strategic discourse did so on the basis of a need to justify their giving in the same manner in which they make business decisions. In the absence of a bottom line, they sought alternative tools that could be used in order to compare potential investments and identify successful opportunities. Dozens, if not hundreds, of tools of diverse kinds have since been developed for measuring social outcomes (GIIN, SROI, OCAT, and many others, most of which can be found on the TRASI website). Nevertheless, there is still no universally-accepted model for measuring social impact, though several tools provide a relatively successful approximation.

Peter Frumkin, one of the most prominent theoreticians who support the strategic approach, argues in his book *Strategic Giving* (2006), that precisely because of the difficulties involved in objective measurement, it is important and worthwhile for philanthropists to focus on a logical decision-making process. He points out that every philanthropic investment constitutes a response to a public and not a private problem — a subject or issue that requires the catalyst of resources and commitment. Giving realizes its potential when the giver brings their preferences, values, and basic assumptions to the process. It can apply solutions that governments cannot implement, if the donor also brings their own life experience, commitment, and caring. The way to solving problems rests with those who respond to the challenge, and donors, too, cannot shirk this responsibility. They must decide what should be done, what is worth doing, and how — and these are purely strategic questions.

What is strategy? Frumkin proposes a model that helps the investor to ask themselves five questions:

.1 Values. What do I believe in, what motivates me, what has value for me, what is important to me, and what am I not willing to give up? How will my giving reflect these values and priorities?

2. Theory of change. What is the logical and causal model and what is the sequence of actions that will lead from the current reality to the desired reality? What is government's function in providing the solution to the problem and what relationship must I develop with government?

3. Agents of change. What social organizations should I invest in in order to realize change? What coordination is needed between all the players in order for change to occur effectively?

4. Philanthropic style. Do I want to micromanage, take risks, cooperate with other funding bodies, support new projects or proven ideas?

5. Timeframe. When is the right time to invest in the organization and the initiative, for how long should I invest, what is my exit strategy, and how will sustainability be ensured in the long term after the foundation ends its grant?

In their book *Give Smart* (2011), Tom Tierney and Joel Fleishman suggest a slightly different model. The six questions that a donor must ask themselves are: What are my values and beliefs? What is "success" and how can it be achieved? What am I responsible for? What do I need to do so that the work will take place? How should I work with the supported organizations? Am I getting better? The authors claim that ignoring any one of these questions will reduce the chances that the donor will secure the desired outcomes.

The theory of change and the logic model are basic tools in strategic philanthropy. The logic model details all the resources and relevant actions for inputs, actions, outputs, outcomes, and impact. The theory of change specifies how the social problem will be solved or alleviated, how the foundation's actions will catalyze and impact the social system, and how the activities will expand to a broad scope over time.

These are important tools for planning and evaluation, but they also serve as the "psychological contract" between the foundation and its partners. However, the use of these tools demands modesty due to an underlying problem: However effective intervention may be, it is not responsible alone for any given outcome. Numerous complementary and competing variables also come into play and contribute to strengthening or weakening a given trend. No outcome can be attributed exclusively to a single investment. It must also be recalled that a logic model is not a closed system, rather it is dynamic and influenced by external factors. The logic model is particularly suited to organizations that focus on a particular field of activity, but may prove misleading or problematic when applied to organizations that run multiple initiatives in different fields. These reservations may deter potential investors, but there is no replacement for a commitment to the desired change on the part of the donor and an attempt to identify the causal relationship between the donation and the change. In the final analysis, every donation entails risk. The principal motivation for a logic model is not planning or evaluation, but the clarity it offers from the donor themselves, enabling the identification of the approach that will secure the desired outcomes to the best of the donor's judgment.

The Case of the Trump Foundation

Let us return to the question of the philanthropic gamble. To the best of my understanding, the specific initiative launched by the Trump Foundation — which is similar to that of the Avi Chai Foundation, with certain differences — meets the definition of the experts from Bridgespan and constitutes a philanthropic gamble, certainly with reference to the overall scope of philanthropic investments in Israel. An investment of 600 million shekels over a defined timeframe of 10 years in a clearly-delineated sphere of activity, part of which requires the establishment, from scratch, of mechanisms, partnerships, and projects, certainly constitutes a philanthropic gamble. If successful, it may change fundamental patterns, reverse tends, and create social change with ramifications in the fields of education and higher education, employment, entrepreneurship, innovation, and so forth that will be felt over the coming generations. Conversely, failure — or failure to identify failure — will throw into the literal wastebin and the wastebin of history vital funds, and is liable to impair future philanthropic initiatives.

In the case of the Trump Foundation, the key word is opportunity. The book *Startup Nation* appeared in 2009, highlighting Israel's unique capabilities. The family and the founders of the foundation realized that education was the field in which they should be investing. In contrast to the traditional philanthropic approach, the founders did not want to establish a charitable organization. Rather, they identified a social problem and felt obliged to remedy, or at least to improve, the situation. From the outset the foundation was motivated by a clear sense of urgency. It decided to focus on mathematics and science education as an engine capable of pulling forward the other carriages on the train.

The founders recognized that while a window of opportunity for improvement had opened, it would not remain open for long. Accordingly, they decided to focus their efforts rapidly and over a set timeframe. A second opportunity was largely responsible for shaping the foundation's theory of change and its decision to concentrate on a specific and unique niche. Although the Israeli government renewed investments in education, and indeed did so at a level above the average for the OECD countries, the results of international measurement tests published in 2009 (particularly the PISA tests, which examine not only literacy and reading skills but also the atmosphere in the school) positioned Israel below the average obtained by these countries. This suggested a gulf between the investments made by the Ministry of Education and the results, and raised concern that Israel was beginning to lag behind in a field in which it had been thought to enjoy a relative advantage. Moreover, the figures showed that other countries, such as Poland and Canada, had managed to progress and to improve their relative position in the ranking significantly, presumably thanks to pinpointed investments. These findings were an eye-opener for many people, including the founders of the Trump Foundation.

Two years earlier, the McKinsey report examined the factors behind the success of the best education systems in the world. The report noted the lack of success of structural and budgetary reforms in securing change in education systems, and identified the principal factor on which almost everything depends: the teachers. The report convinced many people that improving students' achievements requires investment in the human dimension, i.e., teachers and the quality of their teaching, and that it was now possible to learn from the experience of countries that have been successful in this respect. More importantly, the Israeli education system was also aware of a window of opportunity that might close, and was willing to listen to new ideas that could change the situation. The desire to exploit these opportunities led the Trump Foundation to a promising starting point. Now it needed to choose a course of action to realize the founders' vision. The question was — how exactly should this be achieved?

Calibrating the Focus

The "why" had been clear to the founders of the Trump Foundation from the outset, but they now had to translate this into the "how" and "what." It is apparent that the process of preliminary clarification has become embedded as the foundation's preferred modus operandi and is returned to repeatedly.

That is open and transparent consultation that welcomes criticism, comments, and revisions, resulting in a strategic document that is coherent yet open to all and more complex than usual in the field. These have become the Foundation's hallmark and a source of pride for those who work in it. Alongside the considerable investment in this process, it offers additional advantages, particularly in terms of the organizational culture and the development of awareness and legitimacy inside the organization and beyond, regarding the spirit of the foundation's actions. The involvement of people from within the organization in the process of drafting these founding documents may secure at least two positive outcomes: It creates a common language and common denominator that facilitate coordination, synchronization, cooperation, and the reduction of room for error and opposition; and it reinforces the sense of ownership of all those involved in the final document. From an external perspective, the process itself conveys a sense of seriousness, professionalism, and credibility, while the content of the document conveys messages to all the stakeholders, helping to coordinate expectations and even delineating methods and objectives for potential partners. To an external observer, the large number of drafts produced before the final version, and the element of transparency that exposes interim comments to anyone interested, may be misperceived as ambiguity. Others, however, will find in this practice a calming message of self-confidence.

The Foundation's professional staff drew two alarming insights from their initial encounter with the various reports. The first was that the dramatic gulfs were evidence of a real problem. The second was a combination of modesty and concern: they gained the impression that the problem was so profound and extensive that any solution would require cooperation with numerous bodies. Rather than abandoning the issue and surrendering to the scale of the challenge, however, they decided to confront it head on and to turn to the world of knowledge in order to locate appropriate solutions. The sense of urgency and the recognition of a transient window of opportunity filtered through to the professional staff, who embarked on a series of consultations with experts from the educational field and the world of philanthropy in order to brainstorm and receive feedback on their preliminary ideas. After much discussion, the Foundation decided to concentrate on teachers, and in particular on tools that would enable teachers to devote their time, capabilities, skills, and energy to the 15 percent of students who belong to the second circle around the circle of outstanding students. The Foundation deliberately refrained from declaring that it was "dealing with education." Although such broad definitions are common and facilitate flexibility, they tend to have the opposite impact to that sought by the leading organization. The Trump Foundation prefers a precise and defined process, with clear components that can be realized during its lifespan, rather than a vague definition whose successful implementation cannot easily be gauged.

Many educators and educational experts face a dilemma: should they focus their efforts mainly on the outstanding students in each class, hoping that the engine will pull forward the other carriages in the train; or should they invest in the weaker students who need the most help, to prevent them falling behind and slowing down the class? The Trump Foundation decided to set aside the layer of outstanding students, comprising approximately six percent of the total student population, based on the assumption that they need less help than their peers. It decided to focus its investments on the 15 percent of students who form the second circle, and who can move forward to expand the circle of outstanding students. After studying the issue and understanding the data, the Foundation reached the conclusion that these 15 percent do not belong to any particular population sector and do not share a common profile. Neither was any difference found between the center of the country and peripheral areas. On the contrary — these students come from diverse population groups and are regular youngsters in every respect. This fact helped shape a program that is "blind" to the different sectors and facilitates investment across groups and regions, without the need to prioritize any specific group.

The Foundation's Strategy

As a self-aware foundation that applies strategic thinking, the Trump Foundation engages in frequent discussions of its strategy, revising and adjusting its perceptions on the basis of insights drawn from discussions with experts, the encounter with the field, and analysis of its own activities. In a departure from the usual practice in Israel, the foundation also involves the public, inviting stakeholders to comment and make proposals concerning its strategy, as published on its website in a series of documents.

The first document, published in 2011, emphasized the window of opportunity that had opened, through which the Foundation planned to launch an initiative to improve the quality of education in Israel. The Foundation identified an awakening of interest in the issue in official circles, based on the analysis of the deterioration in the achievements of Israeli school students on international tests. The government announced a change in its policy on teachers' salaries and set itself the ambitious goal of closing the gap in knowledge between Israeli students and their peers overseas. From the very beginning, the Foundation developed a clear and precise theory of change. It decided to focus on mathematics and science studies, and to attempt to motivate students to choose to study at the five-unit level in the matriculation examination. This was to be achieved through investment in improving the quality of teachers. This outline remained unchanged in the subsequent documents. Three programs of activity were also apparent from the first document:

On the basis of the model presented by Joel Fleishman in his book *The Foundation* (2007), the Trump Foundation adopted three strategies for promoting high-quality teaching in mathematics and the sciences in post-elementary schools in Israel: recruiting excellence in the service of education; nurturing clinical expertise among teachers; and modeling support networks for high-quality teaching. The Foundation decided to play a distinct role in each of these strategies. Fleishman suggests that foundations can choose to play one of three roles: driver, partner or catalyst.

The Trump Foundation chose to act as a catalyst in its plan to recruit excellence to teaching. The Foundation's goal was to ensure that the teaching profession is led by capable teachers who can have a positive impact on their students. The attractiveness of the teaching profession depends on numerous variables, most of which lie beyond the Foundation's sphere of influence. The Foundation decided to create examples of success that would attract the most outstanding teachers. Given the unpromising starting conditions, the foundation was obliged to initiate preliminary training and jumpstart its routine activities.

The Trump Foundation chose to act as a driver in its program to nurture teachers' clinical expertise. The innovative concept of "clinical teaching" refers to the strengthening of teachers' practical capabilities in the classroom, alongside specific professional knowledge.

These skills enable teachers to provide a fitting response for every student in a heterogeneous class; to diagnose each student's capabilities; set them a high target; adjust teaching methods to their needs; monitor their progress; and provide constructive feedback. There was no need to invent this aspect of teacher training from scratch since training institutions and professional development frameworks are already engaged in the nurturing of teachers' content-based knowledge. However, in order to complement this knowledge with the required clinical skills, the Foundation chose to work with these institutions, helping them to build components for more practical professional development focusing on the student's learning. The Foundation would later act as a driver with its partners, connecting these basic components to form a center of expertise to advance the field in Israel.

The Trump Foundation chose to act as a partner in its program to model networks for supporting high-quality teaching. An excellent teacher needs a support network so that all of his or her students can secure high achievements. This support network includes various components, such as work methods, the use of technology, a professional community, infrastructures, and management. In the initial stage, the Trump Foundation would assist in the development and introduction of a professional infrastructure for these components, in order to ensure that they are available to the education system. In the second stage, the Foundation would partner with a small number of local authorities and school networks, helping them to model the successful implementation of all the components.

The aforementioned initial document clearly defined the undesirable phenomenon that the Foundation sought to correct these, while presenting objectives for realizing change. Even while the document did not fully clarify the causal connection between the intervention and the desired outcome, the Foundation's theory of change, the theory of leverage and the macro theory are clear to the reader. Naturally, the explanation was accompanied by statistics and other findings supporting the logic model and reinforcing the Foundation's choices. It would be unreasonable to expect that a preliminary document, published before the activities began, could validate the selected course of action — particularly in the absence of similar experience by other foundations. According to the document, the Foundation expected that within seven to ten years it would initiate the establishment of an Israeli institute for advanced teaching, introduce a prize recognizing outstanding teaching, and establish coaching and training tracks for excellent teachers — as a kind of "elite force" helping to attract many others to the field.

The Foundation also hoped to establish a municipal model in cooperation with local bodies, one of the outcomes of which would be a significant increase in the number of students taking five-unit mathematics and physics matriculation exams. The document also presents the principal structures that would operate within the framework of the Foundation and contribute to realizing the theory of change. Even at this early stage, the document mentions the Foundation's undertaking to examine its progress on a quarterly basis, and in a thorough and in-depth manner five years after its establishment.

A year later, in 2012, a similar document was produced ahead of the discussions by the Foundation's Advisory Council. The document reflects the questions and insights that accumulated over the course of the initial activities. The 2012 paper explains the method of selection of the methodology, which is dedicated to increasing the number of students taking mathematics and physics at the level of five study units, as opposed to other possible courses of action, such as helping weaker students or outstanding students, direct pedagogic activities, establishing a network of schools, developing and inculcating teaching and learning technologies, and public advocacy and campaigning. The main reason given was that these alternative niches lacked a relative advantage or added value and would not advance the overall vision. Another factor was the Foundation's recognition of its limited power, and the clarification that it intended to concentrate its efforts in a single sphere rather than disperse them over several areas. Once again, the selected sphere was the improvement of teaching in general, and the inculcation of clinical teaching in particular. The three-way model (catalyst, driver, partner) was replaced by a model reflecting the Foundation's sense of urgency. The Foundation was to function as a type of pyromaniac lighting localized fires, and as an engineer locating the cogs and defining vital actions, key stages, milestones, criteria for implementation, and the desired pace of progress.

The significant change evident in 2012 also reflects an internal contradiction. On the one hand, the Foundation abandoned its intention to operate in a linear fashion and to make gradual progress, stage by stage, from recruiting support to training. The leaders of the Foundation now recognized the importance of establishing tools and means in a simultaneous and parallel manner — particularly the components of the support network. However, as part of the process of drawing interim conclusions and developing guiding principles, it was decided to work in a gradual manner. The system was not yet mature enough, and there was a fear that excessive speed could impair the credibility of the initiative as a whole. The document included another important addition in terms of sharpening and refining the criteria for implementation. The Foundation realized that the preliminary criteria had been overly cautious, and now sought to enhance the precision of certain criteria. This change reflects growing confidence in the steps that had already been taken and in the chosen direction. As befits a document submitted for discussion by the Advisory Council, the document includes numerous questions for discussion and consideration.

At the end of 2014 the Foundation published a new strategic document. As its title makes clear, the document constituted a summary of insights raised by the members of the Advisory Council. One of the main insights relates to the innovative concept of "clinical teaching," acknowledging that this term is not easily accepted and adopted by professionals. There is also recognition of the importance of high-quality teaching. In light of this insight, the foundation realized that it must find a compromise between the perceptions of the professionals and its desire to secure change. From the Foundation's standpoint, it has completed its infancy stage — or "start-up stage" as the document puts it — and this stage has already yielded its first tentative successes. Now it must "put its foot to the gas pedal." The recommendation to the Foundation was to deepen the program to promote high-quality teaching; to network all the stakeholders systematically; to move from the development of tools to their implementation and modeling; and to invest in data collection, documentation, and measurement — an aspect that received little attention in the previous papers. Without relying on Fleishman's model, the paper details the means by which the Foundation should strengthen its partnerships, build networks, and develop capabilities. The paper includes a recommendation to resume public media work, an aspect that had been examined in the past but rejected.

The last paper, to date, was published in 2015 and presents a portrait of the Trump Foundation's initiative after five years.

The introduction includes the important statistic that the Foundation has approved 125 projects at a total cost of 100 million shekels, out of the 600 million shekels allocated for the initiative as a whole. This proportion reflects the Foundation's choice to spread its expenditure over the period, and to expend larger sums in its latter phase rather than in the beginning. A clear chart shows the change that has occurred over the Foundation's period of work in the key criterion: the number of students taking mathematics at the five-unit level — even if this does not include evidence showing that the Foundation's activities have necessarily influenced this finding. The paper presents a new model of "functions" based on the original model with some elaborations. The document explains that the Foundation worked in stages: in the initial stage, it served as a catalyst, and in the subsequent stages, it plans to work as a connector, builder, and ultimately as a mentor. In contrast to the earlier documents, this paper does not confine itself to strategy, but also includes detailed discussion of tactics — i.e., the programs and projects that go together to form the big picture. The document also discusses the leveraging of change (Frumkin's theory of leverage) but does not, however, address the causal relationship that could prove a correlation between the Foundation's intervention and the evidence of change to date.

The Theory of Change

Every philanthropic foundation has developed its own strategy, whether worded clearly or less so, and whether transparent and accessible, or more obscure. We have already discussed the importance of a public strategy developed in partnership with the members of the organization, as well as the central role of strategy in the Trump Foundation's experience. Additional characteristics in this context distinguish one organization from another. These include the level of flexibility or rigidity in conserving the strategic framework or in its replacement as conditions change. In the case of the Trump Foundation, a welcome measure of duality can be seen. On the one hand, there is an emphasis on strategic discipline and a tendency to avoid engaging in actions inconsistent with the strategy. On the other, we see openness to change as something that is particularly vital in conditions of uncertainty. Adjusting strategy if and when new data emerges and renders earlier decisions irrelevant is a necessary process.

A key component in the Trump Foundation's strategy is the recurring image of "scaffolding." To an extent, this metaphor was chosen in contrast to the usual modus operandi of other foundations. Scaffolding is "a temporary structure that provides support… in order to build or renovate larger structures." This is exactly how the Foundation perceives itself: not as the thing itself, but as a supporting arm; not as a permanent structure, but as a temporary one; not as a simple structure from simple materials, but as a framework that facilitates the construction of edifices that are larger, more stable, and last longer than itself. The Foundation considered various alternatives when it selected its theory of change, including a number that have been applied successfully in Israel. Among other options, it could have offered additional support for the existing system, for example through scholarships or incentives for teachers, establishing training and empowerment centers for outstanding students, or developing a network of schools as a model for replication. The Trump Foundation chose to go with the system rather than bypassing it. It seeks to help the system take responsibility for the solution it has presented. Colleagues I interviewed also formed a positive impression of the Foundation's ability to work together with the government, present a horizontal perspective beyond the level of the project itself, and to maintain philanthropic partnerships on critical issues for the future of Israel. This capability was described as a vital condition for success.

The Trump Foundation enjoyed an inherent advantage over many other organizations. Its leaders wisely selected measurable objectives for which it is relatively easy to collect, document, measure, and compare achievements with the starting point. This is a lesson that is worth holding onto. Colleagues I interviewed also praised the care taken by the Foundation to define a clear problem, set measureable objectives, define a solution within a fixed timeframe, and plan actions to secure the solution. All these constitute strengths in the Foundation's activities.

The Exit Strategy

In the philanthropic context, the term "exit strategy" usually refers to the manner in which the foundation notifies its grantees of its intention to discontinue funding, so that they can prepare ahead and find alternative funding sources. In the case of the Trump Foundation, the definition is slightly different. Everyone recognizes that the Foundation does not intend to remain in the picture in the long term. This entails disadvantages, particularly in terms of uncertainty among the stakeholders regarding "the day after." They wonder who will serve as a facilitating and catalyzing body, and above all — who will provide support and funding. Some of the programs may be cut, reduced, or even closed. Employees in the partner organizations are liable to lose their jobs, suppliers will lose an important client, and volunteers will lose the place where they have volunteered. An idea that has gained a foothold is liable to lose the trust and legitimacy it has won, lose prestige, and be replaced by more attractive ideas in the marketplace, thereby impairing continuity. Programs that survive the change are liable to suffer from inadequate maintenance. The professional community is also liable to put the past behind it and to turn to competing programs with a longer horizon and lifespan. At the very least, training may be interrupted and sporadic. The government and the authorities are liable to renege on their promise to assume ownership of the various programs, and in the absence of the scaffolding the building may collapse.

Is it possible to achieve real change in a decade? If not, should the task be abandoned at its midpoint? Who will preserve what has already been achieved and who will ensure ongoing development? Even if reality proves to be less dramatic than this description implies, it is important to prepare remedies and solutions in advance for every scenario. The Trump Foundation recognizes that the real test will come on the day it closes. Accordingly, it has emphasized that while momentum is important, implementation is even more so. Once the professional community and the government make the program their own, the Foundation will know that it has accomplished its mission.

Alongside the advantages, we must highlight the sense of urgency and the awareness of all those involved that the window of opportunity that has opened will eventually close. For some people, and perhaps also for some organizations, a clear deadline is beneficial and brings their positive qualities to the forefront. The organization strives to find the best possible partners and to learn quickly from its mistakes. The Foundation does not enjoy the prerogative of eternity, and this influences the pace of events.

The partner organizations that receive the support are also influenced by this reality and act with a sense of urgency. The Trump Foundation has been careful to select strong partner organizations, and even after doing so it supports them and enhances their capabilities. The setup is more like a social movement with commitment than a random collection of franchisees.

What will happen in the field after exit? This is a dramatic question, because it is not easy to change culture. The situation is reminiscent of the Talmudic story of Honi HaMe'aggel, who was walking along the road when he saw a man planting a carob tree. Honi asked him how long it would be until the tree would bear fruit, and the man answered, "70 years." Honi asked, "Surely you will not still be around in 70 years to see this tree bear fruit?" And the man answered that he came into a world full of fruit trees planted by his ancestors for his benefit, and so he was doing for his descendants.

The Trump Foundation also invests in projects that, it hopes, will continue to operate after it departs, so that others can enjoy the fruits. As it declares, to this end it is willing to act without honor and praise, and it emphasizes the importance of the initiative and the shared achievement rather than the name of the Foundation. The Foundation's heads are fond of saying that the initiative is what matters, not the brand. The broad landscape of initiatives launched by many different bodies are the Foundation's pride and joy. ■

Collective Impact in Israel

The Story of the 5x2 Initiative

Yael Ben David

Introduction

The 5x2 Initiative applied, for the first time In Israel, the Collective Impact model. The 5x2 Initiative was implemented through an extended process of creating a network of partners of leading organizations from the public sector, the private sector, philanthropic foundations, and education NGOs (non-governmental organizations); in order to promote excellence in STEM education and build a unique partnership with the Israeli Ministry of Education.

The 5x2 Initiative achieved its goals successfully by creating public awareness of the issue of excellence in STEM education, but also by realizing one of its main tasks sooner than expected: the number of students studying high school mathematics at an advanced level. Known as "five units" in Israel, this advanced mathematics track doubled in size within four years, significantly in advance of the initial time frame posed by the 5x2 Initiative. [Figure 1]. In addition, the key partners share the feeling that this is a significant success. Partners note the extent to which their participation in the 5x2 Initiative was meaningful to them and to the future of the relationships between organizations participating in the network.

In this paper, we examine the conditions that made this initiative so successful, and the reasons for the development of an unlikely partnership, by narrating the story of the 5x2 Initiative and the systemic change it created.

The first part of the paper recounts the story of the 5x2 Initiative, from its inception until today. It reviews significant moments and junctures of decision making and emphasizes the process by which the relationship between the partners came to be. It will discuss the creation of a cross sector environment that made these relationships possible, and the changes of discourse regarding excellence in education it brought about. The second part of the paper is dedicated to the future directions of the 5x2 Initiative and to the dilemmas and challenges it is currently facing.
The analysis is based on material created and collected since the inception of the 5x2 Initiative in 2013 and in-depth interviews that were conducted in 2017 with twelve leading partners in the 5x2 Initiative. Among them, two were from the private sector, four from the public sector, four from education NGOs, one from philanthropy, and one from academia.

It is our hope that this paper and the insights it puts forward will be useful not only to actors operating within the field of STEM education in Israel, but also to organizations in other fields that would like to learn about this unique model of cross sector collaboration, which inspired the inception and application of the 5x2 Initiative.

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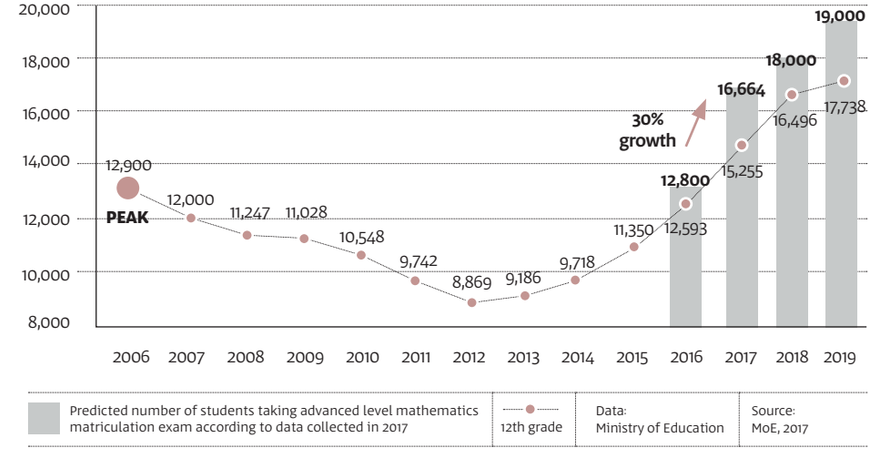
Predicted Number of Students Taking Advanced Level Mathematics Matriculation Exam [Figure 1]



The Collective Impact Model

In recent years, the Collective Impact model has become a key tool for social change and is employed by organizations and initiatives around the world (see: Kania & Kremer, 2011; 2013, Rom, 2015; Rom, Hurvitz & Tamir, 2012). The model offers a framework that enables stakeholders who possess diverse assets and perspectives to collaborate and promote solutions to complex social problems in various fields including education, health, community, and the environment. The Collective Impact model is defined by five elements that are necessary for the success of social change initiatives (Kania & Kremer, 2011):

1. Common Agenda - Collective Impact requires all participants to have a shared vision for change, one that includes a common understanding of the problem and a joint approach to solving it through agreed upon actions.

2. Shared Measurement Systems - Developing a shared measurement system of the ways outcomes will be measured and reported is essential. Collecting data and measuring results using a shared measurement system ensures alignment and accountability.

3. Mutually Reinforcing Activities - Collective Impact initiatives depend on a diverse group of stakeholders working together, encouraging each actor to undertake the specific set of activities at which it excels in a way that supports and is coordinated with the actions of others.

4. Open and Continuous Communication — Communication is aimed at developing trust and a common language among the participants.
5. A backbone organization - A neutral entity is appointed with the consent of all actors. The backbone organization serves the entire initiative — it facilitates, manages, shapes, accompanies, and supports the process.
On top of the five elements, the Collective Impact model emphasizes three necessary preconditions which must be in place before launching a Collective Impact initiative: (1) an **influential leadership** that has (2) a **sense of urgency** for change and willingness to support the need with (3) **adequate financial resources** (Hanleybrown, Kania & Kramer, 2012).

Since the model was conceived and formulated by the American consulting firm FSG (Kania & Kramer, 2012) many initiatives have employed the framework, though not without challenges. This is because working to connect various entities from different sectors that have not previously worked together often leads to competition and tensions arising from disparities between the parties, who may have cultural differences, varied needs, and diverse motives for action. The tensions tend to surface when the actors must reach joint agreements, make decisions, and coordinate collaborative efforts.

"We all have great programs, so why does the number of students taking advanced math keep dropping?"

The 5x2 Initiative was prompted by leading philanthropic and business organizations that promote excellence in STEM education: **The Eddie and Jules Trump Family Foundation, Rashi Foundation**, and **Intel Israel**[1] . The founding organizations were concerned about the alarming trend of high school students dropping out of STEM classes. Data collected by the Ministry of Education showed a steep decline in the number of students taking the matriculation exam in mathematics at the advanced level ("five-units" matriculation exam). While in 2006, 12,900 students took the exam, in 2012 the number reached a low of 8,859 students (see figure 1 above).

Many schools were closing their physics and chemistry majors, and there was a growing shortage of teachers in these subjects. The Eddie and Jules Trump Family Foundation, Rashi Foundation, and Intel Israel began discussing the significance of the data; not only did they recognize that there was a problem, but they also came to understand that none of them could solve the problem by acting alone. This sentiment is reflected in a statement made by one of the partners from the private sector:[2]

For the past 20 years or more, the company has been investing heavily in education... teacher training programs, student training programs... and indeed it was all very good. When I joined this endeavor, I asked myself, "What have we changed in the education system?" We have changed things on the micro level, but we have not changed anything on the macro level- that is we were able to change a teacher, a student. I do not underestimate the influence of this; it is very, very important, but for an organization that invests so many resources in education every year, we ought to produce an impact on the macro level, not only on the micro.

Understanding the urgency of the problem on the one hand, and the need to initiate a broad, systemic process on the other, percolated within the three organizations, serving as key factors in establishing the 5x2 Initiative.

In March, 2013, representatives from the three organizations approached Sheatufim, a non-profit organization that specializes in designing and leading cross-sector dialogue using various methodologies. The suggestion presented to Sheatufim's team was to learn the Collective Impact model developed by FSG (Rom, Hurvitz, & Tamir, 2014) and examine the feasibility of implementing it in Israel as part of the effort to advance excellence in STEM education. Sheatufim accepted the challenge and initiated a threefold learning and planning process: (1) studying the Collective Impact model and its application to issues of STEM education in the United States; (2) mapping the actors in the field of STEM education in Israel through meetings with various stakeholders and, (3) engaging in an in-depth study of the problems in STEM education in Israel (Manny-Ikan & Rosen, 2013).

At the end of a 4-month long learning process, the team at Sheatufim assessed the main partners' readiness for the Collective Impact initiative. It appeared that the crucial criteria were met: (1) there was an influential and committed leadership in the lead organizations; (2) a shared sense of urgency concerning the problem as evident by the readiness of diverse actors in STEM education to undertake a long-term, cooperative process; and (3) the initial financial resources required to begin the process. In collaboration with the group of leading organizations, it was decided to initiate a national, cross-sector campaign applying the principles of the Collective Impact model to achieve focused and measurable results that would increase the circle of excellence in STEM subjects. It was also decided that Sheatufim would be the backbone organization for the initiative (for more on the value of backbone organizations see: Turner, Merchant & Ellen, 2011).

The First meeting of the network: Excitement accompanied by question marks

The 5x2 Initiative was launched in July, 2013 at the Hebrew University of Jerusalem Edmond J. Safra campus at Givat Ram. The meeting was attended by an impressive forum of about 60 representatives from leading organizations including: private (mainly high-tech companies); public (Ministry of Education, Ministry of Defense and the IDF, municipal authorities, and representatives of teachers and schools), and what we call "the third sector", (NGOs and educational organizations, school networks, science museums, and philanthropic foundations), as well as academia, including universities and teachers' colleges. The meeting, which was held in the presence of then Minister of Education, Mr. Shai Piron, was remembered by many partners as a significant milestone. In particular, they recalled the excitement that emerged from meeting with such a large, varied network of partners for whom this issue was important. Participants felt the festive atmosphere and enthusiasm. At the first session, the "rules of the game" were defined that would accompany the 5x2 Initiative throughout the later stages, and contributed to the building of dialogue. These rules dictated the creation of an "enabling space" for everyone, especially for organizations whose work was related to the promotion of excellence in STEM subjects, and who were invited to join the partnership to bring their expertise and unique experience. This collaborative atmosphere was created as a place where everyone could express their professional opinion equally, as explained by one of the partners from a philanthropic organization, in his report:

"In the first workshop with the Minister of Education, the founding group might have decided that everyone would give an opening speech. These are not people who lack ego. Yet, deliberately we were all ordinary participants, to the point that the Minister of Education said "I'm going to sit with you; I came to learn. It really was a round table, here the Minister of Education and a teacher from Metulla [a remote peripheral city in the north of Israel] get the same air time."

At this meeting, the partners began the process of developing a common agenda and formulating the joint platform. This was accompanied by excitement and positive energy, but also by question marks and suspicions regarding the divergent motives of the various organizations. A major concern was the extent to which the Ministry of Education would be involved as a key player, and the potential for turning good will into practical action, as one partner, an educator, put it:

"The first meeting was mainly a declaration of a desire to promote STEM education... and I must say that I left with a good feeling... but it was not at all clear that the Ministry of Education was with us and without the State we could not do anything... The experience at the first meeting was unclear, there weren't enough top-level educators saying, "We are with you..." My experience was of a discourse disconnected from reality, in which industry representatives were aiming at something that would not have an impact... I had the feeling that it was not going to lead anywhere... We were presented with the Collective Impact Model but I did not understand what it was, so the initial experience was nice but I was sure the Initative was going to dissolve. That's how I remember the beginning."

The main outcome of this meeting was the joint definition and vision for the 5x2 Initiative agreed upon by the various stakeholders. The vision formulated then has accompanied the Initiative ever since; it states:

> By 2020, Israel will be among the top fifteen countries in the world based on the quality of excellence in STEM education, and will be in a position to leap forward as the second quarter of the 21st century begins. High school students from all sectors and strata of the population, will exercise their right to study STEM at a high level, thus opening up opportunities for a life full of success, prosperity and contribution.

At this meeting, it was also decided to establish a steering committee for the 5x2 Initiative, which would include representatives of the philanthropic and business sponsors of the Initiative, representatives of leading educational and academic organizations, and teacher representatives.

From the outset, there were differences in the motivations that led the various partners to join the 5x2 Initiative. In a deeper sense, these differences highlighted the diverse worlds from which the partners came, as well as the history of their relationships. The main motivation of the actors from the private sector emerged from their sense of emergency in the face of a growing shortage of engineers and professionals in the technological fields needed by the Israeli high-tech industry. The private sector's leadership clearly understood that a long-term solution is required, and therefore the aim should be to increase the number of students choosing STEM tracks. These students would be able to integrate into the high-tech industry in the future. Within the private sector, most of the actors had previously been involved in some form of educational work for STEM excellence, which is also related to the corporations' desire to contribute to society and the community, according to the principles of corporate responsibility. Although excellence in education is not the core business of these companies, their sense of urgency and need for engineers on the one hand, and identification with the social and educational vision of the 5x2 Initiative on the other, led to the extraordinary commitment and involvement of private sector organizations in leading and promoting this Initiative. One of the key points in consolidating a joint agenda was the decision to keep the 5x2 Initiative focused on the education system while not stating explicitly that it will aim at increasing the number of engineers. This decision clarified the significance of reaching an agreed-upon agenda among different stakeholders. The "third sector" educational organizations that joined the 5x2 Initiative had many years of involvement in efforts to promote STEM education excellence in Israel; **indeed** this is their core activity. With the 5x2 Initiative, these organizations continued to promote the issue throughout Israel, in primary and secondary schools, in formal and informal education.

"Third Sector" organizations in the partnership included non-profits and educational organizations, educational networks, and science museums. In addition, colleges and universities participated in the 5x2 Initiative; higher education institutions are, obviously, involved in science education both in the context of the training of science teachers, and through research and teaching the sciences themselves. Among the "third sector" organizations, it is important to distinguish between the philanthropic organizations who support civil society organizations and enable their activities, and the civil society organizations that implement various educational programs in the field. The activities of the latter are heavily influenced by the strategic directions that orient the philanthropists.

There was another partner whose entry into the network was essential for success: the public sector, as represented by the Ministry of Education, teachers, and representatives of municipal education departments. Although the Ministry of Education expressed desire to be a partner from the outset, it was not initially clear how involved it would be, and the extent of its willingness to take responsibility for the project, and be significantly involved as it's leader. At the same time, it was clear to all of the partners involved that the full commitment of the Ministry of Education was essential if any progress was to be made.

The various organizations that had worked alongside the Ministry of Education for many years understood its power and importance, and thereby welcomed its part in the partnership. However, this understanding was accompanied by suspicion, criticism, and fear resulting from years of working together, and the substantive differences between the partners due to their disparate perspectives of the field.

The disparities between partners were also evident surrounding the question of excellence in STEM education, and the reasons for its promotion. This question has accompanied practitioners in the field for many years, and they have developed many different approaches to deal with it, most of which were brought to the table by partners in the 5x2 Initiative. Roughly, these approaches can be mapped along a scale between two extremes, although it is important to note that most of the partners moved dynamically between them. At one end, we can identify the "pipeline" approach, which contends that students' excellence in STEM subjects is a means to ensure their professional and economic future. Those who hold this approach seek to act within the existing discourse in the labor market, which assumes that technological professions will continue to lead the Israeli economy and that STEM education broadens horizons in social mobility and future income for students. One of the partners from the private sector described his goals for motivating high school students to study mathematics as follows:

"There is a great deal of misunderstanding about what high-tech is and what it means to be part of the high-tech industry, which stems from all kinds of movies or fantasies that in this business you can just "make a killing" overnight... We wanted to show that it is necessary to sweat and invest effort to achieve things that do not come easily, especially in math, physics, and computer science. The second goal is to turn them [the students] into engineers, and inspire them to be part of something, to create a foundation, basis, and to encourage them to invest in their studies because if they don't see how they will benefit from STEM subjects, why get involved in them at all?"

The "pipeline" approach reflects a deeper cultural assumption that success is determined by the accepted standards of the current socio-economic elite in Israel, i.e., such as serving in elite IDF units, and then finding work in the high-tech and technology industries. Moreover, this approach assumes a hierarchy between science and the humanities, as reflected in the assumption that compared with other fields, technology subjects require a greater investment. This position was shared by a number of respondents who argued that studying mathematics adds substantial weight to the student's social capital, because society perceives students of these subjects as smarter and more successful. For example, an educator, a key partner in the 5x2 Initiative, commented:

"If a child is outstanding in mathematics, they will say that he is smart. If he excels in Bible studies, they will say that he excels in Bible studies... Math has value beyond the subject itself. It gives the child a broader sense of being capable."

At the other end of the spectrum, we identify the "springboard" approach, which considers STEM studies a tool for cultural expansion, and for the inclusion of science within a wide cultural context. Those who hold this approach seek to expand and even challenge the existing social discourse, which differentiates between science and culture, making science unattainable and even abhorrent. In broad terms, some spoke of "raising scientific capital", a concept that refers to the tools, experiences, and resources of science that are accessible and acquired throughout life, and in different areas of life, not only in school (Archer, Dawson, DeWitt, Seakins & Wong, 2015). According to this approach, the motivation to learn science should come from an internal sense of interest, curiosity, and pleasure. For example, one partner in the 5x2 Initiative from an education NGO described the Initiative's goal as follows:

"The goal is ultimately to encourage an increasing number of students to choose to study science because it is important for them as future citizens, it opens up many professional opportunities, and gives them tools that will help them in any future field of work. It expands their personal abilities and makes them better citizens because they can make more informed decisions... I don't want more students to choose to study science to win the Nobel Prize or return with a medal from an international Olympics — but rather so it will become part of them, it will be part of their culture and education... science is part of the culture."

In concrete terms, some referred to STEM education as helping students expand their intellectual repertoire, encouraging them to excel, and to fully realize their potential. Those who hold this approach view STEM education as a tool for transforming students into better citizens (not necessarily better engineers), as described by one of the partners from an education NGO:

I always talk about the personal places... [and about] human excellence. My value-based approach asks how I relate to my environment, not only to myself. If I have a friend who has difficulty in math, I will help him in school or accompany my graduate in whatever he does, whether on the tenants' committee or political action at the highest level... I want to see them excel in everything they do.

Formulating the Joint Platform and the Partnership's Focus

The differences between the various approaches described above were expressed more strongly in the discussions held during the initial meetings of the 5x2 Initiative. These discussions were devoted to the formulation of the joint platform, the first milestone in building a partnership based on the Collective Impact model. After defining the vision at the start-up session, the steering committee held several meetings to define the joint task and the boundaries of the 5x2 Initiative (Hurvitz & Alon, 2015).

After a complex process that lasted six months, the partners established mutual trust and were able to define the joint mission of the 5x2 Initiative, as follows:

> Our mission is to double the number of students' successfully studying and demonstrating research and higher order thinking in the fields of mathematics, physics, chemistry and engineering in Israeli high schools. Within ten years, at least 20 percent of students in each class-year will meet the national and international standards of excellence.

The vision and joint mission statement combine a clear definition of measurable indicators of success for STEM excellence, and emphasize that the essence of the 5x2 Initiative is to expand opportunities for students through STEM education. The text of the joint mission reflects the decisions made by the steering committee regarding the boundaries of the 5x2 Initiative: focusing on mathematics, physics, and chemistry, where there was a clear decline in the number of students excelling in these areas, as well as a shortage of teachers; and focused on middle school and secondary school students only.

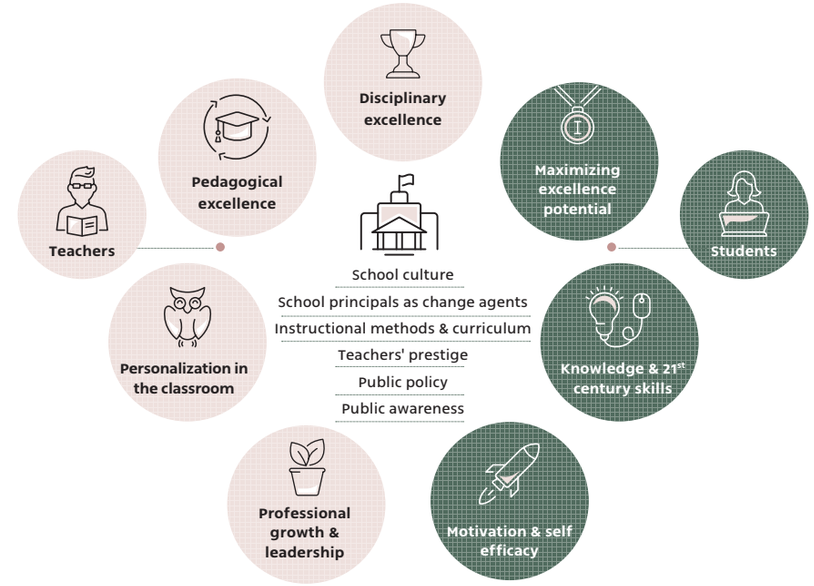
According to the partners, the process of building consensus and making decisions while defining the joint task and setting boundaries for the 5x2 Initiative involved lengthy, in-depth discussions that sometimes seemed tedious and lacking a clear purpose. Some were concerned that the Collective Impact model, which requires the sharing and building of agreements between a range of stakeholders, would be cumbersome and not accomplish its purpose. Deciding on boundaries for the Initiative was a particularly complex and controversial process. Some of the partners saw the decision to focus the activity on formal, secondary education as something that could limit the promotion of STEM subjects at younger ages, and also limit the possibility of stimulating interest in science in other strata of society. Others felt that without a clear focus on a particular age group and defined subjects, it would be impossible to expect significant short-term results. Despite the disagreements and harsh feelings that accompanied this series of meetings, it seems that the joint vision, as finally formulated, was indeed valuable for all partners, and it has accompanied the 5x2 Initiative ever since.

It should also be noted that the process of formulating the vision enabled the various partners to get to know each other, discuss disagreements and differences in perception, and reach deeper insights into the question of STEM excellence. This was a significant stage that laid solid foundations for the 5x2 Initiative's work, and demonstrated the importance and centrality of the joint agenda component of the Collective Impact model in general. Beyond that, defining the shared vision reinforced the recognition that the issue of STEM education is a matter of major national importance, and contributed to the dedication and commitment of the partners.

Overall, the formulation of the joint platform of the 5x2 Initiative was an evolving and dynamic process, which lasted more than a year. During 2014-2015, and following the formulation of the vision and the joint mission, more processes of thinking and development were undertaken. These processes were aimed at elaborating and refining the joint platform and designing the Intiative's roadmap to expanding the circle of STEM excellence students. This roadmap clarified the elements deemed critical to successfully expand the reach of excellent STEM education. It was jointly developed by working groups composed of representatives from the partner organizations. They took part in the multi-party effort by bringing their professional knowledge and expertise, and by relying on existing research data. During the final phase of this effort, academic experts evaluated and validated the roadmap.

The roadmap elaborates the stages that are essential for the development of STEM advancement for students and teachers, and anticipated results. In addition, the roadmap presents the conceptual framework for the development of a shared measurement system with indicators that measure the progress made by the 5x2 Initiative. In hindsight, the roadmap facilitated the creation of a common language and assisted the organizations to place themselves in relation to the broad frame of activities, and hence focus their own activity.

Roadmap to Expanding the Circle of STEM Excellence Students



[Figure 2]

The Regulator Takes the Lead

During the first year of building the joint endeavor and recruiting partners, many organizations increasingly called for the Ministry of Education to lead the project and plainly state its support. Repeatedly, strong statements were heard that the joint mission could not succeed in achieving its goals without Ministry support and leadership. Therefore, it was decided that the 5x2 Initiative would devote the first year to dialogue with the upper echelons of the Ministry of Education: the minister, Shai Piron, the newly-appointed director-general, Michal Cohen, and other senior officials. Indeed, after several meetings in which they learned about each other and explored how they could work together, the sides reached a shared appreciation that a joint effort by the 5x2 Initiative and the Ministry of Education held great potential to generate systemic change.

In March 2014, the director-general of the Ministry of Education issued a statement that the Ministry accepts the joint agenda set by partnership, and will join the 5x2 Initiative as the leading partner.

Two months later, in May of 2014, a year after the 5x2 Initiative was established, the Ministry of Education launched the "Math First" national program to encourage an increase in the number of students studying advanced mathematics (i.e., at a "five units" level). In addition, the Ministry appointed Mr. Mohana Fares, who was, at the time, Supervisor of Education for the Druze sector, to take responsibility for leading the program on its behalf. Both decisions were of great importance and shaped the future of the 5x2 Initiative. The program itself was launched in the 2014-15 school year, with an investment of approximately NIS 15 million, which was allocated to provide additional reinforcement hours in about 100 schools that responded to a call from the Ministry. In addition, the money was allocated to strengthening the quality of teaching in the field of mathematics.

In light of the Ministry's decision to focus only on mathematics during the first stage, the steering committee of the 5x2 Initiative discussed the significance and implications of this focus. There were those who objected, and saw the focus on advanced mathematics as a narrowing process that was inconsistent with the extensive cultural and educational change necessary to strengthen STEM excellence. Partners who were closer to the "springboard" approach wanted to see a broader change, dealing with a variety of subjects aimed not only at high schools, with their emphasis on matriculation exams, but also at middle schools and the cultivation of wider bases of knowledge and skills.

Other voices in the 5x2 Initiative argued that the focus on mathematics would be a good foundation for initiating systemic change, and that concretizing goals and indicators of success would create clarity for the partnership network. After discussions in the steering committee, it was decided to support the decision made by the Ministry of Education and help realize the goals of the Math First program. Despite the differences of opinion, the convergence of the 5x2 Initiative around one focused goal was, for many partners, a positive turning point in the process, as one partner, an educator, explained:

"In many cases, the deeper one goes, the more it spreads, and what happened here is quite the opposite, the goals became clearer and defined as the process progressed. The focus on math made it possible to make a move that would yield results, if there had been something lukewarm here, it would not have taken off, and it was also part of the strategic discussion... We decided that mathematics would be only the first stage..."

As evident in this quote, deciding to begin with mathematics after extensive discussion of various perspectives, made it possible to focus the efforts, while maintaining the broader picture of change that the 5x2 Initiative aimed to generate.

Many partners noted that the appointments of Michal Cohen as director-general of the Ministry of Education, and Mohana Fares as director of the project on behalf of the Ministry were a positive turning point in the Initiative. Both steps were active reflections of the Ministry's decision to join the 5x2 Initiative in a substantive way and create joint operational mechanisms. They were augmented by the director-general's direct statement that the Ministry would take sovereign responsibility for the 5x2 Initiative, which she made clear at the first meeting she attended. Everyone remembered and mentioned how she told the partners: "Let there be no confusion, the Ministry is responsible and must take responsibility for the process." The presence and position of the director-general created substantial mobilization, a sense of possibility, and the opportunity for a truly significant advancement. Other officials in the Ministry of Education expressed the same position, as Mohana Fares stated:

"I remember asking, in the initial stages, how much the high-tech companies would pay, but very quickly I understood that they do not have to pay, that is the role of the state. I understood that they have other roles in the partnership. Yes, they give money — but their money cannot and should not run the program... Having students with a good level of physics and mathematics is the responsibility of the state, otherwise the state crumbles."

The Ministry's assumption of responsibility sharpened the message that the 5x2 Initiative and its principles of action were not promoting private interests, but rather were concerned with the public good, and intended to promote the full realization of Israeli students' capabilities. There was broad agreement that the role of the network is to create complementary processes and programs that support the goals of the national program.

After the parliamentary elections in March, 2015, Knesset Member Naftali Bennett was appointed Minister of Education, and immediately put STEM studies at the top of his agenda. The new Minister of Education saw great value in the 5x2 Initiative network and invited its steering committee to serve as a publicly recognized forum that would accompany the national "Math First" educational program. Following his decision, Mr. Bennett initiated policies to enhance public awareness of the issue and promoted changes within the field of STEM education. In August of 2015, the Ministry of Education announced the National Program for the Advancement of Mathematics, and allocated NIS 75 million for the program, which formed the foundation of its budget.

Additional significant organizational steps were taken by the Ministry, including the opening of approximately 100 new math majors in high schools where advanced mathematics had not previously been taught, an additional 15,000 teaching and reinforcement hours, broadening the accreditation and training of about 200 teachers to teach the advanced level, funding for mentoring projects, and more. In addition, significant changes were made in order to encourage students to take the advanced level matriculation exam in mathematics. The policy changes consisted of, among other things, an increase in the number of bonus points added to matriculation grades in the university admissions process, so graduates who took the advanced level exam in math would have 35 bonus points added to total grade-point average. All of the leading Israeli academic institutions supported this decision. In addition, the Ministry decided to create a safety net for those who did not pass the advanced level matriculation exam ("five units" level), making them eligible for matriculation with four units of mathematics rather than three. Finally, in order to promote this policy within municipal authorities, emphasis was placed on increasing the percentage of students eligible for high-quality matriculation certificates, which includes an advanced level exam in mathematics, and not limited to the percentage of students entitled to a matriculation certificate in general. This change was of great importance because these statistics constitute an important basis for formulating municipal educational strategy and encourage municipalities to focus efforts on cultivating excellence and the quality of the matriculation certificate, instead of getting the certificate in itself.

The Ministry of Education recognized the value of leading the National Program for the Advancement of Excellence in STEM Education in conjunction with the 5x2 Initiative. This partnership was not anchored in a formal agreement but rather based on the shared recognition that the various partners of the 5x2 Initiative have an important role to play in inculcating focused messages, and creating complementary, supportive processes in the field. In addition, the space for discourse, learning, and joint action among member organizations in the network of partners created and managed by the 5x2 Initiative was seen as a vital, important space for the continued implementation of the national program. The system of trust built between representatives of the organizations and of the Ministry of Education during the first two years of the Initiative's operation created a broad, fertile foundation for open dialogue and cooperation when implementing the actions within the education system.

In this context, it is important to note that from the outset, the 5x2 Initiative was guided by an approach that called for working in cooperation with the Ministry rather than apart from it or against it. The steering committee and Sheatufim team led a clear line, which stated that pooling the forces of representatives from the three sectors - public, private and social - under the leadership of the Ministry of Education, was the only way to successfully create policy change, with direct long-term implications. Therefore, it sought to deepen the shared discourse, joint action, and mutual trust with the Ministry of Education. There was broad agreement among the partners that this approach should be promoted, even if it slowed the pace or required compromises along the way. However, this approach was not self-evident, since many social change processes take place through struggle, often by forming a coalition opposing the sovereign (Ben David & Rubel-Lifshitz, 2018), as one of the partners from an education NGO explained:

"I am involved in other endeavors in which the Ministry of Education is disparaged, and where people are condescending towards it; but in this project there was something very respectful... everyone's together, that's the style, it's all about the atmosphere in Sheatufim, the work concept, the trust, the values, and many things that made it diftferent.."

In the current case, the approach taken by the 5x2 Initiative was based on the assumption that when the sovereign takes responsibility and leads, other partners in the Initiative must form a support system that enables the Ministry to implement the national plan. The Collective Impact model emphasizes the importance of open dialog and continuous communication (Kania & Kremer, 2011). This form of communication facilitated trust building and understanding among the various organizations and the Ministry of Education, as described by **Inbar Hurvitz**, the 5x2 Initiative's director from Sheatufim:

"From the outset, we came with a positive attitude towards open and honest cooperation with the Ministry, but it took time to create a cooperative spirit within the entire network. The Ministry's representatives brought a true spirit of openness and dialogue, and we saw how the cynicism and skepticism of the various partners gradually diminished. It's not that they completely disappeared, but something different happened in the room, and the dialogue was characterized by patience, openness and willingness that facilitated the joint action."

Senior officials within the Ministry of Education testified to the strength of the partnership that was built. The director-general described the Ministry's work alongside the partner organizations:

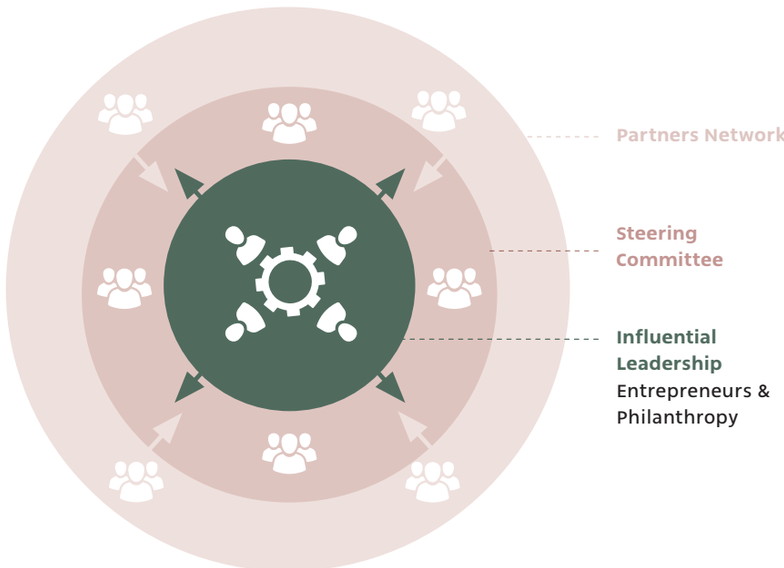
"In my humble opinion, the success of this process was due to the fact that the Ministry took hold of it with both hands, and connected with the partners. I don't see how it would have been possible to do it differently [the partners without the Ministry] because, like it or not, [the Ministry] is the regulator, the sovereign. The Ministry of Education is in charge of the education system. At the same time, the beauty of the story was that we also understood that there was a lot of strength in cooperation. Each of the partners contributed according to their strengths — the integration of organizations supporting the teaching and the teachers, the engineers, the teachers' communities... There was joint, systematic work.

The words of the director-general reflect the sovereign's clear assumption of responsibility and leadership, along with its recognition of the essential nature of the partnership with the other parties, who contribute — in her words — different, varied strengths. As she explained, this combination led to the 5x2 Initiative's success.

Multiple Partners – Different Worlds

Beyond the gaps in the perception and motivation that the partners brought to the table, there were also differences in practices, culture, and jargon of people coming from different spheres of activity (business, public, and social). The partnership system consists of three circles: (1) the influential leadership, i.e., the entrepreneurs who were also the main funding sources for the initial stage of the 5x2 Initiative and for the incorporation of Sheatufim, (2) the steering committee of 15 partners representing the various sectors, and (3) the extensive circle of partners in the network, representing several dozen organizations from all sectors. The steering committee was appointed to provide strategic leadership for the 5x2 Initiative and the decision-making processes that directed the focus of the Initiative and its methods of operation. The steering committee met quarterly, and the discussions were chaired by the backbone organization Sheatufim .The committee reached strategic decisions regarding the joint task, and defined the boundaries of the Initiative, through in-depth discussions and consensus-building.

Circle of Partnership - 5X2 Initiative



Source: Ben David, 2017

[Figure 3]

At the beginning of the process, the cultural differences and disparate world views dividing the diverse array of partners were prominent. For example, one striking difference in the early stages was the way people from the high-tech industry spoke a language of products and expected immediate outputs, which was not customary for the other partners. One business partner said:

"In many cases I was exposed to a work that is extremely different in its conduct and style from what we know... We (in the industry) are used to working with immediate outputs... the work pace is very fast, and here [at the Initiative] it was, well, 'we'll meet and see in another two months' [referring to the tracking on missions]... That's not something we do... it's totally unfamiliar."

Conversely, it was important for "third sector" partners and educators to emphasize the process, and some clearly stated that they disagree with frequent measurement, arguing that it might harm the educational process, as one educator explained:

"Some educators say that measurement destroys everything [referring to the pedagogical process]... My approach is that we need balance in everything we do in life."

It was evident that the dynamics between the partners reflected, at least in the initial stages, the adherence to the "familiar" roles played by civil society and the business world, and it took time to establish relationships and build trust. For example, one partner from the private sector said that she initially felt that partners from the education sphere questioned her motives, and did not recognize her potential contribution to the educational discourse:

"I remember that during the first meetings, every time I opened my mouth to say something... someone would jump up and say, "What are business corporations doing here? We are here to talk about education, we are pedagogues, we are teachers, and we studied education. What does the business sector have to do with it?"

On the other hand, representatives of civil society did not always understand their own position and weight in the discourse vis-à-vis the initiators who brought money and resources into the Initiative. However, as the civil society and private sector partners became better acquainted, the complexity beneath the dichotomy was gradually revealed.

Specifically, an understanding was reached that the private sector partners had joined the 5x2 Initiative out of their broader civic identity and social agenda. As described by one of the partners from the philanthropy sphere:

"[There was] suspicion based on unfamiliarity [among the partners]...relating to a person from the high-tech industry as someone interested in commercializing, a capitalist who wants to measure... or the Ministry of Education as burdensome, corrupt and bureaucratic. But then you discover that the high-tech representative was a teacher for 30 years before going into high-tech, and it gets deeper."

As the process progressed, trust was built among the partners, a common language was formed, and the sense of partnership around the goal was strengthened. Many partners saw these achievements as the result of two main factors: clear leadership and action mechanisms in which a variety of stakeholders participated (such as the steering committee and the working groups), and the role of Sheatufim as an objective and professional backbone organization.
The Collective Impact model emphasizes the existence of a backbone organization as a necessary condition for the success of a Collective Impact initiative. With a separate organizational infrastructure, and a dedicated professional team for leading the partnership, the backbone organization is a unique player in this model, differentiating the Collective Impact model from other collaborative efforts in the social field. The backbone organization is an impartial body that earns the trust of varied stakeholders; its role is to design, manage, accompany, and support the process. The backbone organization must reinforce the various components of the process and ensure that the "ship is moving in the right direction" in cooperation and coordination with all parties (Turner et al., 2011). As the backbone organization managing the 5x2 Initiative, Sheatufim played a central role in shaping and coordinating the complexity of the Initiative, leading it toward its goals while supporting the relationship and trust building processes among the varied partners. This role of Sheatufim was described by one of the partners, an educator:

"Sheatufim wove this fabric and I think they did it skillfully... It's not something conspicuous, it's as if they put a hand in your pocket without you feeling it, they step up, invite people to create materials, and create a partnership without being conspicuous. Not a leader for others to follow, but rather more a coordinator or organizational consultant, and they did a good job."

These words reflect, to a large extent, the nature of the backbone organization's role in creating optimal conditions for forming a partnership between numerous actors from diverse sectors. The unique position of the backbone organization — as a facilitator, rather than as a leader — enables the inconspicuous smoothness of the processes taking place.

Many partners pointed to the existence of a backbone organization and the work of Sheatufim as one factor that made it possible to put aside interests, disagreements and gaps, and connect to a broader, systemic vision, as described by a partner from an education NGO:

"The fact that Sheatufim managed to bring so many elements into one room, " each with its own agendas, interests, overt and covert directions, and succeeded in creating in the room both a climate and employed methodologies that allowed us to discuss the interests for which we had gathered ... I think that in many cases we felt able to leave the agendas with which we came at the door, which was very good in my opinion."

Being influenced and having an influence: Activity of the partner network

Alongside the work done by the broad forum of partners, which continues to convene once every few months, the 5x2 Initiative's strength was created by the commitment of various actors from all sectors to a common goal. Not only did all of the actors influence the specific goal defined — doubling the number of students taking the advanced level matriculation exam in mathematics — they were also influenced by it. In interviews, various partners spoke at length about the mutual effects of the 5x2 Initiative on their organization, as well as on how they themselves influenced thinking within the Initiative. For example, one partner from an education NGO explained:

"We [the NGO] decided to stop for a moment and to look at ourselves and at what we are doing. There was a very serious discussion about whether we are aiming at what the Ministry and the Initiative are promoting, and whether we are influenced by it? Because it would be an educational question of great importance if I were to say, "everyone should take advanced level math." That's a big question. So we said, let's examine the data first. Let's understand the status of our graduates, the situation of the students, and we saw that our graduates were three times more likely to take advanced level mathematics than the general population. The partners asked us, how did you do this? [...] That started a whole discussion, and as far as I was concerned, it was an inverse collective impact."

The mutual influence that the partner felt in his organization was so intense that he proposed the concept of "inverse collective impact," revealing an additional advantage of working according to the Collective Impact model. The model facilitates expanding influence in varied circles around a common goal, but also going beyond that goal. Similarly, another partner from a "third-sector" educational organization described her feelings about the involvement in the 5x2 Initiative and the implications it had for her in other contexts: "It's really being at the center of the action... This is a move that I really connected to on a personal level, and I felt I had something to contribute."

Later, the same partner described how her organization's collaboration with the Ministry of Education intensified, and how they created an additional project in cooperation with a big high-tech company. All of these were direct results of their involvement in the 5x2 Initiative. Meeting other partners led to the creation of new projects and shaped the strategic directions that some organizations embraced later on.

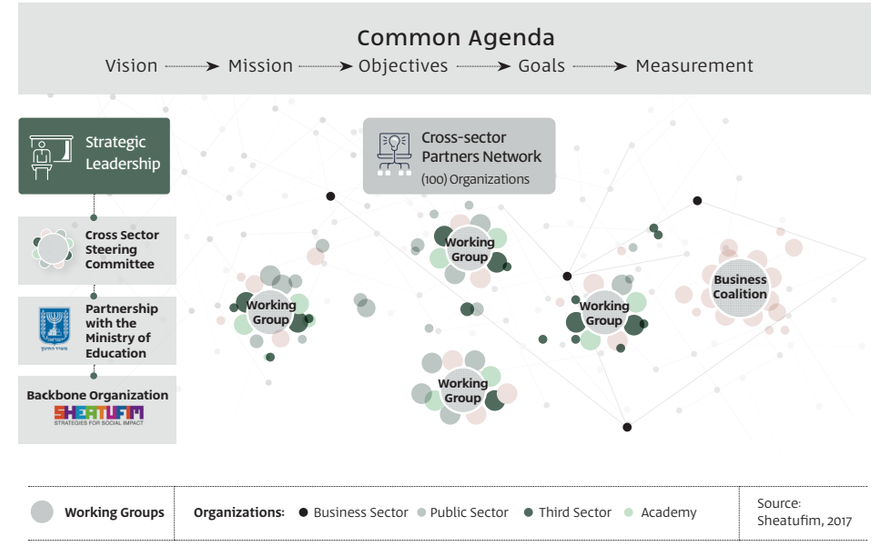
Participation in the 5x2 Initiative enabled the partner organizations to promote their organization's activity by connecting to and networking with other organizations. It also contributed to strengthening their sense of added-value, through understanding and recognizing each partner's unique contribution. For example, another partner, an educator, described:

"Part of what happened here [at the Initiative] influenced my work... I had a feeling that I'm travelling for four hours to the partnership network convention, ostensibly on a volunteer basis, but I gain something that can be brought to the field... The partnership gave [me] the ability to come back to my school and say: "This is on the agenda of the Ministry of Education. I was there two weeks ago, and the director-general said this and that..." As far as I was concerned, the profit was very substantial because I understood that I was a partner in a decision of the Ministry of Education...."

One of the most prominent examples of influencing and being influenced within the network was reflected in the organization of the business coalition, which was established to promote STEM studies among high school students and to motivate them to choose this path. The coalition was established during the earlier stages of the 5x2 Initiative, out of the need and desire of high-tech companies to create an additional platform within the 5x2 Initiative. This platform was intended for representatives of the private sector to encourage internal dialogue and strengthen opportunities for joint action. At its inception, the business coalition included ten companies, and it has now grown to 40 high-tech companies that are committed to the vision and goals of the 5x2 Initiative.

The first activity of the business coalition focused on coordinating and synchronizing the activities of high-tech companies offering volunteer lectures by engineers in high schools and conducting organized tours of their offices and facilities. The coordinated activity enabled broad distribution of activities throughout the country, focusing on the periphery and Arabic-speaking schools, and sharpening common messages about the importance of STEM studies as a key step towards social mobility and employment. The work of the coalition is coordinated with the Ministry of Education and social-educational organizations operating in the field. This coalition of actors from the private sector within the 5x2 Initiative should not be taken for granted, both in terms of the three-sector partnership concept that underlies the Collective Impact model, and the unique competitiveness of the private sector, which may prevent its collaboration with such initiatives. The coordinated action component of the model, which dictated the conduct of the 5x2 Initiative in this regard, encouraged each partner to contribute in a way that it found comfortable, and suited its area of expertise. This was the basis for establishing the business coalition, which made a very significant contribution to advancing the common goals of the 5x2 Initiative.

Working Groups' Model Established During the Third Year of the Initiative [Figure 4]



In addition to the business coalition, the working groups established during the third year of the 5x2 Initiative are another circle in which mutual influences are particularly prominent (see Figure 4 above). The working groups were formed with the aim of promoting four issues that the steering committee defined as central: (1) encouraging students to choose STEM subjects, (2) realizing the potential of students in the periphery, (3) promoting technological excellence, and (4) expanding the circle of teaching positions candidates.

The working groups made it possible for the diverse partners to become more deeply acquainted with each other, while generating shared thinking on specific issues from different, multi-sectoral perspectives. The partners described in-depth thought processes that led to various outcomes for joint action. It is clear that the tri-sector work process using working groups, and the connection to a broad goal created in the shared space, improved the partners' abilities to understand each other, and made them more optimistic and hopeful, as described by one of the partners from the "third sector":

"Participation in the initiative made it possible for me to develop additional channels for listening and observing. I think that the change occurred because I came with more patience, and also learned a lot. I left more optimistic."

The shared space created by the 5x2 Initiative made it possible for the partners to bring in their worldview, experience, and expertise, while the common messages and language permeated the organizations. These processes created movement in discourse and action.

Does Advanced Mathematics Define Excellence?

In May-June 2016, two media campaigns promoting STEM excellence and directed at the general public were launched, one by the Channel 2 television franchise Keshet in cooperation with the Eddie and Jules Trump Family Foundation and the other by the Ministry of Education.[3] Both campaigns sparked public and media debates, especially concerning the messages emphasizing that studying advanced mathematics defines excellence, and dictates the path to occupational, economic and social success. In response to the campaigns, teenagers launched their own campaign on social networks, especially Facebook, uploading their pictures with the slogan: "Successful but not in five," adding voices with other perspectives to the public debate. Sources in the Ministry of Education explicitly referred to the issue, making it clear that this was not their intention. The director-general of the ministry at the time stated:

"[The campaign] was too aggressive, in my opinion... I really do think that grades are not everything... I don't think a child must study five units [of math] if he doesn't want to, and I do not think that if a child doesn't study five units, he will not succeed. I think if you are given the choice and you make that choice, you deserve respect, but if you don't, that's to be respected as well... As an educator, I have always said that my job is not to create robots for the future. My job is to give the children an experience of being able to choose what they want. "

The campaigns led to the development of a public discussion in which teachers, parents and students participated, and eventually influenced the 5x2 Initiative itself. This was another step in sharpening the Initiative's messages that offered a broad conception of excellence and encouraged STEM education as a way to expand horizons and open doors. The public debate clearly permeated the 5x2 Initiative and resonated with the discussion that took place around the focus on "Math First", and the various approaches to STEM excellence. In this sense, the external, public discussion helped the partners recognize their inner voice that sought to go beyond STEM excellence.

It's a Revolution: Reversing the Trend and Increasing the Number of Students Taking the Advanced Mathematics Exam

In the summer of 2016, the Ministry of Education published updated data regarding the number of examinees and students taking advanced mathematics. These numbers clearly showed a reversal of the previous downward trend. From a low of 8,869 students who took the advanced matriculation exam in 2012, the number grew to 15,800 students in 11th grade who took the exam in 2017, with further increases expected until 2019.[4] Just as the previous publication of the grim data about the drop in the number of students taking advanced math was an important component in the motivation for creating the 5x2 Initiative and recruiting its partners, the publication of the data showing that the goal had been reached in 2016 was a stamp of success, and strengthened the partners resolve for the road to come. The new data prompted excitement and a sense of accomplishment among the partners, who felt that a significant change had occurred. However, it was uncertain if the achievement could be analyzed or if it were possible to explain exactly how it had been accomplished. Nevertheless, there was a clear recognition that the convergence of many forces around the same goal led to quick results, as described by the director of the 5x2 Initiative on behalf of Sheatufim:

"The fact that the goals were achieved within four years is not self-evident. The change was very rapid, and I think that the Initiative contributed to this speed.

The teachers and principals did the main work, while the national program created opportunities and access to the study of advanced mathematics that were not previously available. I think it's important that a variety of NGOs and organizations working in the field promoted the same messages, each in its own way and place. The private sector went into the classrooms with clear statements by engineers about the importance of advanced mathematics as a key to success. They all contributed to moving things in the field... These things are hard to measure, but I believe that this had a lot of power... We don't necessarily know what each organization did, and that's fine, but we know that each one shared the common goals and interpreted them in its own way... This variety, combined with the coordination and the creation of a common language is a powerful tool when trying to make a significant change."

This statement reflects the rationale for the change inducing activity of the 5x2 Initiative. A project that was designed and built according to the Collective Impact model, created a coordinated, synchronized space where all parties worked towards a common goal, but without supervision or control of their varied activities. This opened the way for multifarious processes, both on the level of the individual organization, and by partnerships formed between two (or more) organizations, as we saw in the case of the business coalition. The coordinated action, which was not necessarily managed from above, created reverberations that expanded into different regions, and enabled many forces to move toward the goal.

Systemic Change as a Two-Way Motion

To evaluate the impressive achievement attained by reversing the downward trend in the number of students taking advanced mathematics, it is essential to examine the preparatory and infrastructure work carried out in the years preceding the declaration of the national "Math First" program. As one philanthropic partner explained, the first step was taken even before the partnership network was formed, when capabilities were built within the education field. In the years preceding the convergence of the 5x2 Initiative and its network of partners, significant work was done by the social-educational organizations operating throughout the country, with the support of the philanthropic foundations.

Professional communities of teachers had already been established, as well as processes for training teachers and strengthening the quality of STEM teaching. Action had also been taken to raise awareness of the issue in schools. This prior infrastructure work was vital to the success of the 5x2 Initiative, and it was further reinforced when it was established. The initial processes of establishing the network of partners, formulating the joint agenda, and enlisting the Ministry of Education to lead, fortified the field's activity and readiness to implement systemic actions. Indeed, by the time the Ministry of Education declared the National Program for the Advancement of Mathematics, the 5x2 Initiative had sufficient infrastructure in place to do the work and implement the policy change. This is a unique case, and it contrasts with the more common situation in which a new educational policy is declared but the actors in the field feel alienated and uninvolved. This time, when the policy was declared, the educational organizations were already acting in its spirit and therefore felt they could associate themselves with its goals. Moreover, they knew how to act in accordance with the new conditions outlined by the Ministry of Education. A two-way motion was created: fieldwork and infrastructure beginning at the grassroots level was accompanied by processes of policy change, which enabled rapid, powerful change.

Long-term Perspective

Another significant factor in the success story of the 5x2 Initiative was the long-term vision shared by many of the leading partners. In numerous interviews, partners expressed their long-term vision as they discussed their broad perspective on the good of society. Indeed, it would seem that this was the internal motivation that mobilized many to join and invest energy in the 5x2 Initiative. Several partners spoke about their identity as citizens of the State of Israel, based on a broad vision of the future of the state. The partners spoke about the need for profound social change in the employment market, opportunities for the younger generations, the need for social mobility, making scientific knowledge accessible to society, and the need for a fundamental change in the attitude toward STEM studies. These broad conceptions made it possible, according to some, to put their organizational egos aside, and connect with more varied motivations.

The recognition that the decline in the excellence of STEM education is a national problem that cuts across population sectors, and has long-term implications for society, was an essential cornerstone that enabled a rare and successful connection between actors coming from different content and occupational worlds. The 5x2 Initiative enabled organizational interests, such as the industry's urgent need for engineers, to unite with broader national interests, as described by one of the partners in the 5x2 Initiative, an educator:

"A person from a high-tech company doesn't come as a representative of high tech, but as a citizen of Israeli society... There is a national vision here... On the other hand, the starting point [of the partners in the Initiative] is very real. It emerges not only from the real needs of the field, but also from genuine intentions to create change."

Looking ahead: Strategic directions and future challenges.
The sense of satisfaction and success that first accompanied the publication of the Ministry of Education's data was supplemented by many questions regarding the 5x2 Initiative's next steps.

Questions arose mainly in light of the reversal of the trend in the number of students studying advanced mathematics, and regarding the operational methods of the Initiative's network of partners. To this end, the 5x2 Initiative conducted a strategic planning process from September of 2016 to February, 2017. The planning process was aimed at re-envisioning the 5x2 Initiative's focus for 2017-2020. It resulted in a decision to focus on two main routes: first, expanding the circle of excellence in the social and geographic periphery, and second, strengthening the knowledge, skills and sense of competence of middle school students. During these meetings, the definition of excellence and a conceptual forethought that would guide the 5x2 Initiative were reformulated. The 5x2 Initiative purpose was altered as follows:

"We see our mission in promoting excellence in STEM education, as a driver of a broad educational culture of excellence. We are committed to achieving that, while striving to narrow the social gaps and provide equal opportunities to every student in Israeli society."

The understanding that in order to create a broad moral foundation for excellence in STEM subjects is reflected in the reformulation process and in its outcomes: it is important to structure messages transmitted by the 5x2 Initiative around broader ideas that emphasize the value of excellence in all education.

The Challenge of the Periphery

The Ministry of Education data shows that the impressive rise in the rate of students studying advanced mathematics is primarily found in strong municipalities of the Jewish sector in the central region of Israel. Therefore, the strategic planning process resulted in a decision to focus on encouraging STEM excellence in the periphery and in the Arab sector. From the outset, it was understood that the desire to expand the achievements of the 5x2 Initiative to the geographic and social periphery would be complex.

The familiarity of many partners in the 5x2 Initiative with the situation in peripheral areas left no doubt that the challenge would be far from simple. Their experience showed that copying an existing working model would not be enough. The periphery requires deeper thought and consideration about the roots of the gaps between the center and the periphery. Under these conditions, many resources are needed to cope with the challenge of STEM education, as expressed by one of the partners, an educator:

"At the end of the day, the teachers are the main resource, especially in the periphery, which is short on human resources... In Haifa, which is next to the Technion [Israel Institute of Technology] it's easier [than in] Dimona or Kiryat Shmona where it's much more complicated. Here it's an issue of physically reaching the place....In most places there are no high-level science classes because there is no one to teach...The obstacle is there at the outset. I also think that the story in the periphery is more complex because it's not just mathematics... [For example] What about native languages [Hebrew or Arabic] and English? There is a deep gap between them and a child from a strong place...
These two anchors make it very hard to work in the periphery."

This statement reflects some of the understandings formulated during the strategic planning process, and in the periphery working group that honed the need to build and strengthen extensive intellectual infrastructure based on quality teaching staff in order to promote excellence in mathematics. Regarding the new focus, it was also clear that a narrow conception of excellence as concentrating solely on math might be an obstacle because additional skills are necessary for success in STEM studies, including proficiency in both Hebrew and English, as mentioned above. More generally, the challenge of the periphery is not limited to pedagogy, but also requires widespread response to the absence of infrastructure. For example, there is a need to address basic needs such as nutrition and hours of sleep, that could be significant factors impeding students' achievements. Therefore, an important part of the 5x2 Initiative's future work is expected to take a holistic approach to ensure that students' basic needs are also met.

The focus on the geographic periphery emphasizes the importance of working on the local and regional levels. In its early years, the 5x2 Initiative worked to promote a national effort, but it now needs to strengthen its understandings and cooperation with local authorities.

There is no doubt that a significant change will require the commitment of local leadership, and the creation of clear priorities in the regional context.

The network's future: From initiation to maintenance and leverage.
A partner from an education NGO recounted:

"At one of the meetings, the Minister of Education said it very well: if we do not invest in infrastructure, the achievement will not persist. He called it the difference between taking steroids and building muscle. So we did the steroids part, we reached the number and surpassed it, but muscle is a mechanism that needs to be developed by teacher training, professional development within the schools, a million things. So there's a lot more to be done."

The significant achievement of the 5x2 Initiative raises questions about the processes that created it. More specifically, how could these processes contribute to its expansion? Until now, the network has operated according to the Collective Impact model, which was a major component of its success. However, questions are now being raised about the possibility of maintaining that achievement over time. Questions such as: how can the Collective Impact model, based on broad pooling of forces for a common goal, not only lead to a reversal of a trend but also to the consolidation of an alternative trend over time? How will the 5x2 Initiative operate in the implementation and assimilation phases? Will the 5x2 Initiative succeed in maintaining the momentum and commitment of the various partners over time, and in what ways?

At this stage, it is already known that leveraging the shift in the number of students taking advanced mathematics and turning it into a stable, permanent trend may require much more extensive infrastructure work than has been done to date. So far, the 5x2 Initiative has focused its efforts on particular age groups and subjects. It is possible that it is now necessary to expand into working with different age groups, and additional subjects, while aiming for diverse target populations, sectors, and geographical regions in Israel. This will require dealing with delicate social issues that have not yet emerged with intensity in the course of the 5x2 Initiative's work but are known to influence the potential of students from different groups to excel in STEM subjects.

The infrastructure development processes are indispensable for strengthening the quality of teaching staff, and the ongoing development of the next generation of teachers and must continue. Infrastructure processes tend to take a long time and require many years of work, during which the personnel changes. All this must be considered when ascertaining how to keep the flame of STEM excellence in Israel, which was lit by the 5x2 Initiative, burning.

Realizing the Potential of the Network

Realizing and maneuvering the potential of the partners' network is a key factor in the network's long-term success. During the strategic planning process and interviews conducted when preparing the case study, many partners noted that the network had not yet reached its full potential. Although new partnerships have indeed been created, it is evident that there is a need to deepen the familiarity of all the partners and promote joint strategic moves. This can be done in a number of ways; one direction that partners pointed out was the need to deepen mutual learning about the practices and strategies that the different partners use in their organizational space. Each partner brings with it expertise, knowledge and experience. For example, an educator

described in an interview how strategies employed in his school to strengthen teachers' abilities were implemented by other partners in the 5x2 Initiative. A further deepening of mutual influences will continue to expand existing knowledge and improve practices for encouraging STEM excellence.

Another potential path toward leveraging the network is to encourage the involvement and influence of less active partners. This is especially important for "third sector" NGOs that do not feel the same power and influence as other partners since their contribution to the network is not embodied in material resources. In this regard, it seems that the 5x2 Initiative must decipher how to reinforce two-way movement so "third sector" organizations are not only influenced by the network's funders but can also influence the network and its partners by sharing their knowledge and expertise.

Finally, there is a need to create platforms that encourage numerous and various connections between partners in the network. It is evident from the interviews that many partners felt insufficiently acquainted with the other members in the network, that they are curious about them and would like to deepen their familiarity and cooperation. The desire to continue deepening the network is a positive, encouraging sign that ensures its continued development.

However, this requires thinking about processes and platforms that will strengthen the network and inspire further cooperation.

Conclusion

The story of the 5x2 Initiative illustrates the joint journey of actors from different worlds towards the goal of promoting STEM excellence in education in Israel. The journey began with various actors from different sectors, activities, and motivations — philanthropy, NGOs, higher education institutes, business corporations, and the Ministry of Education who identified a common problem and organized together. As the 5x2 Initiative evolved, a common language emerged in the network, bringing with it better communication, more lively and deeper discourse, opportunities for cooperation, and a wide-ranging process in which diverse forces created broad movement in one, focused and measurable direction. Apparent in interviews of the partners were descriptions of the pleasant, enabling and nourishing space created by the 5x2 Initiative. This space was shaped by the staff of the backbone organization, based on the principles of the Collective Impact model emphasizing the values of sharing, dialogue, and building agreements between diverse stakeholders, each bringing its unique added value for achieving the goals and advancing the joint mission. The 5x2 Initiative created change not only in the external reality, based on the goals set by the Initiative, but also affected each of the partners who described the significant personal, organizational, and inter-organizational change that each had gone through in their own ways. As one of the participants explained: "The network is evolving, maturing." The common language created in the network opened up a gateway and the potential for realization and action that were not possible previously.

The system of trust and unique partnership established between the leadership of the Ministry of Education and representatives of organizations from the various sectors was a key factor in solving the unique puzzle for advancing the Ministry's national program and achieving common objectives. The open and participatory discussions, conducted in a professional and a knowledge-based manner, in which various voices could speak without fear, turned the 5x2 Initiative into a significant space for advancing the mission shared by the partners. It remains to be seen how the mature network will meet its future challenges. ■

1 Intel Israel is a subsidiary of Intel Corporations. Established in 1974 it has become Israel's largest privately-held employer and exporter with four development centers and two manufacturing-related facilities. In 2019 the company employs about 10,000 people, in addition to indirectly supporting the employment of 30,000 workers in Israel.

2 In order to follow qualitative research ethical guidelines, all quotes in this report are verbatim. Most of the respondents are not identified by their names, except for places in which identifying the speaker has significant implications for the context. In these cases, all respondents gave their consent to full disclosure.

3 See links: http://www.mako.co.il/special-math-five?partner=channelheader
http://www.ynet.co.il/articles/0,7340,L-4809634,00.html

4 According to a press release that was published on behalf of the Ministry of Education in June 2016.

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You Need a Collective to Impact a Child's Education

A Conversation with Leaders of STEM Excellence Collective Impact Partnerships in Israel and the US

Inbar Hurvitz
Talia Milgrom-Elcott

5X2 was launched in 2013, initiated by the Trump Foundation, the Rashi Foundation and Intel Israel, and organized by "Sheatufim" — a nonprofit organization that specializes in cross-sector collaboration, and in building and leading multi-stakeholder partnerships to tackle complex social problems. With more than 100 member organizations, 5X2 is considered one of the key contributing factors to Israel's success in doubling the number of high school students who graduate having majored in math, and in increasing the public awareness of the importance of STEM excellence.

100Kin10 was launched in response to former President Obama's 2011 call to prepare 100,000 STEM teachers in ten years as a national priority. Drawing inspiration from the collective impact approach, 28 organizations, including nonprofits, government, and businesses, joined the initiative, incubated at Carnegie Corporation of New York, one of America's oldest grantmaking foundations, and made a bold commitment to reach this goal.

The "collective impact" (CI) approach to creating social change defines guiding principles to effectively tackle complex social problems (Kania & Kramer, SSIR, 2011). At its core, collective impact brings together a wide range of organizations and builds a structured network that aligns and integrates their work to achieve population- and system-level change. It is composed of five main features: (1) collectively defining a **common agenda** — vision, mission and goals; (2) implementing **shared measurement** systems to track progress; (3) fostering **mutually reinforcing activities** to align all partners; (4) encouraging open and **continuous communication** to strengthen trust and relationships; and (5) having a strong **backbone organization** to facilitate and manage the process.

Since 2011, the collective impact model has become very popular among social change initiatives in the US and around the world, addressing a wide range of social problems in the fields of education, poverty, public health, employment, and the environment. As more and more initiatives implemented the approach, lessons were learned, and the model evolved to address challenges that emerged from the field.

Both 5X2 and 100Kin10 implemented a collaborative approach inspired by CI. Both have successfully reached their main goals: By 2018, following an orchestrated effort of 100 organizations from the public, business, and nonprofit sectors that formed a strategic network partnership with the Ministry of Education, 5X2 had doubled the number of high-school students completing high level mathematics (5 units). In 2021, the 100Kin10 network included 300 partnering organizations that together surpassed their goal and prepared nearly 110,000 STEM teachers.

At the decade landmark of both initiatives, we conducted a conversation between Inbar Hurvitz, former director of 5X2, and Talia Milgrom-Elcott, the founder and executive director of 100Kin10, to explore their experiences implementing the collective impact approach to lead social change strategies in STEM education. The following conversation not only tells the story, but also wades deeply into the methodology and various approaches employed to implement it.

First Steps

Both 5X2 and 100Kin10 embraced the collective impact approach soon after it was introduced in an article in the Stanford Social Innovation Review (SSIR) in 2011 and was, in many ways, still an experiment. There were few practical recommendations for action on the ground, and no proof of success. So, from the get-go, there was a lot of curiosity (and skepticism by some) as to what CI could yield, together with a feeling of the leading partners that it had the potential to promote innovation and encourage diverse stakeholders to work collaboratively in a more effective way to achieve ambitious goals.

Inbar: When we at Sheatufim were approached about exploring the possibility of launching and implementing a national STEM initiative which followed the recently published collective impact approach, it definitely sparked our imagination and resonated well with our previous experience and belief in the value of cross-sector collaboration between government, businesses, and nonprofits. It seemed that the CI approach built on previous attempts and was more ambitious in its commitment to delivering results and promoting sustainable impact. In order to deepen our understanding of the new CI premise, we traveled to the US to learn more about the theory and practice, and to explore how it would mesh with Israeli culture in general and the education arena in particular.

Upon our return, we assessed the preconditions for a CI approach and they resonated well with us: 1) **There was a strong sense of urgency** shared by many stakeholders in the STEM education field in Israel. The ongoing decline, over a decade, in the number of students who graduated with high level STEM tracks was viewed as an urgent educational crisis; 2) **A group of leaders** from philanthropy, business and the nonprofit sector were excited to step forward; and, 3) Organizations in the field of education **had a history of collaboration** and they were ready to build on that and strengthen it as part of a national level network. These indications affirmed our assessment that CI was a good fit and we decided to launch the initiative.

We engaged in a bottom-up approach and built a cross-sector network. Approximately 40 organizations joined us at the beginning: nonprofits, academic institutions and high-tech companies, as well as mid-level representatives from the Ministry of Education. We learned that there were a few elements of CI that made it attractive to our partners: **first, the results-oriented approach.**

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**Talia Milgrom-Elcott is executive director and founder of Beyond 100K (formerly 100Kin10)

The fact that it focuses on measurable goals and designs a collaborative strategy based on the most effective way to attain these results. **The second was the sense of taking part in a broad mission,** one that is bigger and beyond what you could accomplish on your own. It created a buzz that something new was happening, and people wanted to join us on this journey. Third, people were curious regarding the opportunity to create a different kind of cross-sector collaboration: influencing policy as well as designing a joint strategy based on the unique expertise of each organization and each sector — public, private, and nonprofit, and effectively integrating bottom-up action of civil society with top-down policy making.

Talia: From 2007-2013, I was a program officer at Carnegie Corporation of New York, a large foundation in the US. As a program officer, I had the privilege of funding and supporting many great organizations, learning from their work and watching them succeed, as well as struggle, and doing my best to use the resources at my disposal to encourage more of the former and less of the latter, in no small part by encouraging organizations to open up and learn from each other.

One of the things that became clear to me was that the existing incentives compelled people and organizations in the field to compete with each other and try to go it alone. Prior to founding 100Kin10, I tried in small, experimental ways to encourage people across organizations to work together, to think about how their efforts could complement each other and together create greater impact beyond their own organization's missions. President Obama's 2011 call for 100,000 new excellent STEM teachers in 10 years provided us at Carnegie an opportunity to take these experiments a step further.

President Obama's call went well beyond the capacity of any individual organization, and that required all of us to think creatively about collaboration. There was no alternative way to reach the goal but to collaborate. Our job, as the emerging backbone (still situated at Carnegie Corporation), was to learn how to get people and organizations to do things collectively that they couldn't do on their own. Together with the 28 pioneering organizations that joined us, we realized that CI requires a new way of working: each organization brings its own unique strength and expertise to the collective vision, and, through the network, they work collaboratively to learn from each other, adapt and build on each other's successes, and together, whenever needed, generate innovative and new solutions.

What made it possible at the start was that the shared goal was so broad that it demanded radical collaboration if any of us were to succeed. And more than that, it was a grand yet crucially achievable vision that could be attained working together. At the ten-year mark, we commissioned an independent evaluation of the effort. The evaluators concluded: "In interview after interview, partners credited 100Kin10 with shaping and supporting a collective and coordinated effort that empowered network partners to drive systemic change for schools, teachers, students, and families on a level they could not have achieved alone."

Mid-Course Improvements

Following growth in the number of initiatives that embraced CI, the approach also garnered a level of criticism. Some faulted it as a methodology that suits short-term, immediate goals, and fails to mobilize towards long-term sustainable impact. Others saw it as a top-down approach that does not reach out and directly involve the communities who suffer from the problem and as a result, does not effectively address issues of equity. As a response to this critique, beginning in 2016, leaders and experts of social change sought to refine the CI model.[1] It evolved and additional components were added, in particular the system-change approach and the focus on community engagement and equity. 5X2 and 100Kin10 addressed this critique in different ways.

Inbar: Indeed, promoting a long-term systemic change, is a challenging task. I am not sure we had sufficient tools and understanding of what it takes to create a transformative change that addresses the root causes and challenges around the existing structural aspects, power dynamics, and values and norms that are linked to STEM excellence. One aspect that was clear to us was that promoting long-term change entails and requires influencing policy.

This was therefore placed at the center of the strategic partnership with the Ministry of Education. We placed great emphasis on promoting supportive regulations, budgeting, and creating new incentives for local governments and school principals. In addition, we worked on encouraging long-term collaboration among nonprofit organizations in the field and, in particular, on cross-sector collaborations promoting the common goals. We were hoping that these actions would create a strong infrastructure that ensures sustainability and system change. In terms of equity, following two years of operation we realized that while we created a positive change and were progressing towards achieving our goals with respect to the trend in the number of students at the national level, it also became clear that in the geographical and social periphery of Israel, and particularly in Arab towns, the change was not as positive and strong. There was a concern that we might actually be increasing the social divide instead of diminishing it. In the second phase of the initiative (2016), we designed a strategy tailored for municipalities in disadvantaged areas in Israel, which was based on a partnership between the Ministry of Education and the local municipalities. We were hoping to achieve better results and to make progress towards greater equity. The mission in this regard is definitely yet to be accomplished.

Talia: Look around. There is not a single city that has succeeded in graduating all its students with the level of STEM learning that would allow them to pursue STEM opportunities in college or beyond if they so choose. Yet there are thousands of efforts around the country focused on STEM and education. We don't need more individual efforts; that piecemeal approach isn't working. We need to aggregate and link these efforts so that they connect, complement, and build on each other. And we need to do that not just in one place, but in many places, so communities can learn from each other's successes, adapt them to their own circumstances, and leapfrog toward impact for children.

As I mentioned, we had an independent evaluator review our work over the past ten years, and one of the things they found was that everyone they interviewed agreed that they had accessed better practices and were doing better work because of the 100Kin10 network. But the solutions they were accessing weren't generated by 100Kin10.

They were generated by their peers in other organizations. In terms of the challenge of focusing on those most impacted by the inequality being addressed — that was not a central part of the original CI approach. It was a gap that we saw more and more clearly over our first decade, and, as I'll discuss more in a moment, it's a gap we chose to address head on as we planned for our next decade.

The Government

In both initiatives, the relationship with the government played a significant role in the journey towards change and the ability to succeed. While the goal of 100Kin10 was set by President Obama, 5X2 needed to convince the Ministry of Education to act jointly with the cross-sector network in order to turn STEM excellence to a national priority. When Naftali Bennett became the Minister of Education in 2015, the vision and goals of 5X2 resonated with his own agenda. Bennett, formerly a high-tech entrepreneur, supported the idea of setting a measurable goal with a clear timeframe, similar to 100Kin10 — and he joined 5X2 with the aim of doubling the number of five-unit mathematics students in five years. The multi-sector coalition provided him with support and legitimacy, especially when facing public criticism.

Inbar: We knew from the beginning that a strategic partnership with the Ministry of Education was essential to achieving results. In the early phase we did not know what form or shape it would take, but we knew it must be a key component in our strategy. The relationship with the public sector was not a major component of the CI theoretical model, but we recognized its unique significance in the Israeli system. We placed great emphasis on the role of the public sector and saw it as a critical leader for the advancement of any systemic change.

This was not trivial, as local NGOs are often oppositional and skeptical with regard to the Ministry of Education. We believed that the collective impact approach could create a different discourse between non-profits, business, and the Ministry of Education. And it did, with great results — we created a new spirit of wide-scale collaboration that harnessed an understanding that we must find ways to effectively address the different aspects of the problem together, and that each partner has different capacities and strengths. Our challenge was to clarify exactly how the puzzle of different players would fit together and we are proud to report that we were able to defeat cynicism and bring about a concrete and pragmatic approach. This was very refreshing and helped to create positive momentum.

Furthermore, when we approached the Ministry of Education leadership, we found their openness and understanding of the potential of the unique cross-sector collaboration we offered to be relatively high. Notwithstanding a commitment to the government as the sole agency accountable for the success of all students, they were looking for innovative ways of working together with nonprofits, businesses, and philanthropy to achieve the desired results. As a result, the Ministry of Education launched a new national program that included new policies such as: dedicated budgets for increasing teaching hours, regulations for opening new classrooms to increase access for all students, incentives for school principals and local municipalities to encourage students to choose high level math, training for teachers, recruiting new teachers, and a public campaign to increase the awareness and motivation of students, families, and teachers. Together with complementary actions of a business coalition of over 40 high-tech companies and the work of 50 nonprofit organizations, results have begun to show, and the decline in the number of students who complete high level math has now been reversed.

Talia: The fact that the call to address the shortage of STEM teachers was announced as a national priority outlined by President Obama gave us legitimacy, inspiration, and momentum. The truth is that no one, not even the White House, expected to see the field mobilized to this extent, let alone to see the goal realized on time. And there was no plan for this call to action to come to life and become an actual initiative. But once we launched 100Kin10, spurred by President Obama but run and acting independently, it became a great partnership.

100Kin10 was in a position to mobilize the field and bring both likely and unlikely allies together to take action in pursuit of the goal set by the White House. At the same time, the White House continued to prioritize this goal: The President spoke about it in diverse venues, including in his second Inaugural Address, and the White House offered various STEM and education moments to publicly celebrate the work of the network and its growing group of partners, incentivizing others to step up and join the multi-sector coalition and encouraging more people to do the work.

During the Trump Administration we had little to no relationship with the White House, and now we are grateful to be in dialogue with the Biden Administration and especially its Department of Education, as we set a new goal for the next decade and work to generate new momentum.

The Backbone Organization

The collective impact model emphasizes the need for a backbone organization as a necessary condition for success. With a separate organizational infrastructure, and a dedicated professional team for leading the partnership, the backbone organization is a unique player in this model, differentiating the collective impact model from other collaborative efforts in the social field.

Backbone organizations essentially pursue six common activities to support and facilitate collective impact over the lifecycle of an initiative: guide vision and strategy; support aligned activities; establish shared measurement practices; build public will; advance policy; and, mobilize funding *(Turner, Merchant, Kania, & Martin, 2012).*

There are many different forms and models of backbone organizations. For 5X2, Sheatufim, a nonprofit that serves as a leading intermediary in the Israeli nonprofit sector, took on this role. Parallel to 5X2, Sheatufim managed other collaborative efforts in other content areas. In 100Kin10, the backbone role was first performed by the Carnegie Corporation and later by a newly established independent 100Kin10 (a fiscally-sponsored entity) whose sole role was to manage the large network of 300+ organizations in their efforts to reach the goal. This makes for a distinct difference between the two initiatives.

Inbar: The critical role of the backbone organization was clear to us at Sheatufim from the get-go and resonated well with our previous experience as facilitators of cross-sector round tables at government ministries. We recognized the important role of the convener to design and create the "holding environment" that will create an inclusive culture and allow all voices to be heard, trust to be built, and effective and joint work and decision-making to progress. During the first year of the initiative, we also realized the unique role of a backbone organization in a collective impact initiative as a leader that does not necessarily stand at the head but rather, serves as an enabler of the right conditions being created for other leaders in the field to feel ownership and to represent and push the initiative forward.

Our backbone team indeed pursued all six activities as the CI model suggests. In order to work effectively on all fronts, we created a three-tiered structure for our network:
1. A cross-sector steering committee — responsible for guiding vision and strategy. Our role as the backbone team was to cultivate a culture of collective leadership and not to turn the committee into a traditional hierarchical board.
2. Multi-stakeholder "working groups" — responsible for designing strategy implementation and alignment around specific key issues, such as: how to increase STEM excellence in Israel's periphery, how to expand the circle of excellent STEM teachers, how to address the unique challenges during the middle-school years, and more.
3. A plenary network of all 100 partner organizations which met once or twice a year. The plenary served as the platform to cultivate and enhance collaboration and alignment, generate the public will and mobilize an ongoing momentum in the field over time.

Talia: When 100Kin10 launched, I was a program officer at Carnegie Corporation of New York. In that role, I was committed to finding and financially supporting organizations whose work aligned with our mission. Yet, at the same time, I was nurturing a network where the goal was to invite many and diverse organizations and viewpoints into collaboration to achieve a goal together that none of us could reach on our own. Those goals could easily be seen as in tension, so during the first three years, before 100Kin10 became independent, I was very explicit about wearing two hats — as a Carnegie staff member and as the lead of the nascent 100Kin10 network.

No question, there were some great advantages to leading the initiative from Carnegie. It allowed us flexibility to innovate, and it freed us, in those first years, from needing to fundraise. But by 2013, three years after we launched, 100Kin10 had grown too big to be a side effort, and we needed to know that the network was growing because organizations were aligned with and committed to the goal, and not just because they hoped to get funding. When we spun out at the end of 2013, we could focus like a laser on how to mobilize and support hundreds of organizations to contribute to a shared goal that wasn't directly in their mission statement -- not to do the work ourselves but to create the environment where many others can do that work.

That said, I'll be honest and say that the work of a backbone organization can be somewhat lonely. We are deeply engaged with hundreds of organizations and people, yet we pursue a counter-intuitive approach to change — not doing the work ourselves but creating the conditions for other organizations to do their work better. It's why we so value conversations and partnerships like this one, where we can learn in dialogue — in connection — with other folks trying to do the same kind of work across sectors or across oceans.

Trust and Relationships

At the heart of the CI methodology lies the building of "trust" as one of the key components in getting everyone onboard. This can be challenging. Oftentimes, governments think that change comes purely from policy and budgets; academics believe that research, labs and publications turn the wheel; entrepreneurs value system innovation to create a chain reaction; and, philanthropic foundations and non-profits prize equity strategies and investment to address the root causes. One of the main challenges in collaborative strategies is how to bring all of these perspectives to the table and how to build trust that will allow effective work processes.

Inbar: Building trust and cultivating relationships between the various stakeholders and partners is indeed key to any collaborative effort, and especially to complex and ambitious efforts like a national level CI initiative that mobilizes tens of organizations. The backbone organization has a critical role in building trust among the different stakeholders. Sheatufim's reputation is of an organization whose expertise is the process — building and leading multi-stakeholder partnerships to tackle complex social problems — and since we were not experts in the content of STEM education and were not part of the STEM field, we were perceived as an honest broker, convener, and leader. We told our partners: "You are the experts, and we want to foster your knowledge and bring it to the table."

Our role was to create the "holding environment" in terms of gathering knowledge, expertise, and perspectives from all the different actors in the initiative. We identified the unique competences of the businesses, nonprofits, public agencies, philanthropic bodies, and academics. We added value by bringing all their agendas and interests to the table and leading constructive discussion and joint decision making. This was not an easy task and required great sensitivity and attention to detail. It often lengthened the process, but it conveyed the message that we were serious in our collaborative efforts, and that there was no one simple answer. In this way we gradually built trust.

The use of research and data was another important factor in leading complex discussions and in trust-building. We placed great emphasis on generating a transparent database of updated information from the Ministry of Education and making it accessible to all. Prior to our initiative, each organization looked at different data sets, interpreted them independently and then directed their strategies in different directions. This resulted in a very fragmented system. Through our partnership with the Ministry of Education we stressed the importance of data in our discussions and its availability to all. It was not always easy, but we were able to make progress in this regard.

The more we were able to show the evolving trends in data points, the more the partners were convinced that for the first time we were working together — as a wide network of 100 organizations from the public, private, and nonprofit sectors — towards the same goals, and that the collaborative work contributed significantly to moving the needle.

Talia: Striving towards collaborative action that is aligned and coordinated among many different players is not an easy task. Only when you create enough trust can people be honest about the limits of their organizations, and it's only when organizations can be honest that they— we, because this is true for all of us — can do the transformative work that is required. We say at 100Kin10 that the speed of a network is trust, and we've actually come to believe that the speed of change is trust. We found that trust is a necessary condition for promoting change.

One way we cultivated trust was to be clear that the expertise is in the room — it's not us, the backbone, but the folks in the network themselves, who are the experts. We as the backbone must create the conditions for those experts to capitalize on each other's expertise, on the organic knowledge in the field. Our role, therefore, is to keep inspiring people to show up and build that trust with us and with each other so that they choose to contribute their own time to this goal, which is often connected to but bigger than their organizations' goals, and to share their challenges and vulnerabilities to maximize the chances of finding someone who can help.

We reconnected people to a truth they know but sometimes minimize: that they and their organizations are both necessary and insufficient (on their own) for the change that we all want to see. It's only in a network that we can solve our biggest challenges.

And, like I said, the speed of a network is trust. So, the only way we're going to solve our biggest challenges is to cultivate trust among organizations that might otherwise see each other as competitors.

The Second Album Syndrome

Both initiatives were successful in reaching their initial goals. In 2018, after five years of operation, 5X2 doubled the number of students who matriculated in five-units of mathematics. In 2021, 100Kin10 reached and even exceeded the goal of 100,000 STEM teachers on time. Both initiatives confronted the challenge of addressing success, understanding the need for a new goal to advance the overall vision, and facing the challenge of how to regain momentum and replicate success.

Inbar: After five years of working together we have reached the goal of doubling the number of students who complete the high-level mathematics tracks; and, as we were hoping, this also affected other STEM areas including physics, chemistry and technology. We were successful in changing the dynamic in the field and, the coalition of 100 organizations — with the leadership of the Ministry of Education — achieved the goals we set at the beginning of the journey. At that moment, in 2018, we actually chose to stop and examine whether and how we should continue. Was the mission fully accomplished? Did we create sustainable change? Is there a role for the initiative's network moving forward? We held a strategic discussion with our steering committee. The main conclusion was that there were some systemic challenges that the initiative had the potential to address but had not yet done so. Those challenges included: to ensure the sustainability of the change in trends over time; to address the slowing increase in the number of students completing high level STEM tracks in disadvantaged communities; and, to cultivate STEM excellence at younger ages, particularly in middle school.

The next steps were to look at the data and discuss the next phase and define specific goals for the coming five years. Following lengthy discussions with the steering committee and a wide variety of stakeholders, the new focus was defined as advancing STEM excellence and STEM skills in middle schools. I was no longer the director of the initiative but I know that leading the initiative to its next phase and cultivating renewed momentum was not an easy task. It has now been rebranded and launched as — TOP15 — with the goal of positioning Israel within the top 15 countries in STEM education.

Talia: As we were preparing to close up the 10-year goal, we knew that our work was not finished. Too many kids, especially kids of color, were still in schools without enough STEM teachers and were, as a result, missing out on STEM opportunities. We knew we needed another goal, but what should it be? Without a call from a President, we decided instead to listen to young people, especially young people of color, themselves, and let our next goal come from their stories. So, we launched a massive exercise in storytelling and invited young people from around the country to tell their stories about their encounters with STEM during school.

We knew that, if we could truly listen, the next goal would emerge from that process. From the bottom up and not top-down. Six-hundred young people from around the country shared their stories in the fall of 2021. We heard three main things from them: First, they have not given up and are fired up to do great things in STEM. Second, they are yearning to belong, they want to feel that they have a place in STEM, in particular students from communities of color who are still excluded from STEM opportunities. Third, it was teachers who created that feeling of belonging in STEM and even helped young people who had spent years feeling excluded and like they weren't good enough learn and love, persevere and succeed in STEM.

By 2032, our goal is to prepare and retain 150,000 STEM teachers, especially for schools serving majority Black, Latinx, and Native American students. We'll support our network to prepare teachers who reflect and represent their students and to cultivate workplaces and classrooms of belonging, creating the conditions for all students to thrive in STEM learning. So, this is the framework for the next 10 years, focusing on racial equity and belonging. We believe that if we can do this over the next 10 years, we can reduce the STEM teacher shortage by about a third. And that will give us the ability and confidence to say that we can end the STEM teacher shortage within another decade. ■

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1 In fact, Talia wrote a piece for the Stanford Social Innovation Review, the same journal that first published the Collective Impact piece by Kania and Kramer, titled "Networked Impact," offering a model that drew on but also departed from CI.

Cultivating a Social Movement through Digital Media

Maayan Alexander
Or Shemesh

This chapter was written in 2016 to document the development of the digital arm of the Trump Foundation - "Time for Education." The department was initially created in order to translate the values of the Trump Foundation into activity in the online environment and supporting the Foundation's strategy, while generating wide-ranging involvement of various target audiences. In recent years "Time for Education" has become identified with professional content, packaged in a popular format, and is characterized by positive writing in the education field, encouraging high quality teaching and providing evidence of excellence yielding results. In the next phase the Foundation must consider whether to keep "Time for Education" on the seam between its strategy and the public, or perhaps to shift its center of gravity to one side. In other words—to what extent should the process be tied to its clear agenda of promoting five units of mathematics and science, and to defining a media strategy with measurable goals for this purpose? Or alternately, to use the process to grow a more extensive "social movement" and to develop a sustainable model for it that will not be dependent on the Foundation's funding and content.

The Motivation for Creating the Process

When the Trump Foundation was established, its central question was "How to expand the circle of excellence?", and they concluded that the quality of teaching is the factor with the most impact in the classroom when explaining student achievements. As a result, the Trump Foundation began to focus its strategic efforts on three main channels of activity: recruiting talented people to the teaching profession, cultivating teacher expertise, and creating a model for high quality teaching. All of the above were performed by developing grants, with cooperation from the government, local government, academic institutions, teacher organizations and educational networks.

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Working in cooperation with all of the above entities, the Foundation began taking action to promote the professional development of teachers and to develop programs for training new mathematics and science teachers.

Nevertheless, in a strategic analysis performed by the Foundation, it was understood that there are certain conditions that must be met to ensure the success of the Foundations' training of excellent people to teach mathematics and science. In order for suitable candidates to take interest in the training programs that the Foundation planned to create, the teaching profession in Israel must attain a respectable status. People who are suitable for teaching must feel like education in Israel is moving in a new direction and that they can participate in a process of improving this system. Furthermore, teaching candidates must be convinced that the work that teachers do in the education system yields significant results, and they must feel like people around them and society in general consider teaching to be an honorable choice, and that teachers are valued, important public representatives.

This question was especially pertinent when it came to mathematics and science, since these are subjects that provide an opportunity to pursue an attractive professional career in industry and academia. This was a point of emphasis for the Foundation, due to the growing dearth of teachers in these subjects, caused by the retirement of teachers who had emigrated from the former Soviet Union during the 1990s. A study team, headed by Prof. Miriam Ben-Peretz, submitted its findings in 2009, in which they described the status of the teacher in Israel as the lowest it's been in many decades; already in the 1970s "it became apparent that the teacher's status is in a state of constant erosion, due to the level of education and training of the teachers and due to the low wages.... (today) teaching is unable to compete with the high-tech professions in terms of attractiveness and in terms of economic compensation, which would attract high-quality teaching manpower." (Ben-Peretz, p. 5). In other reports it was found that the teacher's status in Israel, as well as the level of trust of the Israeli public in teachers and their work, is especially low compared to other countries In a focus group conducted by the Trump Foundation to examine the attractiveness of teaching mathematics and science in high schools, "no participant listed teaching as one of the respected professions." (Pass & Lapid, 2013, p. 5) In this focus group it was found that most of the participants (engineers and students who are suitable for teaching mathematics or science) considered teaching as "a profession that they would not recommend, lacking appropriate income or esteem. Nevertheless, this is a profession that on some level has social value and significance." (Pass & Lapid, 2013).

However, in the focus group it was also found that participants considered the status of teachers in Israeli high schools as higher, due to the sense of importance and seriousness of the job and due to the professionalism required of these teachers. Moreover, teaching mathematics, science and technology in high school, is perceived as more prestigious than other teaching jobs. Ultimately, teaching mathematics and science as a second career is perceived as an honorable choice—one that is based on a desire for meaning and social impact, even if this means giving up comfortable conditions and prestige in an existing career: "These are people who proved themselves and were successful, and now they want to contribute....good for them," one of the participants said. A study conducted by Dahaf Institute for the Foundation found that 8.6% of those with relevant academic degrees age 35+ responded "yes, certainly" to the question of whether they would seriously consider a career change to teaching mathematics and science in high school.

In light of these findings the Trump Foundation understood that creating a deep comprehensive change in the public status of the teaching profession in general, is a task beyond the capabilities of a philanthropic foundation. As such, the Foundation began concentrating its efforts on building teacher training programs that would be suitable for the qualified mathematics- and science-educated candidates for whom teaching would be a second career. In order to help those candidates switch careers to teaching, the Foundation wanted to support the process through a dialogue with potential target audiences and with the public. The Foundation sought to create public momentum, which would strengthen the status of mathematics and science teachers in post-primary education; create a sense of the changing direction of science education in Israel; influence people who are qualified to teach these subjects to feel like mathematics and science teaching can create a real change; and for those around them to consider the choice of these subjects a respectable choice, a public mission that people are proud to support.

Prior to its establishment, the Foundation deliberated whether it could target two different audiences simultaneously. On the one hand, the more veteran "Jerusalem" audience of government, academics, local government and third sector organizations, and on the other hand, the young trendy "Tel-Aviv" audience, looking for a way to advance and make an impact. After consultation with Dan Alexander, an expert for strategic messages through design, the Foundation understood that these are two separate messages and that in the first stage the Foundation must present itself as a professional, high quality, serious and official organization, building a deep-seated partnership with the "Jerusalem" audience. Therefore, in the Foundation's first phase of activity, its actions must focus on decision makers and academics. The organization's language—internally and externally—is based on terminology appropriate for this audience, the conversation taking place in appropriate channels.

Only in the second phase, when the Foundation was preparing to establish prestigious new teacher training programs for science and high-tech professionals undergoing a career change, the question arose again. The question was whether and how to help create a dynamic so that the choice of teaching will be considered a valued and courageous choice, and mathematics and science teachers would be considered pioneers, participating in an important public mission.

Creating a Separate Brand

With these objectives in mind, a half-year learning process began. Two consultants were hired, Michael Shorp and Ben Lang, who despite their young age already had extensive experience consulting for companies and organizations in Israel and overseas. The two told the Foundation unequivocally: "If you try to reach the public using your current brand, when you say the word 'Foundation' you will lose 90% of your audience." They explained that today people are not attentive to institutions and prefer to speak, participate, and act independently, cooperating with like-minded people.

In light of this complex challenge, four organizations similar to the Trump Foundation, which also seek to generate a social movement, were examined. These are established organizations, whose main activity is focused on traditional processes of grants and programs, but simultaneously targeted the greater public, garnering support for their strategy:

- Skoll Foundation - The Social Edge: The Skoll Foundation is a philanthropic organization that focuses on encouraging social entrepreneurship. In 2003 it established The Social Edge, in addition to its regular activity. It is an online social community that operated until 2013. The community created a conversation between social entrepreneurs from all over the word and promoted entrepreneurs and initiatives through support and colleague guidance.

- 92nd Street Y - Giving Tuesday: 92Y is a Jewish community center, which has been operating for over 140 years in the heart of New York. One of the values that 92Y would like to promote is giving to others, to the community and to the world. In order to promote this value, in 2012 92Y worked with the UN to create #GivingTuesday—a movement to create a "day of giving". The movement began in the United States and today it has succeeded in encouraging tens of millions of people from all over the world to contribute.

- Avi Chai Foundation—Tzav Pius: The Avi Chai Foundation is a philanthropic foundation that works to encourage connections between different sectors, while encouraging a connection to Jewish tradition. As part of its extensive activity, in 1996 the Foundation established "Tzav Pius," which over the years became an independent non-profit, operating with the Foundation's support. Tzav Pius was established as a movement to heal the rifts between religious and secular Jews in Israel, by producing drama, documentary and reality series on public and commercial television.

- Or Yarok—Ran Naor Institute: Or Yarok is a social organization to fight against traffic accidents in Israel. The non-profit created a revolution in public awareness in Israel pertaining to traffic accidents and driving, and it created a social movement in which about a million people have participated. Only later it went on to establish a traditional arm to promote research—the Ran Naor Institute—established in 2004 to promote research on the topic of road safety and to distribute the study findings to the government and academia.

During the learning process a number of important insights were identified:

1. All of the organizations that were studied created two brands. In three of the four organizations, the parent organization maintained an official business-like position and professional language, as they did throughout their years of operation. New initiatives, operated under a new, young, and public brand, targeting the audience through emotion, creating networked collaborations, (Kanter & Fine) and using a more down-to-earth, unprofessional language. The young brand sought to have an impact on the greater public, whereas the official brand sought to create impact on policy and practice. In the case of Or Yarok the reverse was true: after establishing the nonprofit, branded from the onset as young, and aimed at the wider public, the Ran Or Institute was established to target a professional audience in a more official and reserved manner.

In all of the organizations, as a result of the differential branding of the two entities, the general public does not identify the popular process with the original organization. Therefore, instead of limiting public acceptance by creating the impression that a new philanthropic organization was "dropping" a new idea, these organization cultivated a concept or value, drawing people in, allowing them to nurture it themselves, and creating a movement from the ground up. Furthermore, separate branding allowed organizations to speak to people's hearts and emotions, as opposed to the logical discourse of foundations:

2. In order to become a catalyst for a social process, the four organizations concentrated on the values and the process, putting the organization's influence and prestige on the back burner, allowing people on the ground to adopt the values and ideas as their own and allowing these to grow from within. The price to be paid is not always simple—as the greater public accepts the values and makes them their own, two difficulties arise: The desire for recognition and attribution of the achievements and the success to the parent organization's activities, and also the need to direct the development of the social movement towards the objectives of the parent organization.

For example Henry Timms, Executive Director of 92Y, describes a situation that involves this complexity: "We had lined up the mayor of New York City Michael Bloomberg to be the first mayor in the nation to declare a giving Tuesday. This would be good for 92nd street Y and helpful for us politically; we had the whole press release ready; 3 o'clock the day before the press release hits announcing Mayor Bloomberg as the first mayor in the nation to declare it Giving Tuesday, this arises via social media (a picture of the Mayor of Batesville, Arkansas, announcing Giving Tuesday in this city). So Mayor Bloomberg (was) not that enthusiastic about the press release being the second mayor to declare a giving Tuesday...(however) this is a sign that things are happening; this is a sign that things are going in the right direction...if it moves without you it's a movement".(CEP, 2015, from minute 32).

3. In order to reach the audience, it is important to overcome, at least in the first stage, the temptation to try to bring them to you; rather you must come to them that is to the places where they are located. At first the concept and the values have to be established among the public, and only then, if applicable and only if a real need arises—you can turn to action in new places and bring the audience to them. So for example, the non-profit Tzav Pius, worked with the "Reshet" broadcasting corporation to produce a reality show based on the well-known format of challenge competitions, in which each couple participating included one secular person and one religious person. The show thus demonstrated and encouraged, via the back door, but practically, a connection between different sectors of society.

In a survey conducted for the Trump Foundation, they found two primary avenues to identify academics who were considering a career change to teaching mathematics and science: Traditional media, which includes television news, digital, print and radio journalism, watching programs that present personal stories, mainly on television; and online social networks and social media websites, primarily Facebook (Pass & Lapid, 2014). Regarding traditional media, Roi Tzikorel, the Foundation's creative media director, recounted that: "We understood that they are there, but every time we tried to promote positive articles about teachers and teaching on traditional news and media sites, we received a negative response from the editors and journalists. Putting it mildly, they didn't take the idea of publishing positive articles on education seriously and they rejected us every time immediately. There was no malicious intention. This was simply not their agenda."

4. The organizations that were studied communicated through their new branch, using discourse different than they their standard lingo. They spoke to the public at eye level, in a less formal manner, and allowed the public to respond; they created forums and a community atmosphere; they often cooperated with others and encouraged people to be actively involved in the idea. As such, a social movement began to take form and a snowball effect was initiated—people joined, forums were created, grassroots initiatives were considered, local leadership was created and the level of activity increased, with a sense of ownership of the concept by the community in general and each person in particular.

5. In order to encourage participation and involvement, the organizations that were studied allowed for a space and a respectful dialogue for all, while spreading the idea and the values. So for example, at The Social Edge, each entrepreneur and forum member could respond and post articles, with complete freedom and credit for writing the article, and the articles received a high level of exposure and were distributed in a monthly newsletter. The consultant Michael Shorp suggested that "each voice has to be heard— to allow for people to respond and reply to each message, to open the space to a wide variety of people who can 'run' on their own; this requires an extraordinary effort so that each person's voice will be heard."

6. The organizations that were studied, similarly to the Trump Foundation, had a targeted objective and they directly invested their time and resources in the problem or the need that they sought to solve. Conversely, the young processes—targeting the greater public, their objective to stimulate their growth—chose to expand the values and objectives that were the basis of the process. So for example, the Skoll Foundation used The Social Edge to allow each social entrepreneur to raise thoughts and ideas and to encourage action regarding each social problem, instead of focusing the conversation on ideas that pertain only to especially urgent global problems. Similarly, Giving Tuesday events do not focus on Jewish values, which only resonate with Jewish audiences, but focus on the value of giving which resonates with people anywhere. In other words, the processes were built on values that are expected to have a wide-ranging consensus—instead of a narrow need or value—the young process is trying to expand the values in order to recruit the greater public to act.

Therefore, the Trump Foundation understood that in the process that it establishes, targeting the greater public, they cannot just talk about math and science teachers or a career change to teaching these professions, but rather must address broader concepts or values. The Foundation chose to discuss wider values of quality teaching and encouraging excellence. These are two values that affect the greater public and have a potential to encourage popular involvement. However, at the same time, the Foundation decided that the process will include a special focus on math and science teaching, using it as an example and as a pioneering concept for the larger process.

In light of this, and as a result of the learning process, it was decided to move forward with a process that would create a community under a new brand, which would deal with the importance and impact of teachers in post-primary education, reinforcing the status of the teacher, excellence and quality teaching—with an emphasis on mathematics and science. The target audience selected consisted of potential candidates retraining as high school teachers in mathematics and science. This was intended to stimulate among this audience a sense of new direction in the Israeli education system, convincing them that the teacher's job can yield fruit, and backing this up with examples from the field.

In order to professionally validate the process, it was understood that current teachers have to be deeply involved, and that they would be placed on a pedestal as role models, taking an active part in creating the community.

In a longitudinal study that was conducted by Cambridge University, researchers found that only when teachers consider themselves top-tier professionals, jointly developing their own professionalism, can they present this perspective to the public through the media. It is only then that the teacher's status improves (Hargreaves et al., 2007). Based on this perspective, they decided to encourage qualified teachers active in the system, to present their work and their results—although when the process first began many teachers preferred not to share their work publicly.

Since these target audiences were on Facebook, a platform that encourages forums and helps them grow into social movements, it was decided to open a page on the social network, which would provide a community basis and would open up conversation, responses and posting of stories from the education field. In order to determine a new name for the new brand they consulted with education professionals on Facebook who were asked to suggest names and to rank them. The name that was chosen by a sweeping majority was "Time for Education." A brand book was built for the graphic design that sought to relay a sense of youth and innovation, in an attempt to reach a young high-quality audience (35-45 years old) and to give them a sense of "cool" and "high-tech" quality, also expressing a sense of "vintage" and pioneering, fostering a feeling of courageous work on behalf of the country, utilizing the pioneering narrative, which is an ideal for patriotic action in Israel.

The design that was chosen is a clean minimalist design, filled with geometric shapes and design patterns, alluding to mathematics and exact sciences. In the brand book 12 colors were selected, which are prominent on Facebook's color palette. Furthermore, the drawings that accompany the brand were intended to put the teacher at the center, with an emphasis on his/her role as a professional. It was therefore decided that the teachers would wear an "academic hat," a sign of professionalism and higher education.

- The cream of the crop used to go into agriculture, then they went to the military and then to high-tech. ***Today the cream of the crop goes into education***

First Phase – Public to the Tribe

On April 9, 2013 the "Time for Education" Facebook page was launched. During the first few months most of the posts were pictures, quotes and inspirational stories, relating to teaching and excellence, as well as stories of those who made a career change to teaching from technological and science professions, along with a call for new members to tell their stories, to take a stand and to respond. From an analysis of Facebook at that time it was found that pictures, quotes and inspirational stories receive the most exposure, encouraging readers to express support and to join the page in order to be exposed to additional content. The initial objective was to create as large a group as possible of followers from the defined target audiences.

One of the first posts on the page, was accompanied by a picture, and said: "Time for Education is a page that is intended for anybody for whom education is dear to their heart, anyone who believes that a change can be made in education and anyone who believes that quality education is what makes all the difference. The purpose of the page is not only to provide interesting and inspiring content, but to be the place that puts your stories at the forefront.... the first members will be able to influence the nature of the page and the community that will be built around it. In the coming days you will be invited to send us content, to post ideas and to give your opinion on various topics. We promise that all responses will be recorded and considered in a serious and matter-of-fact manner. You are invited to click LIKE and to invite more friends. Together we will put an emphasis on education and educators."

The response to the page and its messages was extraordinary. "The growth in new members of the community on the Facebook page was extremely fast, especially relative to the community topic, which is not usually a hot topic of conversation," Michal Shorp recounted. Hundreds of people joined every week and increased the page's distribution. Nevertheless, at this stage the attempt to encourage teachers to write about their work was not successful. "Teachers did not want to write. They were embarrassed, they were concerned, they didn't understand why this was necessary and the bottom line is they didn't do it. I would contact each teacher personally and ask them to write...", Roi Tzikorel told us. It turned out that teachers have difficulty writing about themselves and their work in public (Charbonneau, 2015). Time for Education did not give up, and despite the difficulties every week they published an inspiring story of a teacher. Sometimes the story was told by that teacher and sometimes by another person—a teacher or person with a significant public presence, such as then President Shimon Peres and Nobel Prize and Israel Prize laureate, Prof. Aaron Ciechanover

After only seven months of activity, the Time for Education Facebook page had 15,000 members, and it became—to the best of our knowledge—the largest and most active online educational forum in Israel, with the average distribution of the content posted on the page reaching about 100,000 people every week. Members of the online community were mostly educators and those interested in education, age 35-50. At the same time, a targeted campaign was built on the page, directed towards those who are interested in education and considering a career change to teaching. The forum members became increasingly active, responded to content that was posted and sent the page administrators content to publish.

Facebook noticed the fast extraordinary growth of the activity and contacted the Foundation with a proposal to provide mentoring to the page administrators. From this point on Facebook staff accompanied activity, helped with problems and allowed access to advanced tools that were not yet available to all, for experimentation, learning and increasing activity.

In content and distribution analyses that were conducted in October 2013, it was found that the most successful content on the page were posts in which a person expressed his appreciation for a teacher who taught him in the past. When these stories were posted to the page, they received dozens and sometimes hundreds of shares, and were able to reach tens of thousands of people who read them. The responses to these stores were extremely supportive and emphasized the importance of high-quality teachers: "As a teacher I can only strive to be like her!"; "a good teacher—a teacher for life"; "he was my teacher and I agree with every word...thanks to him I love math!"; "an inspirational person".

Scond Phase - From the Internet to the Real World

As the audience of members and interested people grew, the Foundation decided to try "taking the community from the internet into the real world." At first, cooperation was created with conventions and events that deal with education, where members of "Time for Education" were invited. Later the Foundation decided to hold a TEDx convention at Weizmann Institute, where excellent teachers and scientists were asked to give lectures, and the online community members were invited. In light of the success, a series of events was launched, titled "Teachers on the Bar," with the collaboration of WIZE, which would expose the greater public to the work of the teachers in an interesting, relaxed, trendy and modern atmosphere, over a glass of beer. In the first meeting at a trendy pub in Tel Aviv, the teacher who won the Trump Master Teacher Award in 2013 gave a lecture.

In November 2013, an additional important step was taken in this direction with the establishment of "Teachers Day" (http://www.teachersday.org.il/). Teachers Day is an ambitious attempt to establish through the Time for Education community, a kind of new holiday in Israel, similar to Giving Tuesday of 92Y. On Teachers Day, which has been celebrated annually ever since, community members are encouraged to say thank you to their past and present teachers. The initiative quickly spread to the general public and today it has become a day on which parents thank their children's teachers, inspiring stories of teachers are distributed, fostering a general sense of appreciation for teachers. Schools adopted the initiative as a date on which they express appreciation for their teachers, students and parents organized celebrations and events in the teachers' honor, past and present students wrote thank you letters to their teachers, and principals issued appreciation awards to excelling teachers. The media covered the events and even the Knesset conducted a special panel in honor of this day, in which former teachers of the Knesset members participated.

Third Phase - Professional Infrastructure

Along with the significant success of Time for Education, new challenges and needs arose. During the course of the activity of the Facebook page, as mentioned, we discovered how challenging it is to encourage teachers to write about their work in a professional, respectful and inspiring manner, while overcoming humility and fears.

Furthermore, there was a concern that a page targeting the general public would become shallow. In a meeting of the Trump Foundation's Advisory Council in 2014, Zeev Krakover said that "there is a dissonance when you try to relay complex messages through the media. Teachers are offended by superficial messages, such as 'transitioning to meaningful learning.' Your word should be 'to allow,' not 'to instill.'" The question was how to create complex messages packaged in an easy-to-read manner, in a way that honors the teaching profession, allowing teachers to take ownership of them and to create professional content on their own, and as such to build the community from within.

As a solution, the Foundation decided to establish an online magazine, which would allow for respectable professional writing, in-depth discussions and more complex messages, maintaining the level of information and increasing its accessibility, and also reach audiences not active on Facebook, giving them the ability to log on to the website or receive the content via an email newsletter. As such the concept of "civilian journalist" was formulated, meaning that "news can reach the public without the involvement or assistance of the traditional media. Moreover, the traditional media may find itself covering a story after it was published on a new platform, based on user content" (Shirky, 2008, pp. 64-65). The basis for this concept is the intention to allow any user to go from being a passive consumer of knowledge to a creator-partner in the community.

The selected model was influenced by technological websites that to that point—and still today—were very popular. These websites (Such as TechCrunch[1] , Mashable[2] and Geek Time[3]) are content-rich websites, their content created by many writers who are, for the most part, not journalists, but professionals from the technology field. These websites were and still are considered a credible authentic professional authority among the professional community and the wider public, generating a significant amount of chatter and traffic. The websites integrate intensive activity on social media, along with a magazine on a designated website. The purpose was to create a conversation that grows from the educational field and turns "Time for Education" into an honorable, in-depth and popular platform, which provides positive professional content pertaining to teaching and excellence.

In order to save time and money and to avoid investing excessive resources in building a new platform, it was decided that the magazine would be operated on an existing platform. The platform that was selected is provided by Syndu, which offers services to build social websites. The "Time for Education" was created on this platform, to be operated as an online magazine, relying on content created by the community of educators. The website has a home page with articles that are published at the editors' discretion. Any person can become a writer on the website with ease, and can post articles on the website freely, and each writer on the website has his/her own profile page, with all the articles that he/she posted, allowing the readers to see the writer's areas of interest and expertise. Readers can follow any writer that interests them, and will receive an email notification every time the writer posts an article. When a writer publishes an article a message is sent to the editors, who can then begin with the editing process and decide whether to post the article on the home page and send it in the newsletter, which is sent once a week to the magazine subscribers.

In August 2014 the online magazine, Time for Education, went live at edunow.org.il as an independent website. The articles published in the magazine quickly became the center of activity for Time for Education,

most of the activity on the Facebook page being related to the articles in the magazine. Every week five articles are published in the magazine; the link to each article is posted on the Facebook page, as well as in Time for Education accounts on other social media (LinkedIn, Pinterest, Twitter). Furthermore, every week a newsletter is sent to the mailing list by email, containing the five articles that were published that week.

At first an external company was hired to create content for the magazine, and they edited the texts that were sent for publication. The magazine content included inspirational stories about teachers, professional information about education, interviews with people who made a career change, educational events, information about education around the world, educational videos from the internet, as well as content that promotes excellence. The content of the magazine quickly became very popular—after four months of activity the website achieved an exposure of over 250,000 people. However, the large majority (over 80%) of the content was posted by the content company staff. Teachers who chose to write in the magazine usually wrote only once and never published another article. Therefore, a writing seminar for teachers was established, and since then writers from the education field slowly began to join.

The activity during the first half year of the online magazine exceeded the preliminary expectations in terms of the scope of distribution and discourse. About one thousand subscribers registered for the newsletter and the number of members of the Facebook page increased from 17,000 members to 24,000. In November 2014 the website's distribution reached about 200,000 people, and articles on the topic of a career change were read by tens of thousands. However, from an examination of the magazine's function, the responses of the readers, tracking the types of articles that are read and receiving feedback from professionals and leading teachers, two main conclusions were reached:

1. Two main topics were raised in the magazine in a disorderly fashion: High-quality teaching, and excellence in mathematics and science teaching. Dalit Shtauber, member of the Foundation's Advisory Council, said in the Council meetings in 2014: "Your message to teachers must be 'professionalism,' and the message to students: 'Success.' These are two different messages for different audiences. To mix them does not honor the professional teacher." In light of this fact, from this point on the Foundation's main message to the general public (parents and students) on traditional media (television, print and radio) focused on "five units" and the worthwhile effort to invest in this educational track. Time for Education, which targets the general public who are interested in education, began focusing especially on "high-quality teaching." The Foundation's programs continued to speak to the professional field with both messages combined.

2. Along with the great popularity of the magazine and the desire to reach an even greater audience, an insight also arose that there is a need to create a balance between the popularity and the professionalism of the magazine. In other words, to add professional content that deals with high-quality teaching and to move the discussion away from inspirational stories to a discussion of high-quality professional teaching. In other words, along with the importance in arousing an emotional response from the audience, and an emphasis on a sense of change and meaning, the need arose to also create a rational understanding that teaching is a serious profession, which requires professional experience and established theory. The teacher's image as a professional became a central focus of the magazine. The assumption was that exposing the teacher's professionalism is extremely important in order for the teachers themselves to improve the profession's reputation in their own esteem and in the esteem of the general public.

For this purpose, it was decided to bring the content operation of Time for Education back into the Foundation and to recruit a professional editor. The editor became familiar with the Foundation's work in the area of information dissemination, which at the time was just getting off the ground. Up to this point, the Foundation had invested little in translation of articles and books that deal with high-quality teaching into Hebrew and making them available to the professional audience through the Foundation's website. This content received relatively sparse interest; each article being read about 200 times. Therefore, in the first stage the Foundation decided to try to connect the professional-academic content to the popular platform. As an experiment, an article by Prof. John Hattie (2003) was selected. The main ideas of the article were turned into infographics (https://www.trump.org.il/wp-content/uploads/2016/05/ExpertTeachersFinalInfo.pdf) and for select portions of the infographics a magazine article was written in Hebrew, relaying the central ideas in Hattie's article in short and in simple language.

The article "Expertise is not (just) a matter of experience," based on Hattie's article and the infographics published in the magazine, were relatively successful. It was read over 10,000 times in the magazine and tens of thousands of Facebook users saw it. Furthermore, within the article in Time For Education, links were inserted to the full translated article and to the full infographics. There were about 700 clicks on the magazine article, and over 1,600 clicks on the infographics. The article received attention and was distributed well beyond the magazine and Facebook readers - it was quoted in various places, and extensive portions of it were sent for distribution by readers, with some sections finding their way to other articles and magazines all over the web. The infographic drawings were also distributed in different places, so that the knowledge in the article apparently reached scores of other people.

In light of the experiment's success, it was clear that the magazine can constitute an opportunity to distribute knowledge that the Foundation considers important, regarding high-quality teaching, to an audience of tens of thousands of teachers and educators, and as such to also impact the educational conversation in Israel and simultaneously to create a sense of innovation and professionalism in the field. The strong response and the recognition of the need to emphasize the professionalism and the professional experience of teaching, led to a decision that it is important to invest in bringing more professional content to the magazine, and simultaneously to encourage professionals who read the magazine to post articles that deal with professional content on their own.

The "Quality Teaching Section" of the magazine was established in order to take advantage of this opportunity. Once every two weeks the magazine editor selects, with assistance from the Trump Foundation, a professional article from the forefront of global education research that is related to quality teaching. The article is summarized, focusing on the most important principles that are suitable for educators in the field, and a new short (up to 1,200 word) article is constructed based on these principles, accompanied by drawings or infographics and presented in a popular fashion.

The articles utilize a variety of types of presentations in order to avoid creating print that will bore the readers. Popular ways to present the articles include:

- Suggesting effective teaching methods and tools, which are based on the article's main principles—for example "4 tools for quickly and effectively reviewing tests and papers."[4]

- Constructing a touching story surrounding the important principles of the original article—for example "A thought leads to reality: The step you can take to help challenged students."[5]

- An article suggesting tips that are based on the main principles of the article - "What works in education? 8 things that every school can already do on September 1."[6]

- An article poses a thought-provoking question or a provocative question based on the principles of the original article—"Do teachers have to start teaching according to protocols?"[7]

Over time, it was understood that infographics and drawings that accompany the articles in the Quality Teaching Section, that are created specifically for each article, are extremely important, since they have an impact on the accessibility and popularity of the article: they make the articles pleasant and inviting, and on average they double the number of clicks[8] Furthermore, when the infographics can stand on their own and provide the readers knowledge without reading the article—they tend to go viral on their own. The infographics are published in various Facebook groups, printed and hung up in teachers' rooms and distributed in social networks that are more suitable for graphics and pictures such as Pinterest.[9] In this manner the infographics transmit the knowledge well beyond the article that is published in the magazine and further advertises Time for Education.

Following publication of the articles in the Quality Teaching Section, there are often responses and questions, and over time they raised insights among the magazine staff regarding the needs of the teachers in the field. As such, the magazine editor also began searching for articles that would meet the teachers' needs, as these were expressed in the responses to articles in the Section. For example, teachers often said that they would like to use clinical teaching practices, but they do not know how or do not believe that this can be done in formal education in Israel, due to the limited time that the teachers have, the large amount of material that has to be taught for the matriculation exams and the large number of students in each class. As a result, articles based on academic research and practices of master teachers were published in the Section, and they addressed methods of implementation for clinical teaching, under conditions of limited time, large amounts of material and many students in the class.

After about a year of the magazine's operation, a significant collection of articles based on professional literature had accumulated. Therefore, in addition to articles of the type described above, the Section began publishing articles not based on just one professional article, but on a number of articles that were already made available, integrating the information. An example of such an article is the article "Everything about clinical teaching."[10]

Furthermore, during the same period, teachers also began writing articles in the magazine dealing with quality teaching practices that refer to articles in the Section or based on other professional articles, such as the article "A five-minute revolution."[11] Since they are relevant and deal with quality and clinical teaching, these articles also became part of the Quality Teaching Section. This trend increased over time. Today about half of the articles that are published in the Quality Teaching Section are actually articles written by professionals in the field—teachers, educational leaders and teachers-and they refer to content that came up in other articles in the Section or receive the content from these articles as existing knowledge and a basis for discussion.

About a year and a half after the Section was established, each article in the Section had been read an average of 5,210 times. The average number of articles in the Section is 26 times the number of average readers for a professional article that was translated to Hebrew and is now in the Foundation's library. Furthermore, from the testimonies of the community of readers and writers of Time for Education, we can see that the professional terminology used in the Section has begun to seep in and change the conversation in the field among the target audience of teachers and principals. For example, Alina Colton, one of the active teachers in the magazine who is currently a member of the magazine staff, recounted that "although not all of the teachers in the teachers' rooms are familiar with Time for Education, it is able to create a direct and indirect conversation in the education world. I think it is succeeding in a way to impact key players by reaching a critical mass, which causes common terms to be instilled and results in concepts and tools flowing into the teaching arena, in a way that reverberates throughout the education system."[12]

Moreover, it was quickly discovered that decision makers, academics in the education field and teacher-teachers are also using the articles. The articles in the section began to show up in the syllabuses of education courses, in teacher seminars, and in the meeting of teacher study forums. An example of this is the Physics Teachers' Forums in Israel, where throughout the 2016-2017 school year they planned to study a different article from the Section in each meeting. "When my article was published in the Quality Teaching Section", recalled Tammy Eisenmann, the Foundation's program director, "I received a surprising number of responses and this indicated widespread distribution. I was most surprised by the responses from my former colleagues - university researchers, who I did not imagine were reading Time for Education. One of the researchers told me that the accessibility of the content makes her read more. Also teacher-trainers at colleges told me, more than once, that they are using the articles. Among other things, a National Mathematics instructor told me that they are using one of the articles in order to make the most of the learning process in a national instructors' meeting."

As such, the magazine set a goal for the following year, to find a structured way to reach more teachers with content from the Quality Teaching Section, so that they could distribute the articles to teaching students, to new teachers and to experienced teachers at colleges and universities, at seminars, teacher learning forums and school meetings.

Teacher Integration

One of the complex challenges of the process was to encourage teachers to write. Teachers had difficulty writing about their work in public. They were fearful, embarrassed and they did not understand why it was important. It seems that this trend is beginning to change, and not just because of Time for Education. Over the last few years teachers' Facebook groups and blogs, dealing with the topic of education and teaching, have begun to crop up. Teachers are using social networks more to discuss their work and in order to learn how to develop professionally. It can be assumed that Time for Education had a positive impact on this change, because it is apparent that those who founded teacher Facebook groups, are mostly members of

Time for Education and also write for the magazine.[13]

However, this was not the case at first. In the beginning, in order to encourage educators to write in the magazine, the Time for Education team contacted teachers, education researchers, and education initiative leaders. The frequent inquiries were accompanied by phone conversations or meetings in order to get to know them, to coordinate with them and to generate a commitment towards writing. In December 2014 a writing workshop for teachers took place. Only three teachers participated, and only one of them ultimately decided to write for the magazine. In addition, there was a targeted effort to encourage female teachers to write. In Israel a significant majority of the teachers are female,[14] and accordingly over 70% of the members of the Time for Education Facebook page and the readers of the magazine articles are women. Nevertheless, in the magazine itself, as of January 2016 only 26% of the writers were women. The magazine staff is working to encourage women in general and female teachers in particular to write. Among other things an article was published "Not in our school? Who said that writing about education is only a man thing?" calling for women to write in the magazine. The drawings in the magazine and on Facebook present females and teachers in higher percentages.

In 2016 we decided to establish an editorial staff for the magazine, comprised of teachers and intended to serve as a group that would advise and suggest how to proceed with magazine articles, as well as future steps of the process. A male teacher and two female teachers from mathematics and science were selected for the editorial staff, and they receive compensation for their contribution. These efforts began to bear fruit, and as of August 2016 there are 158 magazine writers—36% of them women.

Connecting the Brands

Over the last year the brand values of the Trump Foundation and Time for Education have begun to merge. The Foundation staff noted that they learned that when working together you can multiply your impact. As such, when content about the Trump Foundation's activity is published on traditional media, its distribution in Time for Education not only exposes it to tens of thousands of additional people, it also improves the value of the content in the eyes of traditional media. They notice that there are many readers and viewers of the content that they posted and it causes them to give preference to this kind of content in the future.

Another example is the editors of the Ynet news site contacting Time for Education with a request to create a series of articles based on the magazine content. The series garnered great interest, such as for example the article "Not the teachers' salaries: What makes Finland a world education leader?", that was published on Ynet and is based on the article "20 things (some surprising) that I learned in a tour of a typical school in Finland", from the Time for Education magazine, which received over 1,700 shares on Facebook.

At the same time, Time for Education magazine publishes articles about grants and partners of the Trump Foundation. These articles provide a platform and greater distribution, and they support the recruitment process for additional content producers. Examples of such articles are "The relationship between elite units, running and math," "The quiet professionals: Why are teachers humble and how does it affect the status of the teacher?" and "From the court to the Arab sector; in elementary schools female teachers constitute 86.1% of the teachers in the Jewish sector and 78.3% of the teachers in the Arab sector."

The process of bringing Time for Education closer to the Trump Foundation has recently become more visible. On the Time for Education magazine website it says on the About page that the magazine is operating with support and assistance from the Trump Foundation, and a link to the Foundation website was added. The graphic expression of the Trump Foundation was updated and it is now more similar to the Time for Education theme.

Print Edition

At the beginning of September 2015 and 2016, before the start of the school year, a special print edition of the Time for Education magazine was sent out, summarizing the most prominent and impactful articles for that year. The print edition was distributed for free to the magazine's writers, to people who collaborated with the process, to senior members of the Ministry of Education, educational organizations, education researchers, and partners of the Foundation. During the two years of the print edition hundreds of readers asked to receive a copy of the edition and schools asked to buy and hand out printed copies as a New Year gift to teachers. Due to the limited quantity of copies, about 50 readers are selected in an annual lottery and they are sent the printed copies.

Summary, Interim Conclusions and Recommendations

From the documentation and analysis of the activity we can draw a number of lessons and insights:

1. Despite the sense of meaning that the Time for Education activity gives to the participants, the writers and the readers still don't feel like they are taking part in a community. There is a gap between the story that the Foundation team tells and the sense that a real community is being built; and statements from the writers and readers indicate that most of their activity is between them and the editor and not with other participants. The magazine editor "controls the switch," and as such the readers and writers have a very limited ability to freely discuss things. Furthermore, joint activity between them, online or offline, rarely takes place. (Sadan, 2009; Lev-On, 2013). If the purpose of the Time for Education process is to create a social movement, it is extremely important to develop a community that takes initiative, with elements of relationships and communication.

2. Although the Foundation defined specific target audiences for Time for Education, first and foremost potential mathematics and science teaching candidates, in practice it doesn't appear that the activity targets them in particular or people who are involved or interested in teaching math and science. Participants in the activity note that it is not always clear for whom the content of Time for Education is intended, and there is no consistency when it comes to the level of discourse.

3. Education experts criticized the articles, claiming that they were often too superficial, only offered a small taste of the information, and that they do not allow delving deeper and generating a discussion about the content. Sometimes articles are presented as innovations in the field, when in practice they are referring to well-known topics. On the other hand, among those interested in education, sometimes it appears that the more surface-level or practical content is read by more readers.

4. In the current phase there is ambiguity between the Trump Foundation that is promoting quality teaching of mathematics and sciences and is primarily identified with promoting excellence on the five unit level, and Time for Education that targets the greater audience of people interested in education and focuses on improving the standing of the teacher as a respected professional. This ambiguity has many advantages, but it also has disadvantages and the Foundation must consider whether it would like to remove this ambiguity and to choose one of the two directions:

a. Time for Education as an independent social movement. A social movement is only a movement when it moves on its own. However, many movements have required a push and institutional support in order to get on the road, and then at a certain point they found their own path and spread their wings. This moment has yet to come because the Trump Foundation is still behind Time for Education, paying for editing and graphics and initiating the content, and a community has yet to come together to take the reins. The Foundation must consider whether and how to encourage and to allow for the community to grow and for the movement to take off. If the Foundation desires this to happen they must take into account that a movement develops around common values and not around a brand or institution. It is therefore recommended for the Foundation, through a deep partnership with the community members, to clarify what are the values around which it is desirable and possible to form a movement. At this stage it will also be necessary to develop a sustainable operative model that will allow Time for Education to exist even without funding from the Foundation.

b. A second option, which is starting to materialize, is to bring the Foundation and Time for Education closer together. The more the Foundation is present in the activity of Time for Education the easier it will be to ensure that its messages, values and target audiences are given preference and sometimes exclusivity. On the other hand, in such a situation a permanent dependency will be created, funded by the Foundation, and Time for Education's sustainability will be completely dependent on the Foundation's existence. Moreover, if this occurs, the Foundation will have difficulty transmitting its content that deals with a relatively narrow field, to the larger audience of Time for Education.

Regardless of which path the Foundation chooses, we recommend formulating a "strategic plan" for Time for Education, which includes targets and performance measures, to be used as an internal compass for the Foundation and the community members. Such a document would create transparency and understanding among readers and writers regarding the core values, content and priorities. ■

1 techcrunch.com

2 mashable.com

3 geektime.com

4 http://www.edunow.org.il/edunow-media-story-202383

5 http://www.edunow.org.il/edunow-media-story-224159

6 http://www.edunow.org.il/edunow-media-story-100624

7 http://www.edunow.org.il/edunow-media-story-73212

8 In a review of 37 articles in the Quality Teaching Section, it was found that the average number of readers for the articles without drawings was 3394, whereas the average of number of readers of articles with drawings or infographics was 6376.

9 www.pinterest.com - a social network that is similar to a message board that allows users to create picture collections and to link them to their source websites.

10 www.edunow.org.il/edunow-media-story-80842

11 www.edunow.org.il/edunow-media-story-224288

12 Colton also described a number of examples of this: In a conversation that Colton's sister had with her daughter's teacher, the teacher quoted a sentence from an article that Colton wrote. The teacher did not know that the article was written by the sister of the mother that she was talking to. She heard the sentence from a colleague and she liked it. So she started using it to encourage parents in conversations with them. Another example is that in a round table of the Ministry of Education, Colton heard the Director General of the Ministry raising ideas that came from Time for Education. And finally, Colton recounted that the middle school where she teaches, quotes Time for Education content in its weekly letters and discusses them with the teachers.

13 For example, Sarit Miller who founded the "Teachers Make an Effort" in June 2015 and Omri Di-Nor founded the group "Educational Innovation in the Periphery".

14 As of 5776 (2015/2016) the percentage of female teachers in Jewish high schools was 73.6% and in the Arab sector 55.8%; in middle schools women constitute 80.2% of the teachers in Jewish schools and 69% in the Arab sector.

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It's Not a Movement Until it Moves

Engaging the Public Through the Media

Lital Shochat Chertow

Traditional philanthropy focuses its resources, efforts and expertise on creating programs and capacities. As a result, it is not rare for foundations to experience disappointment when "we built it, but they did not come." When the Trump Foundation was established, it adopted the catalytic approach, which believes that systemic and sustainable change will not occur only by influencing the supply side. The Foundation prepared a strategy that engages an eco-system of stakeholders, ranging from policy makers, through the professional community, up to its target audiences, and the general public.

The Foundation's strategy presented a clear and measurable roadmap that was articulated in continuous consultation with teachers, scholars and policy makers. It incorporated a variety of tools complementing a hands-on grant-making portfolio, including creating a marketplace for sharing knowledge, convening partners for joint learning and collaboration, and engaging the target audiences and the general public through the media. The following chapter will present and analyze the Trump Foundation's media strategy, its successes as well as the insights and lessons learned, gained by taking this pioneering road.

Step 1: Alarming the Public

Israel is a country of multiple emergencies and concerns. Negative trajectories fill the news headlines; the public's attention span is shaky and time-limited. When the Foundation was first established, its team brainstormed on how to make the Israeli public aware that it will soon lose its scientific and technological edge. The Foundation wanted to alarm the public about a severe decline in the number of high school students graduating the advanced five-unit track in mathematics. This track generates the talent pool for high-tech and science that Israel relies on for its future. However, with military and economic priorities competing for attention, it was not a simple task.

The Foundation commissioned a longitudinal study that revealed the contribution of five units in mathematics to future success in life, and collected data showing the decline in five-unit graduates. By working with media consultants, the Foundation reached the editors of newspapers, radio shows and television stations. They became convinced of the high importance of the matter and immediately published the data in their headlines and prime time slots. Soon after, the Knesset's Education Committee convened an emergency meeting and the government discussed the emerging crisis in a cabinet meeting.

After analyzing the public's response to this message, it turned out that the urgency around a "national crisis" and the "the startup nation is at risk'" was accepted with credibility and concern. The message was repeated by different broadcasters, adding more and mora data and fuel to the troubling decline. As a result, many Israelis reacted with skepticism and apathy, concluding that no one would give this problem serious treatment. The Foundation's media team became concerned that instead of driving people and systems to take action and improve, the negative message was now so loud it would drive the public to complain, blame, and despair.

The team therefore decided that after generating an initial sense of urgency, the momentum should be transformed from negative to positive and embrace notions of hope and optimism towards a better future. The media strategy was one of "scattering droplets," ensuring that there was a continuous stream of stories coming out in a variety of news outlets with no necessary or obvious connection between them. The idea was to shed light on inspirational stories of individuals and organizations who "made it" and achieved success. The Foundation's portfolio of programs was thoroughly analyzed to seek out those "heroes" and portray them as pioneers. We wanted to highlight the emerging buds, so that a national program, when it arrived, would connect to the reality already sprouting on the ground.

The Foundation built its own brand by becoming the "problem solver." It was careful not to claim the fame but rather, to create a brand that relies on the quality of interactions with its design partners. Intentionally, the Foundation started with big and ambitious projects in collaboration with the Weizmann Institute and the Center for Educational Technology, two of the most distinguished educational institutions in Israel. These projects required significant funding from government, which soon after decided to join in. The fact that the Foundation had its own resources freed it from the need to advertise itself and allowed it to always prefer "message over brand," focusing its media activity on the issue, rather than on itself.

Step 2: Call to Action

When in 2015, the Ministry of Education decided to adopt this issue as a top priority and lead a national program, the Foundation changed its media strategy. By this time, it had already prepared the ground for government policy to take the wheel. Professional capacity had been nurtured with hundreds of new teachers coming in as career changers from high-tech, and through learning communities of veteran teachers sharpening their expertise together. The teachers felt a sense of identity and ownership and applauded the government for joining and leading their shared effort.

In addition, a wide coalition of stakeholders (titled: "5X2") convened to support the new policy. One hundred organizations including universities, government agencies, municipalities, and school networks, joined hands with assistance from Sheatufim,

* Lital Shochat Chertow was a senior media consultant at Ben Horin & Alexandrovitz and advised the Trump Foundation's media team between 2015-2017.

in order to embrace and support the new policy and create an effective ecosystem around it. The leaders of those organizations raised their voices in the media and expressed their enthusiasm and conviction that the new policy was important and on-point.

The Foundation's media team figured out that the time was ripe for a public call to action to trigger students and their parents to register for the five-unit mathematics track. A public opinion survey commissioned by the Foundation found a gap between the parents, who felt they were irrelevant to the decisions their teenage children made about their studies, and the children who emphasized the great importance they attributed to their parents' perspective. Both groups were insufficiently aware of the significant contribution made by studying five units of mathematics to future prospects in career and life.

In collaboration with Keshet Broadcasting (formerly Channel 2 and currently Channel 12) the Foundation designed a three-month campaign. Its content had a very clear message: "Choose five, it's worth it." Executives from high-tech, successful entrepreneurs and renowned celebrities portrayed a joint story of investing in advanced mathematics in school and succeeding in life. The campaign used advertisements broadcast during peak prime-time television viewing hours, documentaries, testimonials, as well as blog posts and banners on social media; 2.7 million households in Israel were directly exposed to the content of the campaign.

At the end of the 2015-2016 school year, the Ministry of Education published the number of graduates in the five-unit track. The figures had slightly increased as of 2013; however, as of 2016, they leapfrogged. Many observers and commentators attributed this jump to the media campaign. It definitely generated awareness among partners, teachers and students of the high value of five units and led them to sign up. At the same time, it also aroused criticism, as many felt it favored a small group of talented students and was neglecting other students and different abilities (the major section of this case study, below, will present the campaign in detail).

Step 3: Social Movement

The policy of government and the catalytic role of philanthropy generated a halt to the decline and a course reversal toward a positive trajectory, resulting in doubling the number of graduates of the five-unit track in mathematics. This was a remarkable and unprecedented success; however, the ultimate test of this endeavor was yet to come. The challenge was for the trend in the high number of graduates to continue even after government and philanthropy changed priorities and the media returned to its day-to-day issues. The big mystery was whether public behavior changed only superficially and temporarily, as a result of external intervention. Or, did the change truly penetrate the core of systems with convincing messages that met with solid infrastructure and effective practice on the ground?

The Foundation's International Advisory Council, chaired by Lee Shulman, highlighted the importance of a smart exit. The council emphasized the role of the Foundation as scaffolding, which needs to support temporarily, while ensuring that the educational structure is strong enough to hold the larger weight. It recommended several steps that required investment in infrastructure and collaboration with central government and local authorities as well as with universities, colleges and educational institutions. In addition, it recommended that the Foundation assist in the creation of a data system and a monitoring apparatus to keep track of the trajectory and continuously inform the public about the trends. The Foundation seeded such a data system, called "Israel's Excellence Map," which showed the five-unit graduation rate over time in each city in Israel. Every year, the Foundation approached the media and the data was published in national newspapers and websites, as well as in the local press. In 2018, the Foundation transferred the responsibility of preparing the map to the "Cities of Excellence" network it had created at Tel Aviv University.

However, the main recommendation of the Advisory Council went even deeper than data. It challenged the Foundation to touch the hearts and minds of people and restore the value of excellence as a core Israeli value. This was an even more difficult task than persuading parents, teachers and students to study in the five-unit track in mathematics. It required grit and persistence, effort and determination, and many more competencies and skills that tend to dissolve in developed Western societies. It was challenging because in order to influence such traits, the Foundation team needed to expand the boundaries of its highly focused portfolio.

One pioneering step the Foundation decided to take in response was to initiate the first "Israel Excellence Week." The Foundation issued a call for proposals, inviting 150 organizations from all aspects of life, ranging from science to sports, music and art, to join hands and showcase their excellence to the public. Over the week following Independence Day, in partnership with Channel 12 on television and on its website (Mako), 3.5 million Israelis were exposed to the initiative and tens of thousands participated in local events.

The thinking was that by including a diverse range of issues, people will accept the notion of excellence with a sense of belonging and pride. The hope was that some of those who criticized the message of promoting excellence in a narrow (yet important) field of science and technology, would feel more comfortable with it when it was part of a larger movement gathered around the value of excellence.

The Choose Five Campaign

The Message

The media strategy team decided to focus on positive and motivating messages:
1) higher-mathematics studies (five-units) opens doors in the future
2) its importance for the future of the country

In the context of Israel as a "startup nation" we defined five-unit mathematics as the first step on the road to achieving the new Israeli dream. We hoped to inspire the public, starting from the young student and all the way up to successful CEOs. In addition, we made it clear that actively choosing five-unit mathematics and making an effort is something that will be worthwhile and recognized. We wanted to make the students feel like we believed in them and their capabilities.

Potential Fallout of the Messaging

While the campaign advocated the idea that every parent should seek to enhance their child's opportunities by getting them into this exclusive club of advanced mathematics, we were touching an exposed nerve. For some our message implied that if you do not study advanced mathematics, you won't succeed in life.

Buildup

We approached Keshet, an Israeli media enterprise that operates various media channels: TV (Channel 12- the highest rated channel in Israel), web (Mako website), and mobile (Mako App). With approximately 20 million video views per month, it was the number one Israeli video website among young Israelis aged 18-35.

Structure

The campaign was spread over a few weeks during the spring of 2016 and it included: interviews and appearances on morning talk shows, TV ads, interviews on "soft news" shows (tech, afternoon, and late night shows), transitional clips on Israel's most viewed satirical comedy show "Eretz Nehederet," in-depth profile interviews with leading figures in Israeli society and industry, and an ad-hoc update page on the Mako website and social media.
It was planned to reach its peak just before two important events in the education system calendar: the national mathematics matriculation exam (the bagrut), and the date on which students choose their advanced classes for the following year.

This was a relatively late addition once we saw the surveys that emphasized the contribution parents can make to their child's decision and the parents' lack of awareness of the role they play.

A variety of scientists, CEOs of the largest multinational tech companies operating in Israel (Microsoft, Google, Intel, etc.), members of elite army intelligence units (8200), musicians, TV personalities, Nobel Prize winners, athletes, politicians and even authors — all gathered to showcase that it does not matter which path you choose in life, by choosing high-level mathematics (five units) you are ensuring your future and promoting excellence in any field you may ultimately pursue.

Having successful adults call on the students to join them in the future might build the narrative of "the new Israeli dream," but that would mostly resonate with the students who were already studying advanced mathematics. While we pointed at the "prize" of working in the great Israeli

tech ecosystem, we also needed a follow-up call made by other figures who were not the typical advanced mathematics graduates. We recruited famous personas such as Keren Peles, a singer songwriter. She demonstrated how mathematics studies taught her the meaning of perseverance, determination and striving for excellence.

Outcomes and Implications

Public Reaction

A real change is one that comes as a result of an open public debate. We would need to cause some level of controversy in order to ignite public interest and discussion. Once the televised campaign began, the criticism grew more intense, doled out mostly by those who had not studied advanced mathematics, such as journalists and even school principals. They all resented the (misconstrued) notion that only those who study advanced mathematics can be successful.

In a way the Israeli DNA played in our favor. Officially, everyone says they should play by the rules, but behind the scenes no Israeli wants to be a "freier" (sucker/loser), every parent wants their child to have the ability to "cut the line" and get a head start. With that said, that same Israeli DNA also meant that the common approach is that when it comes to mathematics, you either have it or you don't.

It is looked upon as some kind of "defining subject"; if you are good at it then it means you are smart, and that it is an innate ability. Obviously, that mindset deters many people from even attempting to tackle it. The campaign emphasized that it is possible, with some effort and perseverance, and it can lead to excellence and achievement. It meant changing the attitude that was ingrained for so many years among the students themselves, but also by the education system which encouraged students to drop out of advanced mathematics in order not to lower their average percent grade for their overall Matriculation Certificate.

The Ministry of Education's Reaction

In record time after the campaign launched, the Ministry of Education launched its own campaign, "Give Me Five," led by then President of Israel, Shimon Peres. At that point there was not one person in Israel unaware of the planned and orchestrated campaign.

Their Give Me Five campaign message was perceived as more aggressive and less inclusive towards those who did not study advanced mathematic. It seemed that while the MoE campaign got everyone talking about it, most feedback was negative, and a few months later then Minister of Education Naftaly Bennett admitted "the campaign was too aggressive."

The MoE rushed into their campaign to reassert control over the narrative and communication with the public. Their involvement enhanced the debate in a way that brought it into each home and school in Israel. Now everyone had to take a stand and contend with the issue.

Outcomes

According to Keshet data approximately 2.7 million households in Israel were exposed to the Foundation's campaign. Our first goal of reaching the Israeli public was accomplished. In a post-campaign survey, we were pleased to discover that parents had more faith in their own children's capabilities; most parents (over 60%) thought the campaign was important. The fact that we got parents to understand that they are a significant factor in their children's future showed the huge impact of our efforts. This could open the way to more parent-led opportunities and involvement going forward.

Another development was noted with teachers, who suddenly experienced the internal mechanics of their classrooms becoming a matter of public interest. A sense of alarm among the teachers was quickly translated into the professional responsibility they felt for their students and for the profession itself. The teachers were also able to connect between their work and its impact on the future of Israel as a country. The spotlight on teachers was not to scrutinize them, and many felt their work was valued.

Insights

Now, six years after the campaign, we can appreciate the long-lasting effect of our work. There are more children in middle-school opting for the advanced tracks once they enter high school, which will allow them to study five-unit mathematics later on. This means that not only was the campaign successful while it lasted, but that it had a longer-term effect on the public and on future generations. There is no doubt the effectiveness of the campaign was a result of the deep emotions it stirred, negative or positive. The years following the peak of the campaign (2016-2018) marked an unprecedented increase that surpassed the original goal of doubling the number of students learning five-unit mathematics. If we needed reassurance, we received confirmation that the campaign was the right step at the right time. ■

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Better Together

Building Effective Relationships and Partnerships
A Personal Perspective

Jo Cohen

Three or four months before Rosh Hashana, the Jewish New Year, we started planning. It began as a practice of heart and mind, and over the years became a firm tradition. We brainstormed to create a theme, design, image, and message we wanted to share that year. We printed hundreds of postcards, each one painstakingly handwritten by every member of the team, and sent via snail mail to arrive just in time for the New Year, a triumphant victory in the face of Israel's painfully slow postal system.

As we prepared the New Year's greetings, we updated our mailing lists, adding new partners, grantees, and teachers; people we had met, convened, and worked with over the past year. The list was always expanding, and the process was labor intensive, a significant group effort. It allowed us to reflect and take stock of our relationships, our partnerships and perhaps even our professional achievements over the past year.

Every year we would question the wisdom of sending out hundreds of these handwritten greetings; was it really worth the time it took? But each time we unanimously agreed once again that it indeed was deserving of the effort. The professional relationships we cultivated were so important and meaningful to the Foundation's work and investing in those relationships was how we showed that we cared.

Over the years, the building and maintenance of those relationships became an integral part of our organizational identity at the Trump Foundation; it helped the Foundation to consistently achieve its goals and it continues to be a central tenet of our work.

The greeting cards are but one small example, but it could be said that every aspect of the Foundation's activities, from the practical to the conceptual, are ultimately underpinned by the quality of its relationships — between members of its own team, with grantees, partners, stakeholders, and decision makers - and over time, the Foundation's mission is served by its ability to successfully manage those relationships.

And so, from its earliest days, as the Trump team contemplated the question of how to effect change, we began to understand that having meaningful, transparent relationships with grantees and partners could be the single most important thing we do.

The protocols and procedures, principles, and habits, which governed our grant-making; from the time we took to respond to emails to the fostering of a web of communication and exchange between partners and grantees, all became an integral part of the Foundation's organizational culture and identity.

We knew it was all about the people: teachers, scholars, and policy makers with whom we collaborated, doing the professional work in their fields. We just had to bring them together, help them articulate their shared passion and mission, and support them in achieving it.

As I started to reflect on the seven years I worked at the Trump Foundation — on the principles, values, and organizational culture we developed, the mistakes we made, the successes we celebrated, and the partners we learned from, I realized that this assignment, as with so many before it, called for a team effort. So, I approached some of my former colleagues, some of whom still work at the Trump Foundation, and others who have since moved on, to reflect together with me on the Foundation's Relationship Management over the past decade.

My first conversation was with Eli Hurvitz, the Executive Director of the Trump Foundation, who brought me back to the intrinsic complexity that philanthropic foundations encounter with all their relationships. "Philanthropy, at its very core, is about the love of people. The word philanthropy comes from two Greek words — philein, meaning to love, and anthropos (as in anthropology), meaning humankind. Philanthropy means love of humanity. That was, and still is the purpose of what we do," he says. "At the same time, how can this love be accepted as genuine, when philanthropy sees itself as setting the strategy and expecting its partners to deliver and execute, whereas the partner perceives itself as the source of wisdom and knowhow and relates to philanthropy as a stubborn ATM? Is it possible to develop authentic relationships and mutual trust, when this very structure is so instrumental?"

Transparency, Clarity, and Order

The Trump Foundation is a catalytic grant-making foundation, and so works with and through others. As such, the importance of having very clear, close, and effective relationships with the people in the field cannot be underestimated. At the end of the day, the Foundation itself does not provide professional development for teachers to improve their instruction. The Foundation has a very clear strategy, objectives, and measurable goals. But it cannot act on its theory of change nor achieve its ambitious mission alone.

From the outset, therefore, it was clear to us that we would only be able to move the needle if we joined with real partners who shared the vision, and who were already working towards it. These partners would be the ones to implement a joint strategy in the field. So, the decision was made to establish a close relationship with each of our partners based on intimate communication, full transparency, openness, honesty, trust, and mutual respect.

"Excellent working relations, listening ears, openness, availability, sensitivity for the situation, and an ability to make the necessary changes in the course of the actions."
(GPR, 2018)[1]

One of the Trump team members responsible for establishing many of the initial relationships with grantees, was Dr. Tammy Eisenmann, who was Program Director between 2011-2017. According to Tammy, one of the preliminary principles of our relationship management was clarity.

* Jo Cohen is Israel Director of the Wohl Legacy. She was a founding member of the Trump Foundation team, serving as Director of Grant Operations from 2011-2018.

"We wanted relationships to be clear, so we laid out distinct and defined stages of grant-making and were clear about which stage the program was at. We believed that we should have a very transparent rationale, and all team members, from the finance director to the administrative assistant, should know how to clearly explain what we do, and why we do it.

Tammy is a strong proponent of structure in relationships: "The standards created order. We could explain them, and with them, we could be fair and equal with everyone. They were untouchable — we decided not to compromise on those standards, and this gave us a quiet confidence in the relationships we built. We made a conscious effort to speak as equals with our grantees and came to understand that this is a rare thing in philanthropy. However, it very much characterized the Trump Foundation. We never received negative feedback about our openness and honesty.

We believed that transparency with grantees directly impacts success. It is often the case that grantees might be reluctant to share difficulties, not disclosing the challenges they are facing, and the gaps between the intended work-plan and reality. If the relationship is founded on self-promotion and overpromising, the grant-maker will only know that there is a problem when it is too late. Our desire was to be in the same 'boat' as our grantees and to do what's necessary to build a close relationship. "

Transparency is a central tenet of the Foundation, and this is expressed in all aspects of its work. Unusually for a philanthropic foundation in Israel, all details of the grants — including the sums granted — are listed on the publicly-accessible website, including full details of every program. When the Foundation moved to new offices in 2015, the premises were designed to embody the concepts of transparency and openness, with glass walls in offices and meeting rooms, and central open spaces.

"The Foundation defined clear objectives, which were continually monitored in cooperation with us, while making adjustments to best achieve the objectives. The relationship is excellent, the Foundation provides strong and supportive backing, and knows how to encourage and empower us toward achieving the goals."
(GPR, 2016)

"[We felt we had a] quality discourse and relationship, honest and direct, between colleagues working together toward a common objective."
(GPR, 2016)

"We are very straightforward and do not cut corners," says Revital Drori, Program Director since 2019. Over her years at the Foundation, Revital has worked with local authorities and school networks, building essential relationships with them and between them, which enable the Foundation to carry out its work more effectively. "What we demand of ourselves we will demand of others as well. In the payment requests and reporting, we respect what the applicant wrote, and we will address every comma and period. We may be seen as rigid, but it is a rigidity that stems from integrity." Both Tammy and Revital reflected on the tension that arose at times between the strict grant conditions and the trust shared between the Foundation and its partners. Indeed, this tension did lead to a number of charged exchanges over the years, but these were accepted as part and parcel of an open, honest arrangement, and mutual respect has preserved these relationships over time.

Revital describes interactions with grantees as professional conversations about content, challenges, and future steps. "Discourse with grantees is characterized by openness and sharing challenges. Even when it comes to payment requests, we make great efforts so that the discourse is not just about money, because the goal is not to punish or catch where someone may have failed, but to learn from it. Conversations are conducted with full transparency and mutual respect; I have no problem calling a partner and telling them that I was wrong about something. Similarly, I expect them to call me too and be honest with me."

We would learn from a comprehensive survey of grantees and partners (Grantee Perception Report) conducted from 2014 onwards, that there are those who experience the Foundation's staff as too bureaucratic, rigidly conforming to the work plan without taking into consideration the natural gaps between planning and execution. A few grantees felt they were being "punished" for lack of outcomes.

"Sometimes there is a feeling that the Foundation expects the partners to be 'contractors' executing a very specific approach set by the Foundation. This expectation is not in line with the interests of partners wishing to generate new knowledge and original programs and who face a host of conflicting demands from their own organizations."
(GPR, 2020)

Clearly, it is about much more than just being nice. "No trajectory would have changed course in real life if we just gave money in response to grant applications and practiced a "feel good philanthropy," notes Eli. "We aimed to catalyze a change that was very different to the direction our partners were heading. We could have tried to exert indirect influence, but we chose to be clear and transparent about our plans, direction and intention. We brought everyone on board to jointly articulate measurable impact goals on a national scale."

Trust and Respect

What underlies transparency in grantee-funder relationships is trust and respect. The Foundation's organizational culture has always revered professionalism and excellent professional abilities. That is why from an early stage we made sure to work with teachers as advisors, committee members, and involve them in the Foundation's activities and decisions in a number of ways. The Foundation aimed to empower them, shine a light on exceptional teachers, and help them experience appreciation and acknowledgement for their work.

I recall that teachers were often surprised by the respect given to them by the Foundation, and by senior officials working with the Foundation - they felt seen and heard. The program team learned their language, consulted with them, and honored their status.

Teachers are modest, and initially, some seemed to undervalue themselves and their professional contribution. In 2012, we established the Trump Master Teacher Award, which recognizes outstanding teachers and publicizes the fact of their award, garnering acclaim for the teaching profession as a whole. When we launched the Award, whose prize is 100,000 NIS, several excellent teachers expressed their opinion that the prize amount was too high for the teaching profession.

We saw it differently. "From the outset, we perceived that in order to achieve what we envisioned, someone else would need to make it happen. So, we listened to them explaining their own narrative, we respected them, and we supported them," said Tammy.

We tried to ensure that the Foundation's actions and decisions were informed by teachers, and as such we could remain close to practice, as an involved and connected funder. This helped build trust and respect. Over the years, the Foundation has hosted numerous meetings, seminars and workshops dedicated to honoring, listening to and learning from its partners: teachers, academics, teacher-trainers and government officials. The program team would frequently consult with teachers on potential programs and peer-review became an essential part of the grant-making process.

Over the years, the Foundation has taken partners on study tours abroad and hosted encounters in Israel with leading visiting academics and practitioners. In 2013, we founded a National Teachers Day, which is celebrated every year across the country, as if it had always been so, and in 2014, we established "It's Time for Education," the digital education magazine, by teachers for teachers, which achieved a large online readership. Teachers are majority members of the Foundation's Advisory Board and comprise all members of the selection committee for the Trump Master Teachers Award.

Grantee Perception Reports and Ongoing Reflection

It was and continues to be important to the Foundation team that we continually review and evaluate our practice, through seeking to know what grantees and partners think about the Foundation's activities, relationships, and shared strategy.

In 2014, less than three years after it was established, the Foundation engaged the Center for Effective Philanthropy (CEP) to perform a Grantee Perception Report (GPR), a comprehensive survey among its grantees and partners. The GPR provides an in-depth analysis of how partners perceive the Foundation's philanthropic endeavors. It is repeated every two years, in preparation for the Foundation's biennial Advisory Council. The results are thoroughly analyzed, shared with the public and continue to inform the Foundation's work and evolving relationships.

CEP notes that strong funder-grantee relationships — defined by high quality interactions and clear and consistent foundation communications — are critical to high-performing funders. Grantees who have strong relationships with their funders perceive those funders to have significantly greater impact on their organizations, communities, and fields. Unsurprisingly, they found that the strongest predictor of the strength of the funder-grantee relationships is high transparency on the part of the foundation.

As early as 2014, the Trump Foundation's GPR revealed that the Foundation's relationships with its partners was one of its greatest strengths. Unusually, the Trump Foundation received higher ratings than 99 percent of funders in CEP's global dataset for the overall strength of its relationships with grantees and was rated very highly by grantees for the fairness of their treatment by the Foundation and their comfort in approaching us if a problem arose. The Foundation also received strong ratings from partners for "approaching the relationship with respect," "respecting partners' expertise in their area of focus," and "trusting partners to carry out the work specified in the partnership."

Many of our partners described their interactions with the Foundation with praise, emphasizing the staff's "professionalism," "openness," and "ability to cooperate." However, it seems that this high level slightly declined over the years. In the most recent GPR, conducted in 2020, CEP found that grantees were less positive towards their relationships with the Foundation than in previous years. They reported experiencing more pressure to modify their organizational priorities during the selection process.

"We suffer from a second album syndrome," says Eli. "After the first success with the five units in high school, we felt the pressure to prove that the initial success was not coincidental. Our pressure to achieve a second success affects our grantees and partners."

Tammy explains how she perceives the changing relationships over time: "At the beginning, we came to learn from teachers — at a certain point this approach inverted — we had acquired knowledge and expertise and our appetite and confidence grew. Our knowledge of systems and projects and their components was also deeper and better. We knew how things really operate and how to catalyze change. We were sufficiently established so that we knew what we were doing but the grantees and partners felt the change; we started to tell people what to do."

Revital sees this transition as natural, "As time went on and we gained more experience, we had a better understanding of what we wanted. Moreover, one cannot ignore the fact that when the Foundation started it was the new "player" in the field, bringing a somewhat fresh approach to its veteran partners. This fact alone provided the Foundation a grace period, which faded as time went by. It was a huge challenge for us, the Foundation's current team, to maintain the high results the first team received in the first GPR, but it was, in fact, a mission impossible; from a near-perfect score, you can only go down."

"The Foundation has a very clear roadmap...sometimes, there is a sense of rigidity and a lack of flexibility in the way they look at goals, as well as the broader environment from which such goals are to be achieved."
(GPR, 2018)

"We saw a significant rigidity in their work with us and an excessive attention to detail that did not always seem relevant to us."
(GPR, 2018)

Mobilizing, Convening and Networking

As is natural in the life cycle of a spend-down foundation, we gave a lot of thought to sustainability, and carefully watched and learned from the sunsetting of other spend-down foundations.

From early on, this helped cultivate an awareness that non-monetary support, especially convening and networking, is an important way in which the Foundation can utilize the relationships we build to contribute to the professional community.

Initially, the need arose to establish a community of grantee partners. Admittedly, these were people who mostly already knew one other, certainly those who came from overlapping worlds. But we frequently found that academics didn't know practitioners or decision makers and vice versa. In the early years, the goal was to create opportunities for different players to meet and deepen their acquaintance. Indeed, the first meeting between approximately 20 grantees took place in the format of guided peer-to-peer discussions in concentric circles, in a way that allowed them to chat, exchange ideas with one other and left them with a taste for more. People came away enthused.

"We understood that our success was one hundred percent dependent on them," says Tammy. "It wasn't easy because we couldn't control it. At the beginning it was very worrying. We thought, what added value can we give them, to senior academics, for example? They are seasoned professionals — they felt it too."

In the 2014 GPR, two-thirds of the Foundation's beneficiaries said that in addition to the financial grant, they benefitted from help given by the Foundation in getting to know the leading institutions in their field and working with them. About one-half of grantees benefitted from consultation in their fields of endeavor. Some 61 percent of Foundation partners reported participating in at least one conference initiated by the Foundation. The survey further showed that conference participation, day-long seminars, and forums for exchanging knowledge and information between professionals were viewed as particularly helpful.

We therefore decided to significantly increase the Foundation's role as convener, i.e., to act as a facilitator of connections, working relations, and cooperative ventures, not only between the Foundation and its partners, but also — and especially — among the partners themselves. As part of the implementation of this objective, the Foundation moved its offices to premises appropriately equipped to allow partners to meet, run seminars and hold workshops and conferences (Magnat, 2016, p. 4).

"The Trump Foundation is a pioneer and a leading player in the public debate on math education in Israel. It devotes a great deal of time and resources, encourages the creation of collaborative efforts and promotes the professional development of math teachers."
(GPR, 2020)

Recognizing our ability to enlist different partners towards a shared goal, we also launched a "network clustering program," allowing institutions running similar programs in different locations to learn from one another and pool resources. The Foundation provided a non-competitive environment which encouraged knowledge-sharing and cooperation, and participants noted that the Foundation's help in networking was extremely useful. We received positive recognition for playing this role, and were asked to continue strengthening our presence as a convener (Refaeli-Hirsh, 2016, p. 2).

By creating meaningful connections, even when the context was complex, sensitive and sometimes competitive, we found that the Foundation could really add value. The team worked to create networks that allowed partners to continue to learn, grow, and act together. Networks were cultivated to create a feeling of allegiance among members and a willingness to support the network as a whole. As the Foundation invested in the networks and convening, being an active member of the network became highly personal and valued. These networks helped construct relationships rooted in trust and connection and allowed us to engage far beyond the instrumentality of the grantee-funder relationship.

In one of our earlier networking events, we wanted to introduce different grantees and partners to one another, to encourage them to talk, share ideas and delve beneath the surface, beyond their first professional encounter. We decided to borrow from the concept of speed-dating, rotating between different partners with guided conversation topics. We were nervous about departing from the traditional format of lectures and mingling, but this activity and other quirky ways we found to break the ice at various gatherings helped people connect.

Our program officers would encourage those connections, bringing together groups of partners to consult on various issues, or disseminating articles among them, encouraging discussion and dialogue, and the sharing of successes and lessons learned. The program team continually and actively cultivated this exchange over time and continues to do so today.

Joint study tours of education systems abroad are an additional tool intended to connect between partners. "The very act of going out into an adventure, a shared experience of coping together in a place that is new to all of us — connects us. Some of the partners even became friends," says Revital. Evaluation reports showed that those who participated in a significant activity — such as a study visit, overnight seminar, or organizing a common conference — developed a greater sense of ownership and felt more connected, obligated, and satisfied by the convening experience (Refaeli-Hirsh, p. 3).

Another method was the use of a "marketplace," as a concept and practice to help partners exchange information and create collaboration. Every year, the Foundation holds an annual event with the theme of an Exchange Fair or market (called Shuk 5 and later on Shuk 15). This is a forum for operators and developers to meet, network, and present their programs and processes to one another. The format enables the sometimes-disparate worlds of research and development from universities, and operators from local authorities, school networks, and regional districts, to directly purchase from one another. These meetings have gained great momentum and popularity among the grant recipients and Foundation partners.

In 2016, the GPR Survey showed that 40 percent of grantees reported that in addition to the financial grant, they also received invitations to encounters and discussions with professionals and colleagues and were provided with information relevant to their fields. Some 85 percent of survey participants — a higher percentage than in the past — participated in at least one event initiated by the Foundation in which grantees and partners were brought together, in a workshop, a professional conference, or a group discussion (Magnat, 2016, p. 7).

The place and positioning of the Foundation also changed over the course of the convening process - there were stages where we led,

hosted, and set the agenda, and then later, for the sake of sustainability, we wanted our partners to lead, so we took a step back.

When the Foundation embarked on its second strategic phase in 2018 and shifted its focus to middle school, we already knew the power of convening and it was assigned a pivotal role in the realization of this strategy. In 2020, the GPR showed that the Trump Foundation continued to provide an above average proportion of its grantees with intensive field-focused or comprehensive forms of non-monetary assistance (33 percent of the Foundation's grantees reported receiving intensive non-monetary support in 2020 versus 17 percent at the median funder).

These grantees rate the Trump Foundation significantly more positively on the extent to which it is advancing knowledge in their fields, its impact on their local community, and the clarity of the Foundation's communications. As in 2018, 2020 grantees who report receiving non-monetary support most often accessed collaboration support (55 percent), introductions to field leaders (45 percent), and seminars/forums/convenings (43 percent). Markedly, nearly a third of the grantees who reported receiving support beyond the grant, representing a larger proportion than in the past and more than for the typical funder, reported receiving communications/marketing/publicity assistance from the foundation (GPR, 2020, p. 6).

Building the Foundation Team

In any organization, relationship management is an intentional effort, a result of policy and procedure, but also depends to an extent on the organization's human capital and interpersonal skills. The Trump Foundation staff is highly committed to change, and by nature, many of the staff members are productive, proactive, and analytical.

Eli recalls that when he recruited team members to the Foundation he deliberately employed the PAEI Management Model, developed by Dr. Ichak Adizes, which categorizes people into one of four roles: Producer, Administrator, Entrepreneur, and Integrator. Adizes notes that no individual manager can meet all the needs of their organization, and that effective management requires a team of leaders who together can handle the most complex challenges and issues.

"We saw ourselves as service providers," said Tammy, who, together with other early Foundation team members, established much of the organizational culture around interacting with grantees. "I wouldn't go to sleep until I had replied to all the mails from grantees… We committed to answering within 24 hours and we did it. If we couldn't reply, we wrote to say when we would be able to reply. We worked very hard to earn the trust of our partners and tried to act with a great amount of professional respect for the grantees we worked with."

The Foundation's team invested a lot of time and effort in post-grant follow up and guidance — assisting the partners in writing a workplan, thoroughly reading their payment requests and evaluation reports and replying with comments and questions. The expression of interest was genuine, and it was important to acknowledge the value of the time the partners invested in writing reports for payment requests. There was also an emphasis on sharing ideas between grantees, allowing a natural form of cross-pollination. These practices became common among the expanding Foundation team over the years and across different departments. Part of the craft we fostered at the Foundation was the care, time and attention dedicated to the post-grant system — the relationship with the grantee develops and deepens as we support their work and take a vested interest in the outcomes and outputs of their programs. The program team remains in regular contact with grantees, beyond the reporting requirements they fulfill for grant payments. It is a personal and professional connection that strengthens over time.

As the Foundation team grew and new team members were recruited, we tried to choose people who would uphold those values and characteristics in the existing relationships that they would inherit. The GPRs of 2014 and 2018 show that these efforts were felt, as many respondents described Foundation staff as "very professional," "pleasant" and "always available." Some respondents also praised the Foundation's "excellent communication" and noted how it "communicates the messages and goals clearly."

We cannot deny the utilitarian aspect of this behavior. Tammy is honest about how this effort was connected to our desire to succeed, and the relationships in this sense, are also instrumental. Eli connects this with the fact that Trump is a spend-down foundation. Once the Foundation has completed its mission, the ones who will continue to carry the agenda to promote excellence in mathematics and science will be its partners. For this reason, it was crucial to maintain a strong relationship with them and between them from the very beginning

Relationships and the Israeli Context

When discussing relationships, Eli reflected on Israelis' unique character. "We quickly discovered that no one wakes up in Israel to fulfil someone else's dream.

In other places, you find people aligned behind top-down policies — it's a matter of culture. But Israelis are critical and analytical, and they ask, "why?" If they were not included in the process, if they have no sense of belonging or affiliation, then it is not their dream. Israel is a DIY society of pioneers — everyone needs to have their own sense of ownership.

We wanted to reason with the grantees, but also to open and touch their hearts; to make them feel part of something larger than their own efforts. We understood the central place of emotional identity and connection from the beginning.

From an early stage, we understood that we want our dream to become everyone's dream. And pretty quickly, we knew that we needed teachers with us. We visited Educators for Excellence in NYC and they asked us what the teachers were saying about our plan, our theory of change. We were all about teachers and teaching but at this very early stage, there were none around the table. We understood our mistake and fixed that very quickly. Teachers need to have a place at the table. They are part of the solution not the problem. And we needed to bring them on board with the vision."

Much of our time is therefore invested in these efforts to communicate, develop and nurture the joint vision not only with grantees but with government officials, change-makers, and stakeholders. Relationships are informal where appropriate, and in many cases even close.

Revital agrees with Eli about owning the dream. "It is important to find the place where it connects with our partners' worldview. Finding that point of connection is key. When we introduced the new strategy in 2018, the Foundation moved its focus to strengthening the base of excellence in mathematics and science to middle schools.

Some of our partners admitted to us that it was not something they believed in or saw as one of their goals; but gradually, as we combined forces to launch study tours, convene conferences and engage deeply with the theory that lies at the heart of the Foundations' strategy, they discovered and embraced the elements that fit their agenda. Our partners are the best professionals in the field and we knew that if they were on board with the goals, they would promote them with all their talents and resources."

Relationships and Impact

"The Foundation's goals were instrumental in developing a culture of excellence in schools, especially in the study of mathematics and physics."
(GPR, 2018)

Selecting the Trump Foundation's partners, especially the grant recipients, required a great deal of thought and much discernment, and was informed by a conscious effort to maximize alignment of its values and institutional DNA with those of its partners. This was the result, perhaps, of our self-conception as temporary scaffolding that supports a building for a fixed period of time. Once the scaffolding is removed, however, the building must be able to stand on its own (Magnat, 2016, p. 2).

In 2018, the Foundation reached the first of its targets, when the number of students taking the five-unit matriculation examination in mathematics doubled, even earlier than expected. This goal was achieved thanks to great effort by all the partners and received broad public support, especially since the then-Education Minister Naftali Bennett had declared it a national goal. In the same year, the Grantee Perception Report revealed that the Foundation had a high impact at the government level, and a high impact on the specific field of mathematics and science education. However, its impact on grantee organizations was still low. While some of the team members may have been frustrated by this outcome, we were not necessarily surprised by it. According to Revital, the Foundation did not influence the organizations it worked with (according to the GPR) because it did not focus on this task. "We were overestimating our influence to think that we could or should," she says.

Over the years we see in the GPR results that our team changed but our DNA remains the same. Our relationships are our philanthropy, in that they manifest our values and determine the success of our strategies," says Eli. Indeed, the Foundation excels in its clarity, non-monetary assistance, impact on public policy, and transparency. The GPR describes the Foundation less favorably in terms of its impact on organizations, flexibility, and asserting high levels of pressure. The Foundation is perceived as achieving high impact on public policy, but low impact on the organizations with which it partners.

"The Foundation has justifiably gained a great reputation in the field of cultivating excellence in math and science, both as a think-tank and on the ground. The Foundation has a long-lasting impact on decision-makers at all levels in this field."
(GPR, 2020)

"The day-to-day work with the Foundation has always been effective and advancing. Considering all the questions asked..., the Foundation can be rated as having a significant and positive impact. At the same time, however, there are a number of things that can be improved. More than once I have seen that there is not much flexibility in the Foundation´s answers to the unique needs of the local authority.... More often than not, the Foundation demanded changes during the process, changes that prevented the completion of ongoing processes, which were therefore interrupted or halted."
(GPR, 2020)

Eli responds to the challenge of these criticisms with a broad perspective. "The GPR helps us to see that there is a tradeoff between our relationships and our raison d'être as a strategic foundation whose goal is to move the needle. We are here to catalyze change and it has been a successful endeavor so far, but success can be as problematic as failure. It comes at a price; you think it is all-encompassing, but it isn't." Reflecting on the reported weaknesses, there are two relevant points to remember. Firstly, not to forget the starting point. The Foundation selects strong organizations as partners, to promote maximum impact in a short time frame. For many of the larger partners, such as universities and colleges, the promotion of math and science is only one of their priorities and programs, each with its own managers. The Foundation works closely with the person responsible for that field but is not looking to impact the overall organization. This is certainly the case in academia and local authorities where, with others, Trump was able to have more influence on the conduct of the network. The second point is the identification and attribution of credit. It takes time for partners to realize that they have begun to work differently, a process that can take years. When they do eventually notice the change, they may not recognize where the impetus originated. There's something good about that because it means they are taking ownership of the change.

For the Foundation, the true success-drivers are its partners, the people in the field, and as such, the credit is truly theirs. ■

* Jo left the Trump Foundation team in 2018 and still receives a handwritten Rosh Hashanah greeting every year from her former colleagues.

1 All quotes are anonymous quotes from grantees, taken from Grantee Perception Reports [GPR] conducted by the Center for Effective Philanthropy every other year with all partners and grantees of the Trump Foundation.

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Clinical Teaching in Practice: Interim Report

Haim Lapid and **Leah Pass**

Background

Quality teaching forms the heart of the Trump Foundation's strategy. It is the Foundation's main program lever to enable more students to complete their studies successfully at the level of five units in mathematics and science.

In its strategic plan (2011), the Foundation offered a general definition of quality teaching: "Teaching that places the individual learning of each student in the class at the center, and that strives to ensure that he or she reaches the optimum achievements." Later in the document, this definition was presented in slightly more detail:

Outstanding teachers set high targets for every student, diagnose needs and abilities, monitor progress, and prepare adapted teaching plans. They provide the students with feedback and support their learning on a real-time basis… In high performing education systems, teacher training nurtures a clinical approach to teaching that places the student's learning at the center. The teachers observe the practice of experienced teachers and colleagues, undertake and discuss simulations, and share their professional knowhow with each other. Their training is based on the rule that practical experience is preferable to theoretical knowledge.

As its experience grew, the Foundation later updated and detailed its definition of quality teaching (2014):

Numerous studies have shown that the quality of teaching is the most influential factor in explaining variance in the class in terms of the students' achievements… Prominent education systems have transformed the teaching profession from a "production line" approach to clinical specialization. The clinical professions are characterized by a high level of commitment to every "patient," including the presentation of ambitious targets, an individual "treatment" plan, diagnostics, adaptation, monitoring, and feedback.

This documentation paper, part of the 2016 mid-course review, is included here to provide a more complete look at TTF processes and past insights

The clinical professions are characterized by active participation in a professional community, including consultation in treatment (consulium), group study during the course of treatment (clinical rounds), in-service specialization (residency), and mentoring and coaching.

***Quality teaching** in the fields of mathematics and science education means a high standard of teaching based on personal excellence and implemented in a thorough and systematic manner, including careful planning and implementation, and a developed level of selfawareness. It takes place within a professional community, through ongoing consultation, and focuses on the progress of each individual student. This type of teaching diagnoses the student's abilities and difficulties, presents them with ambitious targets, adapts itself to the student's thinking and pace of learning, monitors progress, and provides constructive and reinforcing feedback.*

Quality teaching focuses on the learning of each student. Outstanding teachers:

A. Believe and are convinced that all their students can excel; show deep commitment to making the most of the opportunities they face; present them with high and attainable learning targets; arouse their curiosity; and help them to become independent learners.

B. Create an inclusive atmosphere in their class that builds trust, enables students to ask questions and make mistakes, encourages them to express knowledge and positions, in writing and orally, and encourages them to take cognitive risks. They respect their students, nurture communication skills and creativity, and encourage cooperation.

C. Have a practical understanding as to how students think and learn the subject. They know how knowledge develops in their students and are able to identify typical mistakes, learning styles, and developmental processes.

D. Are proficient in the use of diverse measurement and evaluation techniques and are able to adapt these to the context in which learning takes place. They maintain comprehensive documentation of the learning performances of every student and use this on a real-time basis in order to map, diagnose, adapt teaching, and provide constructive and reinforcing feedback.

E. Use a broad arsenal of teaching approaches and methods and are capable of exercising informed discretion in choosing strategies and techniques according to the context, the subject of the study, the class, and the diagnostic findings of each student.

F. Provide their students with grounded, constructive and reinforcing feedback according to their learning performances. They choose the type of feedback and the appropriate time to present it, and draw on it in order to help the students to internalize the learning targets and to be aware of the extent of the progress they have made.

G. Play an active role in a professional community whose regular activities are led by master teachers, including a systemic focus on students' learning and on analyzing learning and teaching from the classrooms.

H. Build professionalism in teaching together, including formulating a shared instructional system, shaping routines for monitoring learning, establishing a support system for students, and engaging in peer learning, including documentation, analysis, feedback, and mentoring.

The Foundation's International Council met with the Foundation's partners in 2014 and offered the following comments to the Foundation on this subject:

The Foundation's partners, including teachers, grant recipients, researchers, and decision makers, do not understand exactly what the Foundation means. They attach great importance to quality teaching as they perceive it. They remain unconvinced that it is possible to implement teaching that is focused and adapted to the thinking and learning of each individual student. The "clinical" terminology is alien to them… In light of this, the Foundation should deepen the implementation of quality teaching with clinical characteristics. This should include detailing, clarifying, and illustrating – together with its partners – the conceptual perception, the necessary integration of the various components, and ways to ensure sustainability. The Foundation must document the practical knowledge and disseminate it through a process of dialogue with the professional community, and it must be careful to ensure that the projects it supports are actually geared to a focus on the learning and thinking of each student.

The Foundation staff subsequently formulated a more concrete and visual definition entitled "the Quality Teaching Compass" (2016). The Compass was presented as the product of the knowledge accumulated by the Foundation in the course of its hands-on work with dozens of projects and hundreds of teachers, and of an analysis of research and experience in Israel and around the world. In theory, the Compass constitutes best practice documentation including various aspects of professional activity in the field. Its presentation as a "Compass" was intended to position this deliverable as a vision, a target for the future, and an ultimate and collective expression of the profession. The Compass opens with the following definition:

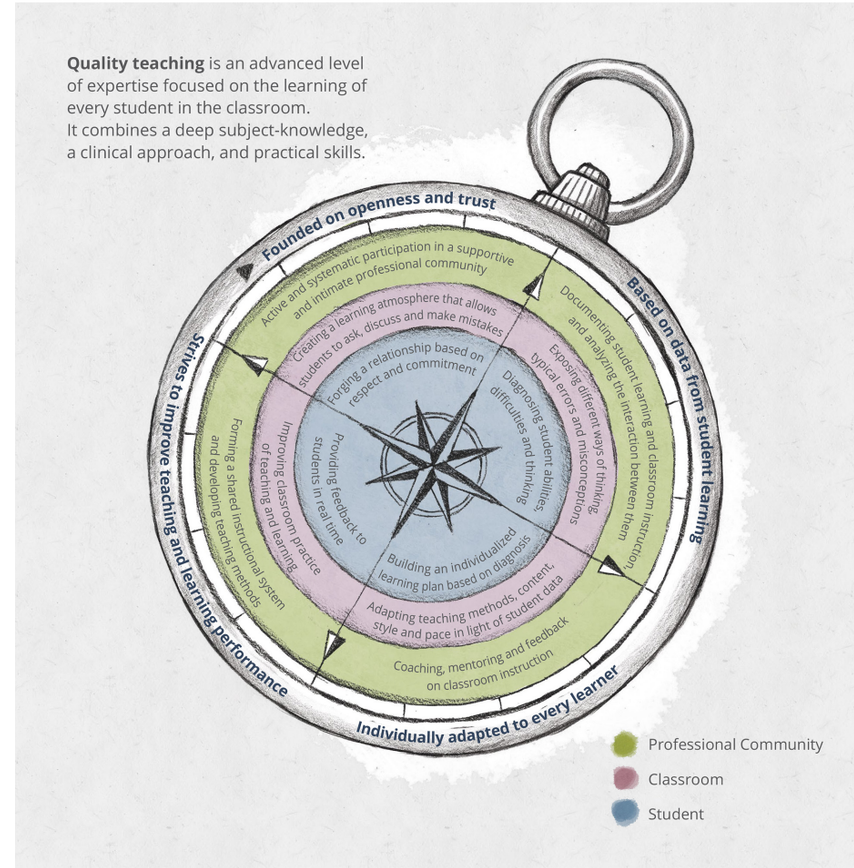
Quality teaching is an advanced level of expertise that focuses on the learning of every student in the class. It combines profound knowledge in the subject area, a clinical approach, and practical skill. It takes place in all three arenas of encounter of the teacher: with the student, the class, and the professional community. Its characteristic is that it is based on openness, sharing, and trust; founded on the ongoing diagnosis of students' learning; adapted individually to the abilities, difficulties, and learning style of each learner; and seeks to achieve a constant improvement in teaching and learning performances.

In order to examine the extent to which the components of quality teaching are implemented in its programs, the Foundation contacted a group of 15 experienced teachers (the "Trump Fellows.") The Fellows were asked to observe the actions of several of the Foundation's programs; to interview the participants; and to observe their teaching in classrooms. The Fellows used the Compass as the glasses through which they observed and analyzed the findings. The Foundation also convened a meeting of some 50 mathematics and science teachers, who participate in its programs, in order to present the Compass and receive their feedback.

The preliminary raw materials yielded by these actions served as the basis for drafting this report.

Key Insights of Teachers

1. "Nurturing" teaching founded on the aspiration to enable as many students to make progress in mathematics and physics reflects the teachers' worldview of today. They note that in recent years the entire system has adopted a more nurturing approach and marginalized the traditional "selective" approach. They emphasize however, that the burden of nurturing falls mainly on teachers, without any substantial help from the system.
2. Most of the teachers expressed a high level of commitment to excellence, to a high level of achievements, and to a profound level of understanding on the part of the students. Some of the teachers expressed concern that the over-enthusiastic adoption of nurturing teaching is liable to come at the expense of achievements, pace and depth, and to create a situation where students who are fundamentally unsuited to these levels of learning are pushed toward inevitable failure.
3. The teachers deeply identified with the need to create an atmosphere of trust and to accept students' mistakes as a learning opportunity. It is evident that principled change has occurred in their relationships with their students in the class in light of this position. Surprisingly, the teachers do not seem to express any difficulty in making this shift or to feel that any restrictions hamper their ability to do so.



4. The teachers testify that they are familiar with common difficulties in understanding and typical errors among the students. The professional development processes they have undergone over recent years have led them to adopt a form of teaching that takes into account their students' thought processes and learning style. However, many teachers do not agree that the individual student should form the center of diagnostic actions or the implementation of their conclusions. Most of the teachers consider this expectation unrealistic — both in a general sense and in the context of the conditions in which they work. This gap between what is expected in this respect and what actually happens on the ground also seems to be due to a lack of clarity regarding the concrete meaning of adapting teaching to the student.

5. Most of the teachers report a significant broadening of the repertoire of teaching methods they control and use, mainly due to the professional development programs in which they are involved. This relates to teaching methods that are organically integrated in the model of quality teaching, since they encourage and reflect its characteristic values, such as discovery, experimentation, openness, and so forth. Regarding the principle of adapting these tools to the students' needs, it is still apparent that while the expectation that they adapt their teaching to the class is perceived as natural, the demand to do so regarding the individual student is more problematic.

6. The teachers express partial support for non-disruptive data collection during the course of the lesson, including the immediate implementation of findings and insights that emerge from this process. Their support is manifested in the principled importance they attach to collecting data for the purpose of quality teaching, but without expressing support for the idea that the individual student should form the center of the diagnostic process and the implementation of its findings.

7. Most of the teachers show an extremely positive attitude toward active participation in a professional community. They report that this has rescued them from the feeling of professional isolation they experienced in the past. The professional community enables them to develop their awareness of their own functioning as teachers through comments and feedback from peers and instructors, and significantly expands the arsenal of teaching means at their disposal. It also provides an opportunity for them to "recharge their batteries" and refresh themselves, reconfirming and enhancing their commitment to excellence. The open, egalitarian atmosphere and the mutual respect and trust that characterize their experience in the community, together with the practicing of different learning means, turn this experience into a type of living laboratory, as shown by the teachers' reports. Teachers can bring problems and examples from their class and take away living illustrations of the concepts and tools they acquire. However, the teachers do not see the community as an arena that focuses on the learning of individual students and on responding to their abilities and difficulties.

In summary, it can be stated that the vast majority of the teachers who participate in the Foundation's programs and who participated in the study support and validate most of the characteristics and components of quality teaching. Their descriptions can be seen as reflecting a change of professional language and culture — from an essentially individualistic, matter-of-fact and cold approach to one that has a more cooperative, collective, emotional, open, and creative character, and that focuses more on the teaching process than on learning achievements.

Introduction

Quality teaching in mathematics and science, as presented in the Trump Foundation's Strategic Roadmap, "is a clinical expertise focusing primarily on providing an individual response to each student's learning." It provides teachers with tools and pedagogical skills adapted to the student's learning needs and characterized by openness, a high level of trust in the students' ability to improve, and a strong commitment to achieving this in practice. Quality teaching "diagnoses" the individual learner's abilities and difficulties and adapts itself to his/her unique pace of learning and thought process. It presents the student with ambitious targets and monitors the rate of progress, providing reinforcing feedback which encourages the ongoing process in an atmosphere of trust.

The theory of quality teaching formed the basis for the formulation of the Quality Teaching Compass. The Compass is a model that provides a graphic representation of the fields and methods of activity of quality teaching. These are grouped into four cornerstones on which this teaching method is based: it is founded on openness and trust; based on data relating to the students' learning; adapted individually for each student; and strives to improve teaching and learning. Each of these principles is expected to be applied in the three types of encounters experienced by the teacher: with the student, with the class, and with the professional community in which the teacher participates.

The goal of this report is to examine the manner in which this model of quality teaching is reflected in the reports of teachers of mathematics and physics at the level of five units who participate in several of the Foundation's programs. A further goal is to discuss various issues raised by the findings regarding this teaching model. In both cases, the report does not claim to examine the teachers' teaching directly, but rather to analyze their own reports and the discussions held between them and the Foundation's representatives on this aspect.

The following are the main types of materials addressed by the report:
A. Reports of structured interviews with teachers of mathematics and physics at the level of five units, undertaken by teacher leaders under the guidance of the Trump Foundation.
B. Reports of observations of teachers while teaching mathematics and physics at the level of five units.
C. Interviews with the heads of the programs in which the teachers participated, or their written summaries regarding quality teaching from the perspective of their PD program.
D. An analysis of the above raw material undertaken by Dr. Guy Ashkenazi, a chemistry teacher at the Israel Arts and Science Academy in Jerusalem who also teaches at the Israel Center for Excellence in Education and who received the Trump Master Teacher Award for 2015.
E. Discussions of various types in plenaries plena and in working groups relating to quality teaching and nurturing teaching as distinct from selective teaching. The discussions took place at a conference held in May 2016 under the auspices and leadership of the Trump Foundation for teachers who participate in the Foundation's different programs.

Despite the partial and subjective nature of these data, this report adopts the basic assumption that dozens of interviews with teachers and observations of their work, summaries from program directors, and hours of lively discussions at the conference **can teach us a lot about quality teaching as it is practiced in the field**.

Proper processing of these materials will include an unbiased external review of the internal examination undertaken by those involved in the processes, who, after all, also ask themselves questions. This will enable an assessment of the extent of the perceived relevance of clinical teaching; the extent to which it has been absorbed in the field; discussion of its various components; and an examination of various difficulties and problems that emerge in the course of its implementation. This information can help the Trump Foundation as it continues to inculcate clinical teaching among teachers of mathematics and physics at the level of five units.

We chose to examine the testimonies and reports with reference to the Foundation's definitions and to the overall concepts of nurturing teaching as opposed to selective teaching.

The Nurturing Approach and the Selective Approach in Light of Clinical Teaching

The Foundation's strategic plan explains several times that the selective perception shared by many teachers and officials has been a destructive force, an obstacle which pushed many capable students to drop down from the five-unit track. This selective ecosystem which dominated the system for many years, led to a clash with the nurturing aspirations of a handful of educators. The Foundation also describes the "traditional" teaching style prevalent in schools in mathematics and physics (and in all probability in other subjects, too). This style focuses on conveying as much study material as possible, while leaving the burden of coping with this material to the student. This approach leaves the level of five units only to those students who are capable of "surviving" on their own. The Foundation has set itself the goal of changing this reality. Accordingly, we can conclude that both simple logic and the discussion of this aspect in the strategic plan see the adoption of a nurturing orientation as an essential and fundamental condition for work in accordance with the clinical teaching vision.

This assertion does not solve all the theoretical and practical questions that follow. In the reports from practice, the clear focus on the perception and practice of clinical teaching leaves very little room for discussion of relevant theoretical concepts. Indeed, the terminology of nurturing versus selective, which, as noted, forms the foundation of clinical teaching, is hardly ever mentioned.

Nurturing Approach versus Selective Approach in Systemic Terms

Nurturing on the system level — The Foundation's strategic plan notes that the actual effect of clinical teaching depends not only on what happens inside the classroom, but also on the system's structure as a whole, the way it operates to advance this approach, and the possibilities for its realization. The way to examine this is to ask to what extent is it accurate to speak of a nurturing approach, as opposed to a selective one, in terms of the system as a whole, and to what extent (assuming this is possible) the system has adopted this nurturing orientation and uses it to guide its actions.

The answers to these questions can only be offered in a limited manner, among other reasons due to the paucity of references to these aspects in the materials available to us. Nevertheless, we can establish with a high level of certainty that the answer to the first question is positive. In other words, a nurturing or a selective approach can be manifested in a practical and concrete manner on the system -wide level in an entire chain of decisions, procedures, policies, and declarations. From this perspective, mathematics and physics studies in schools and the teaching method of each individual teacher are merely one component in this broader structure — a cog that can turn with or against the direction of the machine as a whole.

This raises a further question regarding the present orientation of the system in terms of teaching mathematics and physics. We can take a risk and suggest, in a rather generalized way, that the system is far more nurturing today than it has been in the last few years. After all, the current aspiration and practical effort to enable as many students as possible to reach excellence in these subjects are shared by numerous bodies in the Ministry of Education and elsewhere — including, of course, the Trump Foundation. This clearly reflects the adoption of a nurturing approach, at the expense of the selective approach, which seeks to populate the five-unit tracks with only those students who are perceived from the outset as having the special capability required to succeed. In the selective approach, the teaching process itself is then used to screen and remove unsuitable students.

However, this does not in itself imply that the effort and commitment to nurturing is borne equally by teachers and by the other components of the system. The system in general has other concerns and objectives that may impair its commitment to this aspect. Moreover, the education system in general maintains an organizational culture that also includes a strong selective dimension that presumably filters through to this field. On the concrete level, referring to a system that operates with a nurturing orientation implies one that creates conditions that encourage and facilitate a nurturing approach at all levels — above all on the school level and on the level of the individual teacher, who is supposed to implement this approach through clinical teaching. This contrasts with the adoption of a much easier solution in the form of selection, creating an obstacle course on which only a few survive.

Another key derivative of this discussion is the extent to which the system adopts a nurturing approach, as distinct from a selective one, toward the teachers themselves, and the ancillary question as to what the desirable approach is in this respect. Should a selective approach be applied in admitting new teachers, whereby only the top 10 percent of potential candidates are accepted to teach five units in mathematics and physics? Such an approach seeks to shorten processes and focus directly on outstanding candidates. Alternatively, should a less selective approach be applied to teacher intake, accompanied by massive investments to nurture them as they work in the system? Does the available supply of teachers permit this approach? And what about current teachers: is there any real alternative to nurturing in their regard? A further question is where the programs we examined stand on this issue since they both nurture and select teachers.

Clinical teaching in a nurturing system — In practical terms, the strengthening of the nurturing orientation in the education system in the context of five units in mathematics and physics, at the expense of the selective approach, means a substantial increase in the number of students participating in frameworks for study at the level of five units in these subjects. It is to be hoped that the teachers they encounter in these frameworks have also, for the most part, adopted the nurturing approach. This should be translated into practical teaching using the clinical teaching model. Thus, the correlation between the macro and micro levels would appear to be complete. However, the heart of clinical teaching is the principle of a quasi-clinical approach to each individual student, applying sophisticated diagnostic tools and an individually-adapted learning program. There is a clear practical contradiction between these two trends. The more the

teacher is required to relate to students who have particularly significant nurturing needs—since they are not necessarily "natural" candidates for five units—the less they will be able to meet the expectation of individually-oriented clinical teachers. Paradoxically, therefore, a selective-type system, leading to fewer students in these classes, but more students who are outstanding from the outset, actually permits the maintenance of clinical teaching, though this may be less vital for students with such prominent capabilities from the outset.

When there are lots of students, it's much harder because you can't hear everyone in a big group. If I address them, they answer. I don't remember that we devoted time in the program to how to reach each child in a large class. And I don't think I'd believe anyone who told me that it's possible to do this in large classes without missing any students.

We don't engage in the individual adaptation of teaching. That doesn't seem to be realistic to me, unless it's computerized. The teacher in the classroom can't adapt the teaching methods to suit students who have difficulties, but only according to the state of the class as a whole.

These quotes from teachers show that the most problematic aspect in implementing the clinical teaching model is the teacher-student dynamic. These findings highlight still further the question that emerges here. Can we attribute this difficulty to the increase that has already been seen in the number of students taking five units, leading to a reduction in selectivity in entry to these classes? In all probability this is a negligible factor, at most, particularly since the increased resources provided for schools by the nurturing system will almost certainly have balanced, if not outweighed, the increase in the student-teacher ratio. Accordingly, this specific problem would appear to be more ideological than practical in the present stage. If the nurturing approach later becomes dominant among almost all those involved, leading to a steeper increase in the number of students studying five units, the question presented here that currently seems relatively minor may re-emerge in a stronger form.

The boundaries of nurturing — Is there not a risk that indiscriminate nurturing may sometimes damage students rather than help them? This question was raised several times during the discussions among the teachers at the conference. The desire to reach a critical mass of students studying at five units receiving reinforcement in the form of an enthusiastic nurturing approach may bring to the classroom an increasing number of students whose ability — and, in some cases, whose desire — to overcome this difficult hurdle is limited. The combination of enthusiasm, ambition, and the more sophisticated teaching methods advocated by the clinical teaching approach, which constitute the essence of the nurturing approach, is ultimately expected, after an arduous journey, to enable even hesitant students who have difficulties in reaching the peaks of excellence. In other cases, however, and despite good intentions, this approach may harm students who are genuinely out of place. Such students may come to feel like "ugly ducklings," rather than finding the solution and framework in which they might again be swans in accordance with their own worth and quality.

…students who do not succeed and who receive low grades in five units will feel terrible alongside their friends. They will have failed, and this will not advance them…

Accordingly, is there a need for a selective approach — albeit on a miniature scale — within the overall nurturing framework? Or is this liable to impair the unconditional commitment to nurturing, whose forthright slogan is "everyone can do it" — if we only help; we are not leaving any student behind.

On the principled level, the answer to this question is that we must nurture every student to excellence adapted to their own level. Yet it remains far from clear to what extent this principle can be maintained and translated into practical behavior in the field when this entire project is geared to the goal of five units and will stand or fall on this point.

A further difficulty addressed by some of the teachers themselves is the frustration teachers experience in situations of indiscriminate nurturing when the teacher tries time after time to secure results, without achieving success. In other words, in the indiscriminately selective approach, the teachers safeguard themselves against frustrating situations through the prior exclusion of students likely to face particular difficulties. In the highly nurturing approach, they encounter more situations that provoke despair.

Efficiency of nurturing — Another area of doubt resulting from the current situation concerning mathematics and physics studies at five units, also reflected in the teachers' discussions, relates to considerations of efficiency. Whether they like it or not, teachers encounter such considerations in implementing the principles of clinical teaching in a nurturing system. The nurturing orientation, amplified by clinical teaching, encourages unconditional investment in every student according to individual needs and profiles. However, as the saying goes, "where there are two, a third will also appear," demanding his or her own share of the cake. The need to work with an entire classroom of students in a world of finite resources obliges teachers to consider the allocation of these resources and the measured investment of time and energy. If they fail to do so, they are liable to leave one student unattended to and moreover, to be unfaithful to the goal they have undertaken for themselves and toward the system — of bringing as many students as possible to the five-unit finish line.

This raises another issue also mentioned by the teachers: what about considerations of efficiency and viability regarding the teachers themselves? This point was initially raised in the context of the emotional loss the teacher is liable to experience after investing limitlessly in a student who faces serious difficulties. However, teachers not only have emotions, but also their own interests that can be measured against various yardsticks. Are teachers not liable to be harmed if they fail to plan their steps carefully?

The practical meaning of these comments is the need to put a brake on the teachers' instinct to indiscriminately nurture everyone under their charge, and instead to recognize the cost-benefit aspects of investing in different students. Their situation might almost be compared to that facing a physician who must cope simultaneously with a large number of injured people, and who must consider — alongside other factors — the manner in which their work is evaluated by the management of the HMO or hospital in which they work.

It should be noted that these questions, which range from the theoretical to the practical, become more valid and concrete as the teacher fully internalizes the clinical message of individual work according to the quality teaching model. Teachers who tend to think in terms of work with the class as a whole, and who speak of "my personal class," will be less prone, at least subjectively, to situations in which a focus on one student detracts from others. Accordingly, this may represent a further explanation of the unusual lack of success seen in this component of the clinical teaching compass.

Diagnosis versus selection — Diagnosis is a key tool in the clinical teaching model. Diagnosis is supposed to add the element of individual adaptation to the nurturing approach, which relates to large masses of students. Diagnoses are supposed to identify

the individual's precise level, so that work can proceed from that point at the appropriate pace — always forward, always toward excellence. By contrast, selection is a form of diagnosis whose goal and rationale focus on a horizontal axis rather than a vertical one. With which group or category is this individual to be affiliated? When the number of individuals is large, sub-groups emerge comprising those perceived as sharing similar characteristics. Diagnosis plays an important role in this respect. A simple principle of efficiency and logic leads to the grouping together of "similar" students into sub-groups that are then labeled as "amplified" "strengthened" five units, "weakened" five units, and so forth. Thus, the selection born of diagnosis re-enters the nurturing system through the back door — ostensibly subordinated to the interests of this system and operating in its service. After all, it is easier to nurture students in relatively small and homogenous groups than in a large, heterogeneous class. Once again, this highlights the need for nurturing teachers to have selective capabilities. When operated up to a certain degree, these capabilities can indeed assist the nurturing trend. At the same time, and certainly from that point forward, these capabilities can also sabotage the process. The reports from the field and the surrounding discussions however, include little real discussion of these issues.

Process versus outcome in the nurturing approach — The perspective and language of the nurturing orientation emphasize the supremacy of the process over the outcome. From the standpoint of this approach, the individual is in a constant state of development and change, even if this may be only unrealized potential. Accordingly, what matters is not the student's precise condition at this moment in time, but where they can get to with suitable help — and even then, where they can get to is merely a station on the way to the next objective. In other words, the nurturing approach likens excellence to the horizon. By contrast, the selective orientation tends to have a static character, which automatically focuses on outcome — a given, measurable condition that can be labeled and classified in order to ascertain whether or not the student has performed the task so that their level of success can be quantified and so that they can be pinned at a particular position, pending further notice. If clinical teaching is the executive branch of the nurturing orientation, then it shares the tendency to examine developments through the prism of process. Many of the basic concepts and tools of the clinical teaching model are process oriented. The lack of being judgmental and the emphasis on learning from mistakes both mitigate the tendency to identify students with their performances, particularly when these are unsuccessful.

Multiple ways to reach the same solution, examining the thought processes behind mathematics and physics, and using experimentation and discovery, rather than handing the students a ready-made correct answer — all these create a climate that emphasizes the quality of learning rather than its output. A number of teachers commented on this issue, and on the whole, they tend to accept the notion that it is better to delve deep with the students and ensure a true understanding of the material than to check off another item on the crammed five-unit curriculum. Racing ahead while leaving behind those who are slower or have difficulty absorbing the material serves the interests of the exponents of the selective orientation, for whom the possibility that these students may soon drop out of the chosen framework completely does not constitute a particularly serious problem. The cherry on the cake of the process-based dimension of clinical teaching is that a teacher's work with an individual student, from a position that recognizes that every student — even if they are immersed in the group learning process — nevertheless requires their own language, attention, pace, and ultimately their own definition of achievement. This reduces the outcome-oriented dimension based on the standardization of achievements for the purpose of measurement.

This naturally brings us to the crucial question. Everyone recognizes why more and more students are entering frameworks for mathematics and physics at five units. Accordingly, the focus on the learning process, as highlighted in the reports, should serve a goal that has a distinctly outcome-oriented meaning: increasing the number of students successfully completing the matriculation examination at five units in mathematics and physics. There is probably more than one answer to the contradiction that emerges here between this supreme objective, the very essence of the system, and the demand by clinical teaching, in the spirit of the nurturing approach, that teachers should think and work primarily in terms of the individual student. One of the most prominent answers explains that maximizing attention to individual needs, abilities, and learning possibilities is still undertaken in the service of this same familiar goal — to lead the mass of students to a well-defined finish line. However, it is doubtful whether this tension between the language and conceptual standpoints of these two views can be resolved quite so easily. The learning process in nurturing teaching is undertaken through the genuine nurturing of creativity, openness, and flexibility, in a manner that is more reminiscent of the study of philosophy or art. The standardization of the products of this process by means of uniform measuring tools thus appears particularly incongruent. In this context, outcome-oriented goals such as output, interim tests (as a target rather than as a form of diagnosis) and, of course, the final examination that is common to all — all these must, to an extent, appear as a distraction and a necessary evil rather than the real thing. In other words — if excellence in the spirit of the nurturing orientation is indeed to be likened to the horizon, this horizon is something that can be fixed.

The presentation of this issue clearly includes the deliberate exaggeration of a contradiction that most teachers, as we will see below, do not sense, or at least do not mention in their field reports. The closest they come to dealing with this issue is the sense of discomfort and even displeasure concerning the demand for output in their work with masses of students, thereby impairing their ability to nurture an in-depth process. A less direct manifestation may be teachers' expressions of anger regarding the demands by the leaders of clinical teaching and the support community in their promotion of in-depth learning and individual work while ignoring the conditions in which they work, including the demand that they comply with measurable outputs.

A further interesting reflection of this tension between outcome and process, albeit an indirect one, is the remarkable lack of references to measurable outcomes in the material examined, as we will discuss in the following section. There are very few references to hard data, such as interim test scores, the students' concrete achievements, the percentage of students who have advanced in the number of units they are taking or the percentage of students who have dropped out. Such data almost certainly form part of teachers' daily discourse, but they were apparently not reflected in the common discourse in the reports and in the discussions under the Foundation's auspices — perhaps because this discourse is process-oriented and qualitative rather than outcome-oriented and quantitative.

Quality Teaching Through the Prism of Reality

In this section, we will examine the testimonies and reports from and about the teachers who participate in the programs, in reference to the eight characteristics included in the definition of quality teaching as defined in the Trump Foundation's strategic plan. This will enable us to examine the manner in which quality teaching is perceived and implemented by these teachers, principally in terms of their own testimony.

1. Believe and are convinced that all their students can excel; show deep commitment to making the most of the opportunities they face; present them with high and attainable learning targets; arouse their curiosity; and help them to become independent learners

This characteristic emphasizes excelling and excellence. This is the place the teachers aspire to reach with their students. The brief definition provided here implies a transition from the perception of high achievement as something that rests with teachers — their personal vision of what is supposed to happen with their students — to an approach that is increasingly interactive. Excellence is perceived as the common goal of teacher and student, the product of their mutual relationship, including a description of behavior on the teacher's part that can cause students to aspire to high achievements. Is that what actually happens in the field, though? The majority of the reports that addressed this aspect, directly or indirectly, suggest that the answer is broadly positive.

Belief in the ability of students to reach high achievements — This declaration embodies the perception that the teacher is responsible for the success of all students — not some of them, but all of them. A further element mentioned in this context is enthusiasm — the "*spark in the eyes*" of the teacher that can inspire students, taking them along in an attempt to get as far and as high as possible.

Thus, we are speaking of a commitment made by teachers, fueled by the belief that this is their destiny, along with a strong emotional component, to reach excellent achievements — and no less than that — with all their students, and not just with some of them.

Shared excellence of teachers and students — The teachers' references to this component focused on expressions that present the students' internal monologues – *"the students know that I'm not giving up on anyone…," "they know that a low grade is just an interim stop on the way to a high grade."* Although this was not stated explicitly, these perceptions of the students do not seem to represent a manipulative capacity on the teacher's part to instill beliefs in the students that they themselves do not share. Rather, the goal is to ensure that the teacher's genuine belief in the student, founded on their basic assumption that excellence can be achieved through determination and perseverance, will filter through and reach the student. "*They feel that I am interested in advancing them; every student in advanced physics feels that they are letting me down personally if they don't succeed.*"

Excellence-oriented behavior by teachers in the classroom — A broad array of behaviors fall under this category, most of which will form the focus of the following characteristics of quality teaching. We are referring here to the most fundamental behavioral manifestation of this aspect, the manner in which the teacher's enthusiasm, *"is transferred both directly and indirectly to the students, infecting them with ambition and creating belief in their own abilities."*

"Invest, love the profession, and work with the students – the enthusiasm infects the students, and this encourages them even though they find it hard."

"New tools and a fresh look at certain subjects. As soon as I find a given subject interesting and exciting, this is conveyed to the children, too"

"I come with enthusiasm because I am making innovations, and the students sense this."

What we see here, then, is not merely the definition of the high goal they aspire to reach, but also comments relating to the feelings of insecurity, inability of the students, or even their tendency to make do with less than the best. The teachers thus aim to challenge these feelings and to replace them with a sense of ability and an aspiration to excellence.

"It works wonders when you believe in a child that no-one has ever believed in, and who maybe hasn't believed in themselves, either."

Practical excellence — This heading refers to an admittedly small number of examples presenting concrete achievements and attributed to the teacher's perception of excellence and to the program in which they are participating. These references relate primarily to the two ends of the practical embodiment of excellence — classes at five units in mathematics and physics where there is almost no drop out, and a dramatic rise in the number of students entering such frameworks.

"I used to start out with a class of 14 students, and now there's a real demand – 72 students."

Infecting students with the teacher's belief in excellence as a desirable and realistic characteristic, with the practical behaviors that result, are perceived by the teachers as a practical manifestation of excellence in action, reinforcing their belief in the feasibility of this approach. In terms of the Pygmalion effect, a concept that was mentioned in the field reports, teachers' high expectations of students are translated into behaviors that change and shape the students' expectations and behaviors in similar ways, thereby proving and reinforcing the a priori validity of the high expectations.

"…He conveys the message to the students that everyone will be successful…,"

"He needs to be supported all the time so that he doesn't crash. You put mechanisms in place to support him so that he doesn't fall. It's all a matter of attitude. I talk to them a lot during the lessons, not just about mathematics. I have a lot of discussions with them about personal things during the course of the lessons."

In order to complete the picture, we might ask from where teachers draw these high expectations of their students? How are they created? The reports do not provide a clear response in this respect, but it would appear that for more than a few of these teachers, the programs they participate in, including their spirit of quality teaching, play an important role in their aspiration to excellence. The "spark in their eyes" often comes from the fact of their participation in the program, its prevailing atmosphere, the materials studied and tools acquired — and from there it is passed on to the students.

"I used to see things pretty unequivocally – this one is right for five units, this one is for four units, he doesn't stand a chance. I saw that sometimes children even make an effort during the summer, and then they do better than others we were sure about at the end of 9th grade. This year I'm increasing the number of students allocated to five units. I know that with the help of these methods, and the atmosphere we've managed to create, there will be a group where people say, 'Wow! The kids love to study math!..."

However, the teachers also raised reservations regarding the aspiration to universal excellence:

Excellence, but not for everyone — Some of the teachers, while not abandoning the goal of bringing their students to high achievements, challenge the assumption that this is possible with every student. Their experience shows that it is impossible and unjustified to ignore the inherent inability of some students to secure high achievements in this field. Thus, they question the validity of statements such as "everyone can do it" that are presented by most of the teachers.
"I'm totally in favor of 'almost all the students' rather than 'every student.' My feeling, and my limited experience, suggest that trying to win every student by force ultimately means coming out with fewer students – rather than identifying, after something like six months, which students [should be invested in]. When I see a student who isn't putting themselves into the learning process, despite all my efforts and attempts and conversations, I take that energy and redistribute it among all the other students."

Ignoring the teaching conditions in the field — A criticism leveled by some of the program participants is that the value of excellence it embodies is promoted while ignoring the conditions of teaching the field. Exceptionally large classes, a lack of time, students who are not particularly interested in mathematics, and other factors often complicate and even frustrate the best intentions of teachers in this field.

"The question is what is the purpose of the PLC at this point? It has become a kind of hothouse for excellence. This serves certain goals, but ultimately, I think we need to remember that we have 70-90 percent who aren't in that segment, and we don't discuss them as much. We also aren't really dealing with the problems that most teachers face in the class."

The perception of excellence as a key characteristic of clinical teaching in the field is present, and indeed dominant, among the teachers who participated in the study. However, two issues in this context require deeper clarification. The first relates to the subtle but crucial distinction between excellence as an "I wish" and excellence as an actual commitment to high but attainable achievements, as emphasized in the characteristic itself. We should recall that the subject of excellence and excelling is particularly prone to lofty and sweeping declarations, made with sincerity and passion, but which reflect a kind of group spirit, or even group norm, that gives them more of the character of an aspiration than an actual personal target for which the speaker assumes full responsibility.

This is accompanied by the second question — exactly what achievement are we talking about? The various manifestations of the drive to achieve, mentioned in the materials, are not uniform and are often rather vague. There are few direct discussions of this issue and few attempts to examine opposing definitions and perceptions of the concept. Between the lines, a number of tests of achievement may be perceived, and these can enhance our understanding of what is involved: to reach as many students as possible at the level of five units; to meet the challenge posed by students who are not "natural" candidates for five units; to bring them to this framework and keep them in it. In some cases, the emphasis is on prevention — on the need, "against all the odds," to prevent students who have despaired of reaching five units (as has everyone else involved, with the exception of the teacher in question) from dropping out. In other cases, this question regarding the required achievement is presented as a dichotomy between delving as deeply as possible into the material — an aspect that by definition cannot be precisely measured — and meeting the more quantifiable demands of the system regarding the material covered and the grades received.

2. Create an inclusive atmosphere in their class that builds trust, enables students to ask questions and make mistakes, encourages them to express knowledge and positions, in writing and orally, and encourages them to take cognitive risks. They respect their students, nurture communication skills and creativity, and encourage cooperation.

The definition of this quality emphasizes the ability to make mistakes, take risks, and be creative, with the support of the positive and respectful atmosphere created by the teacher. The support found for the actual manifestation of this characteristic in the reports and the accompanying discussions was particularly strong. Some participants even commented that this is the most important and central characteristic of the clinical teaching compass. The following are three prominent examples of this perception, chosen from among many:

The teacher and the students are partners in the learning process and its underlying goal. In many respects, this is the foundation for this entire characteristic, albeit not on the declarative level. It is impossible to create trust between students and teachers, or to encourage students to take risks (concepts drawn from the language of clinical teaching that the teachers frequently employ) without redefining the status quo and the traditional division of tasks in teacher-student relations. The traditional approach argues that the teacher bears the responsibility for managing, determining, and implementing the work of transmitting the study material to the students, while the latter are likened to an empty vessel that is to be filled without regard to its needs or desires, sometimes at the cost of a power struggle with the students.

From student passivity to activity — A transition from a situation where the student is almost constantly examined to ascertain whether he or she is performing as required to one of experimentation and learning. The concrete manifestations of this aspect include:
- ***A non-judgmental approach*** — changing the prism from the almost-constant perception of the students as "alright or not alright," "poor or good," to one in which diagnosis serves to advance the student.
- ***Regarding errors as a basis for learning*** — this relates not only to the cognitive dimension of this statement, but also to the non-judgmental response to mistakes, including the blurring of the dramatic dichotomy between a mistake and a correct answer, in favor of the perception of both answers as ancillary means for the acquisition of knowledge and understanding.
- ***Aspects of positive psychology*** including a deliberate tendency not to mention students' non-successes and an emphasis on providing positive feedback.

• ***A friendly and open atmosphere*** — the proactive use of exercises and skills by the teacher for creating a comfortable and relaxed climate for learning. This is particularly important during the early stages of the lesson, in the section that the reports refer to as "warm-up exercises."

Trust and mutual respect — The sense of confidence that the teacher inspires in the students, including belief in their own ability to participate in and contribute to the learning process, as well as their ability to secure high achievements. This is complemented by the creation of a situation whereby the student has trust in the teacher — trust in the teacher's positive intentions and caring, and in their stable behavior over the long term. This allows the student to take risks, open up, and share their inner world and difficulties with the teacher.

However, the teachers also raised reservations regarding the aspiration to create an atmosphere of trust:
The main question marks relate to the principle of refraining from making negative comments and focusing solely on positive reinforcement. For some of the teachers, this constitutes a significant departure from their familiar mode of teaching. Some of them feel that this principle goes too far and is inconsistent with simple logic and with their habits as teachers. Accordingly, several of them have refrained from adopting the ceremonies that sometimes accompany this principle, such as clapping in response to students' correct answers. Other opponents, however, noted that although they have not completely abandoned the practice of responding critically to students' mistakes, their utilization of this approach has significantly moderated and softened the tone and character of their responses. For other teachers, their reservations relate to the sweeping nature of this characteristic. Nevertheless, they draw from it an attempt to focus on what can be used from the student's incorrect answer in order to secure improvement, rather than what is wrong and missing. Nevertheless, the overall impression is that this quality has been adopted less widely, and sometimes less deeply, than the others.

"In the training sessions they love to talk about how we mustn't make comments about the students. They love the ideal of being non-judgmental. In all the exercises, they tell us that when a student is successful, you clap. The mathematics teachers refuse to clap. They tried to convince us that if we don't make comments, the students will gain confidence and be willing to have a go and offer an answer. Even now, there are some teachers who don't accept this…"

3. Have a practical understanding as to how students think and learn the subject. They know how knowledge develops in their students and are able to identify typical mistakes, thought processes, learning styles, and developmental processes.

Attention to knowledge about the way students learn, as defined in this characteristic, is present in the teachers' reports, though relatively infrequent and primarily indirect. The main reason for this is that the references are usually embedded in more intensive discussions about the step that automatically follows — the collection of more focused information about the class and the specific students. Such information is evidently intended to update and moderate the generalizations about the thinking and learning patterns of the student population regarded as a whole.

Knowledge about typical difficulties in understanding and mistakes — The teachers report on their growing experience regarding their students' typical mistakes in the relevant fields of study, common difficulties in learning, and the manner in which students acquire proper understanding. This knowledge is supposed to enable them to act even without prior diagnosis, since they can anticipate from previous experience where the students face difficulties and are liable to make mistakes. Such a process is almost inevitable in teaching, since teachers cannot engage in a specific examination of the student's precise position on every single issue before beginning to teach it. However, the teachers' declarations about their reliance on this general knowledge, without relating to the accompanying diagnosis, some of which takes place intuitively, may reflect both their greater confidence regarding this general knowledge and their lack of awareness of its limitations.

Knowledge about lack of knowledge — In a series of statements, the teachers describe the process whereby they overcame what they had learned and believed about what the students have absorbed and what the students actually know, as reflected in the later tests. The awareness of this gap belongs to this characteristic, in terms of knowledge about how the students think and develop knowledge. Some teachers evidently translate this awareness into a broader working assumption whereby such a gap is always present, even if the teacher's subjective impression was different. The practical ramification that results is the need for diagnosis and various teaching methods that encourage and enable students to present openly what they know and what they do not know.

Knowledge embedded in learning tools — Experienced teachers can activate efficient teaching means without being able to offer a good explanation as to their reason. However, the inclusion of this characteristic implies that a clinical teaching teacher is required to gain an explicit understanding of the relationship between the teaching means and the student's learning process. Two common examples of this are teaching through discovery and teaching through errors. Both instances encompass considerable knowledge regarding the way students learn. They understand and internalize the study material better when they discover a scientific or mathematical principle than when it is presented to them on a silver platter. Learning through errors sharpens and deepens their understanding of the study material, since what makes the correct answer right is absorbed more successfully when it is "illuminated" by means of the incorrect answer.

4. Are proficient in the use of diverse measurement and evaluation techniques and are able to adapt these to the context in which learning takes place. They maintain comprehensive documentation of the learning performances of every student and use this on a real-time basis in order to map, diagnose, adapt teaching, and provide constructive and reinforcing feedback.

This characteristic of quality teaching focuses mainly on the teacher as a diagnostician. It conveys a more principled message than might at first appear regarding the perception of clinical teaching, due to the direct connection between awareness of the student's needs and the manner in which the teacher acts. This contrasts with traditional teaching, which provides little room for diagnosis, other than for the purposes of evaluation and selection.

The reason for this is that, according to the traditional approach, it is the students who must adapt to the content and the teacher's teaching style, rather than vice versa. The emphasis is on the contemporary study context — the teacher must be able to identify when to undertake the collection of data over the course of the lesson, without interrupting its course, and how to put the findings and insights that emerge to immediate use.

The corroboration of this characteristic in the teachers' reports is partial. It is easy to find support for the principled importance of collecting data for the purpose of teaching, and details of recommended tools to this end. However, it is more difficult to find reflections of the conviction that the individual student should form the center of diagnosis and of the implementation of its findings.

The importance of collecting data — On this aspect, there is broad agreement that the systematic collection of data relating to the learning and absorption of the material by the students contributes to the quality of teaching. This process enables the teacher to understand the quality and nature of the student's knowledge regarding the study subject, and to adapt their tools and teaching methods accordingly.

"This is great because we are trapped in the assumption that the students understand us perfectly. The diagnostic tasks really open up the possibility to understand that what we say isn't what the students understand..."

"For me, every student is a class. When I look at the class, I don't see it as one unity. I look at every student. When I come to a new class, after a week I can sketch a profile of each student. The students are really important to me."

Diverse and dynamic tools for data collection — The reports mention questionnaires, the use of various types of questions, individual work projects, and so forth as means for revealing the students' "learning performances" and learning difficulties. Most of the teachers appear to have been exposed to a great diversity of diagnostic tools in the various programs, more than those with which they were familiar from their own experience. Despite this, there are repeated complaints about a lack of diagnostic tools, particularly in the context of the individual student.

The diagnostic use of errors — The use of students' errors as a diagnostic tool is just one of the collection of tools teachers use for this purpose. However, its weight in the reports was remarkably strong. This can probably be explained by the fact this tool is beneficial not only at the diagnostic stage, but also in several of the subsequent stages in the clinical teaching process. Another possible reason is that its innovative nature attracts attention and comments, reflecting the participatory and encouraging way in which this diagnostic tool is presented to the students. The emphasis is not on right and wrong answers, but on a joint clarification of the source of the error and possible ways to correct it.

"I always used to check tests vertically. Thanks to the program, I have started checking them horizontally and mapping errors. Then we go through the errors, and immediately after the test we have a lesson about these errors (they receive a photocopy of the answers immediately after the test)."

"For example, one teacher collated the students' errors and prepared index cards. She divided the students into groups and gave each group a card. Each group had to characterize the student's error and think of ways to avoid that kind of error in the future."

However, the teachers also raised reservations regarding the use of diagnosis: The most notable finding that emerges from the various reports relating to this characteristic is the considerable difficulty teachers encounter in implementing its central principle — the idea that diagnosis should be used to adapt the teacher's teaching method to each individual student. As long as this concept remains on the level of the teacher working with the class as a whole, teachers do not seem to encounter any particular problems. However, the prism of teacher-student, rather than teacher-class, is not merely dominant in this characteristic, but exclusive. In this context, there is almost complete agreement that this component of the clinical teaching compass remains on paper only. The Foundation's programs do not appear to be providing an adequate response on this point.

The main arguments raised, some of which are contradictory, are that in practice there is almost no individual diagnosis; that the teachers lack sufficiently sensitive and sophisticated tools for this purpose; and that it is doubtful whether such a process can be implemented. The main reason for this, though not the only one, concerns the conditions in which actual teaching takes place — large classes, time pressure, and so forth. Regarding the question of exactly what prevents individual diagnosis, it is difficult to gain a clear answer from the reports. The same is true concerning various ancillary questions, such as: What does individual diagnosis actually include? And what segment of information becomes invisible in the transition from the class level to the student level?

In the context of the class — the students as a group — teachers have a reasonable picture, according to their own reports, concerning their knowledge and their performance in mathematics or physics at five units. Thus, the teacher can locate a gap between what was taught and what was absorbed, identify typical errors, assess the relative effectiveness of the illustrative tools and teaching methods used in the class, and so forth. The logical conclusion, and one that was sometimes raised in a hesitant manner, is that the process of diagnosing the individual student and locating the differential response corresponding to the diagnostic findings requires a diagnostic map with a much higher resolution than can be obtained from the mapping of the entire class. However, and as noted, the reports raise more questions than adequate answers in this respect.

A minority of the teachers express fuller agreement with the principle of the importance of diagnosis on the level of the individual student, and even report the actual implementation of this process, albeit less frequently. One of the factors that encourages this process is the teacher's heightened sensitivity to the student's difficulties, preferences, and manner of learning, alongside the acquisition of tools for individual diagnosis. The distinction between these two aspects is not always clear, since many of the relevant tools for collecting data from individual students are also used for diagnostics on the class level. Thus, for example, the use of errors as a learning tool can also be applied on a more class-oriented basis, as well as focusing on the teacher's need to gain an in-depth picture of the thought process of each individual student.

A further point mentioned in the diagnostic context relates to teachers' need and ability to diagnose themselves. A number of comments point out that the clinical model for teaching does not include this aspect of the encounter and the teacher's dialogue with themselves, at least indirectly. Some teachers commented that the teacher's diagnostic tendencies and abilities, even when manifested primarily on the class level, ultimately contribute to enhancing the teacher's familiarity with themselves. The reason for this is that the deeper and the more detailed the picture obtained regarding the class's performances, the greater the opportunity for the teacher to reflect on their own strengths and weaknesses.

"I think that we need to talk sometimes about the encounter between the teacher and themselves. Diagnostics enables the teacher to examine their own teaching method…"

"There's a whole column missing here – the teacher! Myself as a teacher. I think that this is where everything starts. I think that there needs to be direct attention to this aspect. During the first year of the program, I heard that people say that the foundation of good teaching ultimately rests on the relationship. The relationship is based, first of all, on who you are – your values and beliefs, the way you judge people and talk to them, and so forth."

5. Use a broad arsenal of teaching approaches and methods and are capable of exercising informed discretion in choosing strategies and techniques according to the context, the subject of the study, the class, and the diagnostic findings of each student.

The fifth characteristic embodies the expectation that the quality teacher will have a command of diverse teaching tools and will use them according to the data from the field. This contrasts with a teacher who does not have access to such an arsenal, or who has access to diverse teaching methods but whose ability to adapt these to the conditions in the field is limited. Accordingly, this characteristic assumes that this teacher is also equipped with a diagnostic capability and the ability to collect data, in accordance with the previous characteristic, both in applying the diverse diagnostic tools and in adapting the teaching means to the right situation.

Although this characteristic is based on the previous one, it differs in one crucial respect. In the previous characteristic, the diagnosis and the adaptation of teaching methods to the findings relate to the individual student, while here the point of reference is broader. Once again, the teacher is required to adapt the teaching methods and style to each student, based on the diagnostic process, but the characteristic adds the dimensions of "the context, the study, the class…" This difference in terms of the expectations presented to teachers is probably due to the fact that in the context of overall teaching, as in the previous characteristic, the challenge is indeed each individual student. In this context, the teacher can obviously have only limited knowledge without diagnosis. By contrast, in aspects such as the context, subject, and class, to which teaching must also be adapted, teachers do not need to apply special diagnostic tools. They are already familiar with the situation and its ramifications from their constant contact with the class. This explanation is particularly pertinent to the dimensions of "context" and "subject of study," and less so to the "class."

The reports paint the following picture in this respect:

Diversity of teaching tools and methods — The general impression is that teachers employ diverse teaching tools and methods, and that this diversity is largely the product of the various programs to which they have been exposed. This is one of the most notable benefits of these programs, and very few reservations emerge in this respect. Even veteran and experienced teachers report that the programs they participated in benefited them in this respect. Accordingly, many teachers explicitly declare that their teaching is now characterized by a high level of diversity in teaching tools and methods. Many of these tools and activities are consistent with the spirit of clinical teaching.

Particularly positive comments were received regarding teaching tools, activities, and diagnostics based on contemporary technologies — computers, smartphones, and so forth. Apart from the benefit these bring for the students and the ability to connect to their world, where such technologies play a key role, this arena also offers the teachers a chance to enter a sphere that some of them have tended to avoid due to a lack of knowledge and confidence.

A further characteristic of many of these tools and methods — "technological" and others — that is particularly important for our purposes is their organic integration in the clinical teaching model, due to their emphasis on activity, experimentation, and the active participation of students in the lesson. These aspects can readily be translated into the values nurtured by clinical education, such as discovery, experimenting, openness, or an accepting and participatory atmosphere. In addition, there is a clear emphasis on the value of diversity rather than the value of each individual means — in contrast to traditional teaching, which would seem to take the opposite approach.

In addition to all these aspects, it is impossible to ignore the teachers' sense of satisfaction and joy at the wide range of means and methods available to them. According to their reports, this satisfaction is shared by the students. For many of the teachers, this diversity has ended the reliance on the same teaching approach and the same few teaching tools that they used for years.

Adapting the teaching method to the field conditions — There are relatively few references to the acquisition of skills in adapting diverse tools to the field conditions. Although this is not stated explicitly, the reports show that adaptation is perceived as based on commonsense, acquired together with the tools themselves and applied without any particular difficulties. This may indeed be the case, though it is also possible that the teachers are unaware of defects in this respect. This description applies particularly to adaptation to context, various circumstantial conditions in which learning takes place, and the study subject, and less so to the class.

However, the teachers also raised reservations regarding the aspiration to adapt teaching:

Adaptation to the class and the student — Most of the teachers see themselves as adapting their more diverse teaching methods to the needs and situation of the class. As already noted, most of them do not modify the learning methods and tools for the individual student, as clinical teaching requires. They respond to this demand with a broad range of reactions, drawing on several arguments to support their rejection. Some of these arguments relate to the impossibility of meeting the implications of the demand to adapt teaching to the individual student given the prevailing conditions in the field — large classes, limited time, and a high level of heterogeneity among the students.

Another type of argument relates to a lack of tools. The teachers do not have adequate diagnostic tools to enable them to identify the unique needs of each student and to adapt the learning method accordingly. Very few reservations were raised on the more principled level, questioning the need for individualized adaptation or its underlying pedagogic rationale. However, the comments made by most of the teachers convey the message that this demand is so impractical, for the reasons noted, that it is totally unrealistic. In some cases, this leads to anger at this excessive demand imposed on the teacher.

The picture becomes even more complex when we examine the reports of some teachers explaining how they adapt their teaching methods to the needs of the class.

The teachers emphasize their sensitivity to the heterogeneity among the students (stronger and weaker students) and pay particular attention to those at both ends of the spectrum. Examples of individual adaptation often include individual work by the teacher with students facing particular difficulties, or the identification of other suitable solutions, such as help from another student. An example of adaptation that does not focus solely on students facing difficulties is the adaptation of the difficulty level of the exercises relating to the subject studied in class in order to identify each student's abilities. These examples raise questions regarding the practical meaning of the concepts of "adaptation to the class" or "adaptation to the student" — concepts that appear to be used in more than one sense in the different reports.

"According to the class and according to the student is a bit problematic. Of course, if a student has a question, I stay behind. You can't arrange an individually adapted plan. It's certainly important to me to know what's happening with each one of them, and I sit with them separately, but it's impossible to provide them with an individual plan…"

What is adaptation to an individual student? — Some teachers talk about their individualized work with students who face difficulties, or the special attention they pay to the "spectrum-end students" in the class, such as giving them individual work. Others declare that they do not currently — and there is no chance that they will in the near future — implement an "individual learning plan." Clearly, these two groups of teachers do not share the same perception as to what constitutes an "individual learning plan." The first group sees this as something familiar and readily accessible, based mainly on help for those who are falling behind in their studies. The second group assumes the existence of some type of diagnosis allowing the mapping at a high resolution of individual needs, characteristics, and forms of perception and learning. At this point they have no idea as to how this might be achieved, or even whether it is possible in the current learning conditions. Accordingly, the expectation that they will apply what is referred to as an "individual learning plan" is perceived as threatening or impractical, particularly when multiplied by the number of students in the class. This is particularly true since, in the reports from the field, this slightly bombastic title is never accompanied by a detailed explanation as to what it actually entails.

Class versus individual — This aspect ostensibly reflects a clear distinction between the two end points: the teacher standing in front of a collection of students, aware of their unique characters as the result of in-depth diagnosis, and teaching each one according to their distinct needs — versus the teacher standing in front of a bunch of faceless students. However, it would appear that there are also interim points where it is far from easy to maintain this distinction. The teachers report the adaptation of their teaching methods to "my own class," thereby transforming the class into a kind of individual. Others depict the class as a body with an anonymous and somewhat undefined center, contrasting with well-diagnosed "ends" of the spectrum, usually defined according to the command of the study material. Another common type of comment regards the class as a united and clearly-defined entity to which the learning method is to be adapted, with the exception of a few individuals who have particular difficulties in learning and therefore receive personal attention.

Under the burden of the demand to engage in the "clinical" diagnosis of the individual student's needs, teachers feel ashamed to say they are failing. This leads to feelings of frustration or anger. Others shrug their shoulders at what they perceive as an unrealistic demand that is detached from the field, and accordingly not worth worrying about too much. Others still report that they adapt the teaching methods to the student's needs as required, although a careful examination of the examples they offer to illustrate this creates the impression that, in practice, what they are doing is not very different from what most of the teachers do in this respect; the difference lies in how they conceptualize these actions.

6. Provide their students with grounded, constructive and reinforcing feedback according to their learning performances. They choose the type of feedback and the appropriate time to present it, and draw on it in order to help the students to internalize the learning targets and to be aware of the extent of the progress they have made.

Feedback is a familiar and well-known tool in the context of curricula, workplaces, and significant goal-oriented activities. The decision to allocate one of the characteristics of quality teaching to feedback, rather than including it as one of the ancillary skills required in order to ensure clinical teaching, presumably reflects the great importance attached to this tool. Our analysis of the findings from the field will therefore focus on the question as to whether the feedback the teachers give their students, according to the teachers' own reports, constitutes universal feedback in the spirit of this characteristic, and if not — in what ways it differs from this ideal, and what implications this has.

Feedback with a positive bias — The fundamental purpose of any feedback is essentially positive — to lead to improvement and progress in the functioning of the recipient of the feedback. Nevertheless, the feedback process itself also usually involves the identification of failings, errors, and weaknesses. Although the traditional approach states that positive points should be raised in the feedback before the negative aspects, the overall balance is usually expected to reflect the actual situation. The feedback reflected in the reports we received shows a significant change in this respect. In keeping with the goal of being non-judgmental and the desire to create a positive and constructive atmosphere, there appears to be a significant diminishing of the tendency to note missing or erroneous aspects, as opposed to positive features.

"There aren't any negative responses. Admiration is shown just for the willingness to offer an answer – to stand in front of everyone and move it forward…"

"Students go up to the board and answer tasks they didn't understand. The teacher provides positive, constructive, and reinforcing feedback…"

Feedback focusing on the method rather than the result — Even in its conventional sense, feedback is not meant to focus solely on the final outcome, but on what led to it. In clinical teaching, as reflected in the reports, there seems to be an effort to consolidate and expand this principle, drawing away from the final outcome (the solution), or indeed the failure to solve the problem, and focusing instead on the way this outcome was achieved. This approach transforms this interaction into an act of review and ordinary learning, rather than classic feedback focusing on the individual's performance from a relatively judgmental viewpoint.

Creating opportunities for positive feedback — Any teaching process invites opportunities for feedback as soon as students are given the chance to respond to the study material. The reports show that beyond this level, many teachers make a deliberate and systematic attempt to create numerous opportunities for feedback, particularly as a platform for group learning, as we discussed above.

"A discussion develops among the students. They offer feedback to each other and do not refer to the teacher as an arbiter. They need to understand why this is a natural law – not because the teacher said so. The students argue about the answers, but not just in terms of right or wrong. What's interesting is not the answer, but the thought process – why it's right or wrong."

The main means used to this end are allowing particularly generous space for mistakes, so that these can be responded to and learned from, as well as a large number of individual tasks and the use of online questionnaires. All these are key diagnostic tools in clinical teaching, but here, as the reports show, they are also used to provide feedback in the spirit of clinical teaching as characterized above.

The picture that emerges from the characteristics we have examined so far describes a form of feedback that accentuates or exaggerates the positive and constructive dimension of regular feedback. As noted, this leads to the reduction of the element of feedback in the interaction and its transformation into a regular learning event. The outcome is that there is more feedback in quantitative terms but less in substantive terms in the classic sense of the word. In its traditional meaning, feedback constitutes a type of ceremony attended by the awarded and the recipient of feedback; the latter stands on trial. The participants and observers at this ceremony can therefore easily distinguish between this event and other learning events, even if the latter also include an element of feedback. In our case, by contrast, the feedback is integrated in the learning process in a more organic way. The participants, with the teacher's encouragement, are all those present in the class, with the result that, in a sense, all of the teaching acquires the character of feedback. Accordingly, there are far fewer distinct feedback events.

This particular type of feedback is consistent with the spirit of quality teaching in its various dimensions, specifically, with the second characteristic, relating to the creation of trust, respect, and an accepting and egalitarian atmosphere. In order to create multiple opportunities for such dramatically constructive feedback, there is obviously a particular need for an atmosphere characterized by the student's trust in the teacher, openness, and egalitarian relations in which barriers between the teacher and the students, and among the students, is reduced to a minimum. Equally, feedback in this spirit forms one of the main components in creating this atmosphere and these relations, especially when contrasted with classic feedback, in which it is very clear who is giving the evaluation and who is receiving it and whether the student acted properly or not, with all the inevitable judgmental ramifications of such a setting.

Another question that emerges from this aspect is the extent to which the use of this type of feedback meets the expectation that a clinical teacher will devote a substantial part of their activity to individual work with each student. Increasing the number of opportunities for individual feedback ostensibly also enables the teacher to diagnose the individual state of each student and to respond accordingly. However, as feedback functions less as a ceremony of judgment and evaluation, and more as a "pure" learning event less directed at the individual, the more it becomes a class experience, making the dimension of teacher-student work in classic feedback less dominant. Whether this is a good thing or a bad thing, it contributes to blurring the distinction we noted above between work with the student and work with the class.

We can assume that most teachers, even when they consider that they have adopted most of the profile of clinical teaching, will experience themselves as working with the student as an individual in situations that highlight their attention to a particular student, such as the provision of feedback to their performance on a given task. Thus, they will feel that the class as a whole should serve as a kind of backdrop in this respect, essentially in the role of passive observer, rather than playing a central role in the interaction. A similar, and perhaps even more accentuated, sense of work with the individual will surely be present during feedback discussions referred to in organizational jargon as "evaluation conversations" or "personal conversations." The emphasis in such conversations is usually not on a concrete event but on the individual's standing relative to their long-term objectives. It is possible that such conversations take place mainly between the teachers who participated in the study, though there are few references to this in the various field reports, and these almost all appear in various other contexts and not in the context of providing feedback.

7. Play an active role in a professional community whose regular activities are led by master teachers, including a systemic focus on students' learning and on analyzing learning and teaching from the classrooms.

8. Build professionalism in teaching together, including formulating a shared perception of teaching, shaping routines for monitoring learning, establishing a support system for students, and engaging in peer learning, including documentation, analysis, feedback, and mentoring.

These two characteristics relate to the importance of the teacher's participation in a professional community as part of the clinical teaching approach. The inclusion of this aspect in the characteristics of clinical teaching may create a logical difficulty. While the other characteristics focus on the outputs of clinical teaching in terms of the teachers' work with the students, these two more clearly address not only the input intended to shape this output (such as a command of diverse teaching methods), but also the definition of an overall arena with its own presence, and to an extent its own outputs.

This may explain why the first of these two characteristics (characteristic #7) emphasizes that the framework focuses on "students' learning and on analyzing learning and teaching from the classrooms." This returns the focus to the teacher's activities with the students, rather than to the events in the community per se, however appealing these may be. Characteristic #8, which we included here with its predecessor due to the organic connection between the two, focuses more strongly on what is supposed to happen in the community, though here, too, the emphasis is on what is defined as "building professionalism in teaching together" manifested, as noted, in tools applied in direct work with the students.

Before discussing the comments on this subject in detail, it is worth noting that the Trump Foundation plan defines a "professional community" as a group of teachers who receive in-service training and are led by "master teachers." However, this is not always the case in various programs that have come under the Foundation's auspices. The "communities" are essentially frameworks for enrichment, guidance, and supervision, some of which indeed meet the definition of a community. In other cases, the teacher receives guidance, support, and supervision from some professional source: sometimes a regular instructor who meets with the teacher on an individual basis, and sometimes several participants and several instructors in diverse formats. Although these distinct formats are significant in examining the teachers' responses to these activities, we chose to address all the formats more or less as a single entity.

From isolation to fellowship — Several of the teachers' comments, particularly the more enthusiastic ones, address this aspect. The community provides an opportunity for the "lone" teacher to experience a sense of partnership, examine themselves in reference to others, and express their needs, satisfactions, and frustrations as a teacher. In many cases, this is accompanied by a sense of friendship and the enjoyment that comes from meeting people with whom the teacher shares so much in common.

Self-awareness and professional awareness — A recurring theme in the teachers' reports, and one we have already noted, is the lack of any space where, according to the clinical teaching compass, teachers work with themselves just as they are supposed to work with the student, class, and community. Various comments on this subject suggest that ironically the community framework, in which teachers are among peers, actually permits this introspection. Through the mediation of other teachers, through comparison to them in conditions that are relatively open yet protected, including the giving and receiving of individual feedback, teachers gain deeper insight into themselves as teachers and as humans.

"We have modeling days as part of the program. They observe us, and we observe our colleagues. And suddenly the door opens and everyone is observing me. At least I have some feedback, reinforcement, criticism."

"It adds confidence. We exchange materials, spread our wings, it motivates us and inspires us. It helped me to address problems from a more qualitative angle. I use the tools I get there with all the groups, not only the five-unit group."

Professionalism — The various comments readily illustrate the manner in which the teachers' concept of professionalism is expanded and empowered in the community framework. In addition to enrichment in mathematics knowledge, teachers also benefit from the entire world of quality pedagogy. The components of this world range from the acquisition of more tools, methods, and techniques for conveying the material, and sometimes the provision of "softer" skills in the behavioral dimension that are required in order to undertake the demands of clinical teaching properly, through to an aspect that was also mentioned in the reports, albeit less frequently: deepening and enrichment on more principled issues underlying the entire structure. Many teachers report that the community made a real contribution on these aspects. Even more experienced teachers, who sometimes report that they have developed their own well-shaped professional theory, note that the community sessions increased and expanded their repertoire, at least in terms of teaching techniques and methods.

Renewal — Aspects that can be noted here include the perceived benefit of the community in terms of the teachers' willingness to move beyond their safe zone of action, to take a risk, and adopt working and teaching methods that differ significantly from those they have been used to and have seen as characterizing their work. In some cases, this might go as far as putting on a multicolored hat in a lesson to convey some kind of symbolic point. But even in the teachers' less exceptional behaviors, as many of them note, there have been significant changes compared to how they previously permitted themselves to act.

"The community gave me something else – my teaching became less about learning with the student and less about frontal teaching all the time. For example, research labs – you give [the task] to the students, they move ahead, and I guide them. In the past, I was nervous about giving tasks like that, because I thought it would waste my time… and I wouldn't get through the material for the matriculation… The community removed obstacles that I face, too – not just ones the students face."

The aspiration to excellence — The way in which the aspiration to excellence is gradually built and reinforced by this group framework can be identified clearly. This excellence has a relative character — the teacher is exposed to the performances of their peers, just as they are exposed to his or her performance, and naturally no-one wants to fall behind and ideally, they want to outstrip their peers. There is also a more absolute dimension to the aspiration to excellence, when clinical teaching is divided into various segments, each of which has its own rank of achievement. Thus, alongside the more familiar challenges of increasing the number of students studying at five units, preventing dropout, and so forth, additional challenges emerge in terms of the teaching process, the activation of various teaching tools, and so forth.

These aspects all take place through a process of intensive discourse that also offers significant opportunities to receive feedback, together with a constant drive to improve achievements. More than a few teachers describe this process using such terms as "enthusiasm," "new energies," or "a spark in the eyes." They explain that this leads them to take themselves and their students to new places that previously were the reserve of the few.

"Basically, the fact that I was in the community and discussed these things, first of all influenced the number of students in the track. I can't point to anything specific, but the whole atmosphere of participating in the community, and having tools that you can use, makes you more confident about what you're doing. And this confidence enables you to accept more students, even ones who aren't especially strong, because you know how to cope with them…"

The community as a role model — From the descriptions of what happens in the teachers' community and what these frameworks achieve, it can readily be seen that much of what is reported is similar to the classes where these teachers teach. The analogy we noted just above — the nurturing of the value of excellence in the teacher's community that is then translated to nurturing excellence in the class — is just one of many. Indeed, almost every significant aspect of the community activities has its parallel in the classroom. The teachers' growing awareness of themselves in this framework is analogous to the emergence of greater awareness among the students of their own capabilities and difficulties. Tools such as mutual feedback are naturally employed in both these arenas. Above all, the creation of an open atmosphere, honest talk, mutual respect and trust that forms the basis of quality teaching with students is no less characteristic of the teachers' experience in the community. In this sense, the community functions as a living model and a forum for the preliminary exercising of what will later be applied in the classroom. In some cases, of course, the order is reversed. These embody what we might sum up as an approach of "do not do anything to your student that hasn't first been done to you in the community."

However, the teachers also raised reservations regarding the work in the professional community:
The teachers' comments regarding their participation in the various frameworks of what is referred to as the "community" clearly show that most of them believe that this component of clinical teaching makes a real contribution to the quality of their own teaching. Nevertheless, it is worth distinguishing between the majority of teachers and a minority in this respect. For the majority, in particular for younger teachers, this is a process of learning and empowerment without which they would find it difficult fully to perceive and implement the clinical teaching approach. Others, particularly more veteran and experienced teachers, do not relate to the community in such generous terms, though as we already noted the framework provides an opportunity to refine their professional approach and enrich their repertoire with additional tools and skills. A third group includes teachers who expressed reservations regarding this concept and many of its components. Those who stated their position overtly appear to have less substantive or general reservations, though here and there the reports mention other teachers whose colleagues believe have not gained from the joint learning process and from this experience, and who have effectively stood their ground as teachers and declined to move.

Nevertheless, the clear impression is that the overwhelming majority of reporting teachers underwent a meaningful learning process in the community, including a prominent component of acquiring tools and knowledge, as an experiential and emotional dimension. The community has thereby made a real contribution to their development as teachers and to their ability to achieve what is supposed to be the ultimate test of activity in this framework — a higher quality of work with the students.

A possible reservation that could be raised here is to suggest that the gap between the teachers' community and the class of students cannot be bridged in such a simplistic manner as implied by many of those involved in the process. The more experiential, rich, and elevated the events in the teachers' learning group, and therefore the more they manage to overcome and rise above the reality in the field, the more likely the possibility that this framework will distance itself from the more prosaic and less sparkling reality that faces teachers in the field. The comments to this effect, of which there are not many, appear in the reports in the context of what were defined as "systemic elements" — aspects such as the large number of students in the class, time pressures, the need to meet the demands of the curriculum, and so forth.

The question is not confined to the possibly natural tension between the "field," which of course is in itself not monolithic, and the community classroom. An even more important factor may be the presence of open discussion regarding this tension and its ramifications. Are these voices raised and given a genuine response, or are they unwittingly blurred and diminished? The number of references to this aspect in the reports is limited, but the following examples illustrate the issue from two distinctly different perspectives:

"If I only followed the approach of the hothouse, it wouldn't be realistic. There's this sword hanging over us to complete the material. You can't always do the ideal thing – it isn't always realistic when we have to cover the material. If we had a freer hand that would really be great, but that's not the situation at present. I imagine that each school can take what is relevant for itself…"

"You can't give too much room to this method in the classroom, because of the time it requires (the activity requires four hours, so it cannot be implemented regularly). But this really heightened our understanding that if you just stand in front of the class and tell them stuff, and you're sure they've understood, it doesn't really work – in the next lesson you realize that they're failing on a similar question. Not every lesson revolves around this axis, but it heightened our understanding of this."

Conclusion

1. Clinical teaching as a selected teaching method for teachers of mathematics and physics at five units receives significant support from our analysis of the content of the written and oral reports of teachers and directors of the programs in which these teachers participated. These programs do not address the inculcation of clinical teaching, but rather provide enrichment, enhancement, and improvement of the quality of these teachers' teaching, each in its own way and according to its own world of concepts. Precisely because of this, it is very significant that most of these teachers saw a close affinity between the clinical teaching compass and what they learn in the programs, their daily practice as teachers, and the way they teach in their classrooms. These are not individuals who have undergone indoctrination in the method validated here and who therefore pay lip service to this ideology. Even if we take into account that these reports were prepared in a semi-professional manner, they nevertheless paint a very positive picture of clinical teaching and of the Trump Foundation's choice to sponsor these programs.

2.Most of the teachers state that the programs they have participated in have benefited them significantly, with an emphasis on programs that, in the language of clinical teaching, embody the interactive teacher-community component. The main benefit is in the sense of sharing, overcoming professional isolation, and improving their professionalism as teachers. Among other aspects, this includes the acquisition of teaching tools and methods, the clarification of relevant pedagogic issues and concepts, and various teaching and communications skills.

3. Most of the teachers also report a significant change in the way they teach in practice. This change is consistent with most of the characteristics of clinical teaching. This begins with setting more ambitious goals for their teaching, through to creating relationships of mutual trust and respect with the students, and the use of a richer repertoire of teaching methods and tools than in the past, adapted to the students' needs and capabilities, after these have been diagnosed. The teachers sense that this creates change which favors preparing the students for matriculation in five units of mathematics and physics and enhancing their achievements.

4. The description by most of the teachers of what happens in the professional learning community to which they belong, and to a large extent what happens in the classrooms, embodies a change in the professional culture and language of teaching. The exposure to clinical teaching, directly and through programs and communities that speak its language, the keywords in their new discourse, and the accompanying values all have a more participatory, social, process-based, emotional, open, and creative character.

However:
5. To what extent is this clinical teaching, or something similar to clinical teaching? Does the manner in which the clinical teaching compass is validated as the common denominator of the Foundation's programs, and the way the teachers actually teach, not also allow for the possibility that what

is happening here is a certain blurring of the existing variance in teaching methods and means? Do a number of ways exist to apply the compass, all of which count as clinical teaching? To what extent is this an approach or philosophy of education, and to what extent is it a defined and closed set of behaviors? To what extent is the goal to create an open process of improvement and depth, and to what extent is it to secure results that can be measured in examinations? The profound inculcation of clinical teaching would seem to demand attention to these questions, too.

6. The affirmation and approval provided for clinical teaching by the teachers in the programs are not unanimous, even if most of them clearly offer their seal of support and acceptance. A minority of teachers appeared to emphasize the fact that their mature and well-developed teaching method has not changed much following their participation in the program, though it has been enriched through the provision of greater diversity in teaching tools and methods. Some other teachers — by their own statements and as testified by others — have not "connected" to this method. Which of these three groups best represents teachers who have not participated in any of these programs? At this point, it is doubtful whether we can offer a clear answer to this question, particularly since the test is what happens to the regular teacher following participation in the program, exposure to the concepts of clinical teaching, and how he or she is subsequently classified.

7. As noted, the component of the compass relating to the interaction between the teacher and the individual student did not receive the same support and affirmation from the participants in this study as the other components of the model. This finding raises various questions. Firstly, what is the reason for this? Do the teachers lack skills and suitable teaching skills which prevent them from implementing this aspect as required? Or does the blame lie in the conditions of learning in the field that make this impossible? Perhaps the problem is not one of learning conditions or the teachers' skills, but rather relates to a lack of confidence on the teachers' part in their abilities, or a lack of conviction regarding the importance of this matter, so that they need to be convinced on this point. Of course, it is also possible that this is merely a matter of poor communication and definitions.

There is a lack of clarity that obscures such questions as the meaning of work with an individual as part of a class. To what extent do the teachers really understand the expectations presented by the compass? The actual situation on the ground may be much closer to the demands, so that the point of disconnection is indeed the language used to describe the situation. What do individual diagnosis and an individual learning plan really mean? Lastly, if the significant gap between the demands in this field and the actual situation is a genuine one, does this relate to a substantive component of quality teaching, as implied by the frequent references to teaching of a "clinical" nature? Whether the answer to this is positive or negative, there seems to be a need for a thorough clarification of this aspect and of the teachers' work based on the findings presented here.

8. Is there a danger of a "herd mentality" regarding clinical teaching? Although the reports seem to reflect free and open discourse in the various programs, as also inculcated in the classrooms, this question is always present. This is particularly true since it relates not only to teaching techniques, but also to an approach that has a value-based dimension, faith in the system, and even an element of preaching. There is always concern that the vital need to win over minds and to inculcate the preferred educational approach may, by way of an almost inevitable side effect, result in the emergence of a herd mentality that allows more room for criticism within the method than for criticism of the method. This is all the more the case given that we have identified here a change in discourse and communication, as noted above. What about those who encounter difficulties, or who refuse to speak this new language? And what happens when someone challenges its basic assumptions? Do all the teachers join the programs, or only a certain type of teacher?

9. The systemic factors in the school and beyond are usually mentioned in the reports by way of "background noise" that impairs the ability to implement clinical teaching properly. It is reasonable to assume that the opposite is also the case, but this is not mentioned as often. There would appear to be a need for more information about the school and about other relevant elements in this respect. What barriers impede clinical teaching? What encourages it? To what extent is it supposed to adapt itself to the conditions in the field? Excessive adaptation to the grassroots conditions is liable to damage the aspiration to excellence and lead to a tendency to accept "second best" and mediocrity. Conversely, ignoring these conditions and over-idealizing the system is liable, once the initial enthusiasm wanes, to reveal teachers who have been left behind because they perceived their daily reality as too far removed from the impassioned — but in their view unrealistic — picture presented in the community. ■

Professional Learning Communities

Theory and Practice Reciprocity in Science and Mathematics Teachers' PLCs

Ron Blonder

Teachers are the most essential factor in achieving a good education. The McKinsey report (Barber & Mourshed, 2007), which investigated successful education systems, described two basic requirements for developing a high-quality education system: Attracting high-quality teachers when they first enter the system and continuously developing them professionally. The authors state, 1. The quality of an education system cannot exceed the quality of its teachers; and 2. The only way to improve outcomes is by improving instruction. The conclusion derived from these statements is that any effort to improve an existing educational system should focus on offering the teachers ways to keep developing their knowledge and skills effectively.

Professional Learning Communities (PLCs), where teachers meet regularly to scrutinize their teaching practices and their students' learning achievements, are a supportive framework for the continuing professional development of teachers (Grossman, Wineberg, & Woolworth, 2001). Having proven to impact teaching practices and student learning (Vescio, Ross, & Adams, 2008), many countries have adopted the PLC framework to develop teachers professionally. The present paper examines the reciprocal connections between five Israeli PLC networks and the existing research literature on the professional development of teachers within PLCs. Over the past decade, five science and mathematics teachers' PLC networks have been established in Israel as part of the Trump Foundation's systematic investment in improving the achievements of high school students in sciences and mathematics. The present article lays out their main features followed by their leading guidelines based on research publications and interviews with their academic heads.

The five PLCs presented cover five disciplines: physics, chemistry, middle school science and technology, mathematics (Club 5), and middle school mathematics school coordinators. The discussion also explores the interconnections between the theoretical research literature and the five networks' practical work.

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One definition of the Merriam-Webster dictionary for "community" is "A body of persons of common and especially professional interests scattered through a larger society." (Community, 2022). In the current paper, we refer to communities of science or mathematics teachers who share the common interest of developing their professional knowledge and skills to enhance the teaching of their disciplines in the school. The literature has recognized that belonging to professional communities with shared interests and characteristics supports the members' professional development (PD) throughout their careers (Blonder & Vescio, 2022).

Lave and Wenger's description (1991) of the social nature of professionals' learning explains why PLCs promote the development of their members. Teachers' PLC members may initially have a peripheral position but develop gradually to become active members who contribute more to the community based on the situated learning approach. The literature identifies five features that make PLCs a desirable PD path (Bolam, McMahon, Stoll, Thomas, & Wallace).

The descriptions vary somewhat as scholars like Bolam et al. (2005) identify additional attributes they assume necessary for the effective functioning of PLCs. Despite these slight variations, I engage in this chapter with the five main features mentioned across the different publications (Blonder & Vescio, 2022). The first is that PLCs function under a shared set of norms and values developed by their participants, providing a foundation for the PLCs' future work. The second is that PLC members focus on and are collectively responsible for student learning.

The key here is focusing on the learners' experience that results from the manner of teaching (Hadar & Brody, 2013), in contrast to using PLC work to merely improve student scores on standardized tests (Cochran-Smith & Lytle, 2009). The third PLC feature is that its members engage in a reflective dialogue about their teaching and student learning. Fourth is the PLC's focus on collaboration. The fifth and final PLC feature is that the educators involved must be willing to make public and put to the test their own teaching practices (Vescio et al., 2008). Collectively, these five features work in tandem to create a theoretical foundation for a successful teacher PD. Recognizing teacher communities as effective frameworks for teachers' PD highlights the centrality of collaborative learning for subject matter knowledge, pedagogical content knowledge, and teaching practice within the PLCs (Borko, 2004).

The teachers' PLC networks described in this chapter follow the fan model. According to this model, a lead PLC whose members are lead teachers meets twice monthly at their guiding academic institution. In the intervening weeks, they lead regional PLC gatherings in their schools or elsewhere in their geographic region. The fan model is bi-directional. The academic institution offers top-down knowledge produced through collaboration between the teacher leaders of the leading community.

In parallel, teachers in the regional communities propose bottom-up knowledge and activities influencing the lead PLC's agenda. These two processes are interconnected as the members of the leading community test the activities in their classes and communities, and their insights influence the original design of the lead PLC.

Five science and mathematics teachers' PLC networks

The following is a description of the five operating teachers' PLC networks. They appear in chronological order based on their establishment year.

The Physics Teachers' PLC

The physics PLC network of advanced-level high school physics teachers, initiated in 2011, has been centered at the Weizmann Institute of Science and runs with the support of the Ministry of Education and the Trump Foundation. The network has continuously comprised about 11 PLCs that have served as a platform for the PD of about 250 high school physics teachers, making about a third of the physics teachers in Israel, who teach about 15,000 students per year.

The present description of the Physics Teachers' PLCs leans on the following sources: 1. An interview conducted on March 20, 2022, with the former PLC leaders, Dr. Esther Bagno and the Principle Investigator (PI) Prof. Bat Sheva Eylon, and with the current leaders since 2017, Dr. Smadar Levy and Prof. Edit Yerushalmi (PI). 2. Scientific publications (e.g., (Levy, Bagno, Berger, & Eylon). 3. Research by Weizmann Institute physics department graduates (e.g., the Ph.D. dissertations of Smadar Levy and Michal Walter, supervised by Prof. Bat Sheva Eylon, Dr. Esther Bagno, and Dr. Hana Berger, and their post-doctoral research supervised by Prof. Edit Yerushalmi; M.Sc. student Noga Adi supervised by Prof. Edit Yerushalmi & Dr. Smadar Levy). 4. Documents prepared for the Trump Foundation, which funded the operation of the PLCs jointly with the Weizmann Institute of Science and the Ministry of Education.

The teachers' PD in the PLCs follows the situated learning approach. It offers opportunities to collaboratively reflect on teaching practices from a learner's perspective through new research-based instructional strategies and materials presented at PLC meetings, and meet physics teachers implementing the new activities in their classes and examining the evidences from their classroom experiences with their peers.

Goals of the physics teachers' PLCs

1. Promoting a learner-centered and diagnosis-based pedagogy towards 21st-century scientific and learning practices
2. Responding to the ongoing needs of physics teachers and students
3. Expanding the target physics student body
4. Developing in the teachers a reflective stance towards their practice.

Design principles to achieve these goals

The program derives from disciplinary content related both to the school syllabi and the scientific and learning practices recommended by prominent educational organizations to meet future needs of physics high school graduates. This allows the teachers to benefit from the programs' relevance and potential contribution.
The following are some examples:

• *Promoting a learner-centered and diagnosis-based pedagogy to suit 21st century learning and scientific practices.*
By this we refer to scientific practices meant to empower students as doers and learners of physics, including: constructing on their own the conceptual models required to explain natural phenomena, exercising personal agency in the process, and engaging in a nonlinear process of reflection and learning. Professional development themes, such as Deliberation Labs (Levy et al., 2020) are carefully designed to adjust existing norms and expertise to new goals. The activities' design follows the KI framework (Linn & Eylon, 2011) and involves four processes: ***Elicitation*** of learners' existing knowledge; ***Adding*** new ideas; ***Developing*** criteria to negotiate ideas; and ***Sorting out*** — consolidating learning.

• *Responding to the ongoing needs of physics teachers and students.* Teachers highly value learning from each other's experiences.

The program offers multiple opportunities for teachers to discuss physics and its teaching with peers in a non-judgmental learning environment and share inspiring practical ideas and teaching materials for their classes. The PLCs offer the teachers prompt responses to their questions and dilemmas, and assist them in handling difficulties.

• *Expanding the target physics student body.*
The PLCs play a vital role in strengthening teachers' resilience by offering an abundance of pedagogical materials and assisting them in adapting classes to diverse student populations. To tailor the instruction to more students, the PLCs introduce diagnostic activities and materials that allow teachers to identify students' naive conceptions and novice problem-solving approaches and propose instructional strategies and materials tailored to students' needs.

• *Developing in teachers a reflective stance towards their practice.* Examples appear in the next section.

Research-based insights

A study of the lead teachers' PLC revealed that it offers its members an interactive and supportive learning environment (Levy et al., 2021). It supports knowledge development by offering opportunities to reflect on the ideas it has put forward after the lead teachers implement them in their classes and the regional communities they lead, thus changing their attitudes and practices.
Another Ph.D. research (Walter, 2021) focused on promoting learner-centered considerations in the physics lead teachers' PLC through collaborative lesson planning. The term "junction" elaborates on the KI framework and was introduced to help the teachers notice pedagogical opportunities. The elicitation junction, for example, is an opportunity for the teachers to identify and expose their students' knowledge.
The researchers found that the focus of the teachers' pedagogical discourse changed over the eighteen months since the beginning of the PLC activity from describing their actions as teachers to centering attention on explaining their pedagogical considerations. Moreover, a shift occurred from general explanations to student-centered ones and increased usage of the adapted KI terminology.
Finally, Levy et al. (2022) studied teacher professional development within the "Flag Person Framework," a structured form of collaborative reflection on practice, recently introduced in the PLCs as a means to support teachers who make changes to their instruction. Teachers' attempts to address calls for granting students more agency over scientific practices are commonly hindered by former norms and habits, and by their surrounding structural constraints — shortage in time and resources, and external exams. The study examined the Flag Person Framework in the instructional lab context. It found that it supported teachers in a gradual process of change, allowing them to collaboratively explore goals and find ways to reorient instruction to achieve them.

The Chemistry Teachers' PLC

The description of the chemistry teachers' PLCs leans on an interview conducted on March 16, 2022, with Dr. Dvora Katchevich, who has headed the network since its establishment and on scientific publications (Blonder & Waldman, 2021; Waldman & Blonder, 2020). The author of this chapter has been the principle academic investigator (PI) of the chemistry teachers' PLCs since their establishment.

The chemistry PLCs, initiated in 2014, have been centered at the Weizmann Institute of Science and run with the support of the Ministry of Education and the Trump Foundation. They have continuously sustained since then a network of about 12 PLCs that have served as platforms for the PD of high school chemistry teachers across Israel.

Goals of the chemistry teachers' PLC

Other than developing knowledge and skills, the chemistry teachers' PLC encourages its members to explicitly articulate their pedagogical considerations in an environment that boosts their sense of belonging to the chemistry teachers' community. The teachers' professional development design aims to support them in applying their knowledge and skills and allow them to introduce varied pedagogical considerations into their teaching, thus benefitting their students. The chemistry teachers' PLC activities support the teachers and encourage them to transfer new ideas, knowledge, and skills related to chemistry teaching and implement them in their classes. Another PLC goal is to attend to the chemistry teachers' isolation at school and create in them a sense of belonging to their community.

Most Israeli schools employ a single chemistry teacher who works alone without a team of colleagues with whom to consult or collaborate. The PLC is a safe place where chemistry teachers meet regularly, explore their teaching practices, and share pedagogical considerations and artifacts from their students' learning. Lastly, the leading PLC is a platform for leadership development among the chemistry teachers in Israel. It offers excellent teachers a professional development path while sustaining their roles as chemistry teachers in school. They can thus enhance their professionalism as chemistry teachers in a different way from the traditional one that tends to direct the teachers to management roles.

Achieving the goals

The PLCs work under the academic umbrella of the Weizmann Institute of Science.[1] They differ from the DuFour PLCs (DuFour & Eaker, 1998), where the teachers of the regional PLCs learn on their own without external inputs. The academic umbrella provides research-based inputs broadening the perspectives of the participating teachers, as will be shown next in the description of the PLC activities' structure.

To achieve their goals, the chemistry teachers' PLC meetings adhere to the following guidelines:

• Create a sense of community (SoC) and build trust among the participating teachers. To foster and sustain SoC, every PLC meeting begins with a short opening session that deepens the participants' social and personal acquaintance.[2] To strengthen the SoC, the PLC leaders have opened a WhatsApp group for the PLC. In this closed WhatsApp group, the teachers keep contact between the meetings in a process that supports the development of SoC and teachers' knowledge, as is described below in the research insights section.

• Investigate students' understanding and misconceptions. PLC chemistry teachers can examine their students' misconceptions by using diagnostic tools designed specifically for this purpose. The diagnostic tools, developed and validated in the Weizmann Institute of Science (Easa & Blonder, 2022), offer the teachers a practical means of exposing student misconceptions in each high school chemistry curricular topic. In the PLC, teachers are introduced to the diagnostic tool, and discuss their own findings in the following PLC meeting.

• Examine pedagogical content knowledge (PCK). The PLC forum discusses pedagogical ways to deal with misconceptions teachers discover in their classes (based on evidence from the diagnostic tools' analysis in class). In these discussions, the teachers openly share their PCK and explain the pedagogical considerations behind choosing a specific way of teaching to address the diagnostic tools' findings about their students. The PLC teachers also present problems they face in their chemistry classes, to get help from the PLC forum. In their pedagogical discussion, the PLC members address the raised issue by sharing their experiences and pedagogical considerations.

• Expose the teachers to new laboratory and digital tools for chemistry teaching. In chemistry teaching, laboratory experiments demonstrate chemical phenomena and provide the students with opportunities to probe them. Digital tools and applications support the abstract explanation of chemical phenomena and concepts. The chemistry PLC is a safe environment to discuss the integration of these means in the chemistry class.

• Offer a stage to the PLC teachers. A dedicated part of the PLC meeting allows one of the teachers to present a short activity such as a lab experiment, a demonstration, or a technological tool, for the other teachers to easily adapt to their own classes. The speaker shares a successfully applied practice, explains the reasons for its success, and receives the PLC members' recognition. The presentation is a valuable opportunity for the presenters to receive feedback from their PLC peers. The feedback is twofold: verbal feedback immediately after the presentation, and teachers' reported impressions after they try out the presented activity in their classes.

Research-based insights

The chemistry teachers' PLCs have researched various issues, including the conditions for developing a sense of community (McMillan & Chavis, 1986), essential for fostering trust and creating a safe environment for sharing difficulties, questions, findings from class experiences, and teaching materials. Furthermore, the researchers issued written recommendations to guide other PLC leaders in using the PLC WhatsApp group to develop a sense of community (Waldman & Blonder, 2020). The WhatsApp group is a participant-driven constructivist tool for ongoing intensive interaction that facilitates sharing practical knowledge corresponding directly to the members' needs.

Blonder and Waldman (2021) outlined a novel mechanism of teacher knowledge development supported by the online communication platform routinely used by the PLC members. They found that the WhatsApp group interactions help teachers overcome the filters that hinder the implementation of new practices in their teaching, thus providing an alternative development path for their knowledge and skills.

Research of the variables that affected teachers' PD within the PLCs revealed that trust and implementation of PLC ideas in the classroom had a different impact on teachers at various points in their career (Blonder & Vescio, 2022). Trust among the PLC members proved essential for the development of new teachers, but its influence on teachers' PD decreased as they gained experience. In contrast, the implementation of knowledge and skills as introduced in the PLC meetings impacted the PD of experienced teachers but had no effect on the perceived PD of novice teachers. These insights suggest that the approach to teachers' PD should be differential.

The idea of adopting a differential approach to teachers' PD, which emerged in this research, lays the basis for a different framework for teachers' PD, which is in line with the personalization stance that puts the learner at the center of the learning process. The uniqueness of this research is that the learners here are the teachers themselves. Another research insight is related to different routes by which the leading teachers developed the lead identity. Most of the development routes guide the teachers towards management or administrative roles. The leading PLC provides a unique development platform for chemistry teachers who do not wish to leave the teaching profession but to develop themselves as teachers.

The Club-5 mathematics teachers' communities of practice

The description of the Club-5 mathematics teachers' communities is based on Leikin and Aisik (2020).

The Club-5 mathematics teachers' communities of practice (CoP)[3] initiated in 2014 are centered at Haifa University and run with the support of the Ministry of Education and the Trump Foundation. They have continuously sustained a network of about 18 PLCs supporting the PD of advanced-level mathematics high school teachers.

Goals of the Club-5 mathematics teachers CoP

The CoP was set up to improve the quality of mathematics teaching in the advanced-level mathematics track of Israeli high schools. Achieving this goal requires strengthening the teachers' proficiency and developing their skills to cope with the increasing heterogeneity that results from accepting more students to the advanced mathematics classes.

Achieving the goals

In its first year, the project was devoted to developing the lead teachers' knowledge and skills. They, for their part, applied those skills from the second year on to educate mathematics teachers in regional CoPs. The lead teachers took an academic course that explored the connection between research and practice and touched on issues encountered in mathematics teaching and the PD of mathematics teachers. The leading CoP defined four core guidelines for the Club-5 community operation based on literature dealing with teachers' PLCs and a dialogue with the lead teachers:

- Create a comfort zone within the Club-5 communities to continuously support the mathematics teachers in sharing their positive experiences and cooperating on problem solving and mathematics teaching.

- Adopt an inquiry-based learning approach by Club-5 teachers. Such an approach implies reading research literature in mathematics education to determine a common terminology, translating research findings into changes in instructional approaches, and analyzing the educational aspects of mathematics assignments and the specific characteristics of advanced mathematics students. To stimulate the participating teachers, the CoP meetings include implementing various types of cooperative learning. A unique principle of the Club-5 CoP is focusing on creativity-inspired activities by designing and implementing creative activities and redesigning existing activities accordingly.

- Devote time to designing special activities for implementation in class and experimenting with them in the CoP meetings.

- Collaborative reflection following the activities' implementation in class.

Research-based insights

The central insight from the Club-5 mathematics teachers CoP regards the specific creativity-oriented activities designed for the advanced-level mathematics classes. These CoP activities enhanced the teachers' mathematical, pedagogical, and educational knowledge and deepened their mathematical and meta-mathematical knowledge and awareness. The researchers (Leikin & Aisik, 2020) suggest expanding further the implementation of this approach to benefit basic-level mathematics schoolteachers as well. The community leaders' research underscored the central role of the lead teachers in sustaining the CoP.

The middle school science and technology teachers' PLC

The description of the middle school (grades 7-9) science and technology (S&T) teachers' PLCs project relies on a May 4, 2022, interview with Dr. Zahava Scherz and Dr. Yael Shwartz, who have headed the network, and on scientific publications (Eylon et al., 2020; Scherz et al., 2021). The PLC network, initiated in 2015 with a single leading teachers PLC, has been centered at the Weizmann Institute of Science and run with the support of the Ministry of Education and the Trump Foundation. The network has gradually expanded and currently includes 22 PLCs. The PLC network functions as a PD framework for S&T middle school teachers across Israel.

Goals of the S&T middle school teachers' PLC

The PLCs aim to offer a professional home to middle-school teachers of science and technology. In this supportive hub, teachers acquire new knowledge and teaching strategies and share their practices, successes and struggles. The participating teachers influence the PLC objectives and priorities to match their needs. The long-term goal of the PLC is to advance the teachers' practice and thus influence and improve S&T teaching and learning in Israeli middle schools.

Achieving the goals

S&T middle school teachers in Israel number about 3,500, since middle schools run an obligatory S&T curriculum. A unique approach was required to reach this high number of teachers. To address this challenge, the heads of S&T school departments formed regional PLCs and organized their S&T school colleagues in PLCs they ran within their schools.

Each PLC meeting had a predetermined structure adjustable to specific needs:

- An opening session aimed to develop and boost the teachers' connection to the PLC.
- A content knowledge session introducing new S&T topics and related pedagogical content.
- A community leadership session aimed to develop leadership strategies, cooperative learning, and psycho-pedagogy learning principles relevant to group dynamics, necessary for leading PLC and school S&T teams. As the S&T program is obligatory in middle school, the classes are highly heterogenic, including students with varying interest levels in S&T and learning abilities. In these circumstances, managing adolescents, the students' age group, is a key issue, and adolescent psycho-pedagogy must also feature in the PLC meetings' program.
- A closing session dedicated to reflection on the meetings and providing feedback.

Research-based insights

The observation and study of the PLCs yielded two main insights. The first regards a "Collaboration Model" that formalizes the design and implementation of collaboration skills in PLCs. The model comprises four collaboration levels developed by the lead PLC members over the years. The first level is participation: the teachers have to participate in the PLC meetings. Next comes sharing ideas, class activities, and other teaching experiences with the other PLC members. Third is cooperation: the teachers work together on a project that requires teamwork and responsibility sharing. The fourth and highest level of the collaboration model involves creating a partnership to initiate and manage a project and share challenges and experiences.

The second insight regards an emergent network model of knowledge transmission between the PLCs. Initially, the PLC network used the fan model, where knowledge transfer occurs top-down, from the academic institution to the PLC teachers, with the mediation of lead teachers. However, the research has indicated that other routes of knowledge transfer have developed within the PLCs. Analysis of these routes suggested that knowledge traveled across the PLC network. Any knowledge the teachers deemed relevant for their teaching found its way to their network partners regardless of who initiated it, whereas knowledge thought to be irrelevant was discarded.

The mathematics school coordinators' PLCs

The description of the middle school mathematics school coordinators PLCs relies on an interview conducted on May 24, 2022, with Dr. Jason Cooper and Prof. Boris Koichu, who have headed the network since its establishment and on scientific publications (Koichu, Cooper, & Widder). The PLC network, initiated in 2017, is based at the Weizmann Institute of Science and runs with support from the Trump Foundation and the Ministry of Education. It has been continuously active, supporting up to four concurrent PLCs. The PLCs provide a PD platform for middle school mathematics coordinators (titled Head of Department, HoD) across Israel.

The PLC goals

Every Israeli middle school has one mathematics teacher functioning as the school mathematics HoD, tasked with leading and supporting the professional work of the school's mathematics teachers. The PLCs aim to empower the middle school mathematics HoDs, help them value their role as change leaders, identify the changes they would like to make, and enhance their effectiveness in leading and coordinating change among the school mathematics teachers' team. The PLC leaders associated with the Weizmann Institute of Science, who form a lead PLC, do not dictate the desired changes. Instead, they provide the mathematics HoDs with the required resources to allow them define and lead changes in their schools.

Achieving the goals

The PLC leaders were well aware that the PLCs functioned under a set of shared norms and values developed by their members. Their primary interest was, therefore, to help the mathematics HoDs gradually divert their team meetings' focus from administrative issues to mathematics education issues they considered important.

One optional change proposed was introducing problem solving as a valued practice in mathematics classrooms, thus decreasing the prominence of drilling practices.

However, they soon discovered that the PLC participants tended to avoid discussing the challenge of leading change in their mathematics departments and were more comfortable maintaining the role of mathematics teachers in the PLC, sharing their classroom experiences and their students' reactions. They repeatedly noted that their school colleagues did not collaborate with them or share their ideas, while they did not possess the tools to influence them. Thus, the PLC leaders had to dedicate a significant part of their work to developing leadership. They often began by asking each participant to define the changes they wished to lead in their mathematics team and determine new experience-sharing routines reflecting their role as leaders.

Research-based insights

The interviewees and authors of the referenced articles described how the trust created among the PLC teachers led to an open sharing of their challenges as school mathematics HoDs. They admitted to being frustrated by their work as school mathematics HoDs, having to devote most of their time to the administrative management of the mathematics teachers' team.
The PLC teachers jointly put together a position paper outlining the role of school mathematics HoDs and defined the support they required to perform their duties successfully. This document empowered them in their negotiations with school principals and strengthened their feeling of belonging to a supportive community of peers.

Research of the PLCs' activity yielded two main theoretical insights. The first regarded the impact of the teachers' professional development (Cooper & Koichu, 2021).
The PLCs illustrated that PD had the desired impact on mathematics teaching practices, affirming that teachers' PD may have varied effects depending on the kinds of practices in which they engage. Tension emerged between disciplinary assignments, (e.g., problem-solving analysis during the PLC meetings to model scenarios for the participants and their teams at school) and addressing urgent needs the participants raised. This tension was also reflected in the expected impact of the PLC. It gradually dissolved with the maturing of the PLC communication norms, as the PLC leaders became more proficient in facilitating the activity, and when some of the participating mathematics HoDs assumed the prominent role of community co-leaders.

The second insight regards the implementation chain (Koichu et al., 2022), namely, the way a new pedagogical idea makes from its proposal by the PLC leadership at the academic institution until the teachers implement it in their classes. The implementation chain is a dynamic sequence of intended, planned, enacted, and experienced activities, shaped by interactions between researchers, PLC leaders, teachers and students, with possible changes in activity and aims along its junctions.

Discussion

While writing down the five PLC networks' descriptions, I felt privileged to have interviewed the PLC leaders and received from them the required information about their PLCs. They described the hugely positive influence a theory translated into practice had on science and mathematics education in Israel over the last ten years. Hundreds of science and mathematics teachers successfully trained to lead science and mathematics PLCs across Israel;

thousands of science and mathematics teachers became active PLC members, embracing the five PLC features to enhance their knowledge and practice; and hundreds of thousands of students have learned science and mathematics topics with teachers who invested much time to improve and perfect their professionalism, collectively exploring their teaching while trying out new pedagogies.

All the PLC networks became the professional communities of teachers who had previously felt isolated, being alone in high schools that mostly employ a single physics teacher, chemistry teacher, and high-level mathematics teacher, and in middle schools with a single S&T coordinator or head of mathematics department. Since collaborative learning requires a group, the PLC proved an effective framework for such learning and PD. All the PLCs presented in this chapter offered the teachers a "safe zone". Building trust among the community members supported "the willingness to be vulnerable under conditions of risk and interdependence" (Rousseau, 1998, p. 395). Trust was a fundamental condition for creating a sense of community that enabled the participating teachers to disclose their concrete challenges. The chemistry teachers' PLC probed trust building among its members, proposing practical tools for trust building and developing a sense of community among the participating teachers.

As mentioned in the introduction, the primary feature of PLCs is that they operate under shared norms and values developed by their participants serving as a foundation for their work. Each PLC negotiated its specific focus to address the needs and challenges raised by the participating teachers and the PLC academic leaders' ideas and agenda. The academic leaders' top-down agendas included the following examples: the Club-5 mathematics teachers' communities of practice focused on creativity-oriented activities, the chemistry teachers PLCs focused on implementing diagnostic assignments, and the physics teachers' PLC implemented the knowledge integration (KI) model. Notably, the academic leaders derived their top-down proposals from the teachers' needs and they were tightly connected to these needs. The diagnostic assignment served chemistry teachers as a tool to identify student misconceptions, essential for promoting differentiated instruction in the heterogenic chemistry classes, and a significant concern of the PLCs' chemistry teachers. The creativity-oriented activities of the Club-5 mathematics teachers' CoP increased the teachers' assignment repertoire. The implementation of the KI model in the physics teachers PLC led to developing a new pedagogical discourse that called the teachers' attention to pedagogical opportunities revealed during the physics lessons. However, in all the PLC networks, the presence of the bottom-up approach, where teachers raised their needs and influenced the PLC agenda was notable. For example, during the Covid-19 crisis and the abrupt transition to remote learning, the PLC networks all played a vital role in strengthening teachers' resilience by offering abundant online pedagogical materials and assisting in adapting lessons to online learning without leaving any students behind. The PLCs' mode of action, where teachers interact with fellow teachers, proved highly effective. It allowed for the clarifying of educational values and identifying impediments to their materialization, experiencing research-based instructional strategies, and reflecting collaboratively on classroom experiences. Together, these features fostered the teachers' motivation, determination, optimism, and inventiveness in those challenging times.

The second PLC feature is its members' collective responsibility for and focus on student learning. To shift the attention to student learning and analyze the impact of how one teaches on the students' understanding, teachers must base the PLC discourse on students' artifacts and engage in a reflective dialogue about their teaching and their students' learning, as the introduction's third feature suggested. A review of the five PLC networks exposed ways to achieve this goal. Teachers of all the PLCs were asked to implement PLC activities in their classes and bring the students' answers to the next PLC meeting. The purpose of this routine was to analyze the students' errors and misconceptions and not their scores. Sharing this information was the basis for the fourth PLC feature — teachers' willingness to share and examine their teaching practices openly. By presenting their students' mistakes and difficulties before the PLC forum, the teachers invited the other PLC members to collaborate in discussing and designing optional ways to address these difficulties. This reflects the fifth PLC feature — the underlying focus on collaboration. The middle school S&T teachers' PLC gave this point special research attention, defining four levels of collaboration among the PLC teachers. Over the PLC's period of operation, the researchers suggested how to build and develop collaboration.

These five fundamental PLC features proved collectively to be the pillars of the five PLC networks of science and mathematics teachers that worked in conformance with the theoretical foundations leading to a successful teacher PD. Notably, the connection to the academic research went beyond basing the PLCs on theoretical models, as the educational research supported the evidence-based learning of the leading PLC teams. As demonstrated in this chapter, the academic research insights provided the practitioners with guiding tools for promoting teachers' professional development in the PLCs. Therefore, I would like to conclude by re-emphasizing the great value of the reciprocal relations between research and practice as a foundation that guarantees the success of the science and mathematics PLCs in Israel. Philanthropy played an essential role in the successful reciprocal research-practice relations. The Trump Foundation's contribution was twofold: It financially supported the big vision of improving the achievements of sciences and mathematics high school students by promoting the teachers within the PLCs framework. At the same time, it trusted the research program of academic researchers, thus supporting the reciprocal relations that boosted the success of the PLCs.■

1 Since 2020, the chemistry teachers' PLCs in northern Israel have been running under the academic umbrella of the Technion. All the other PLCs remain under that of the Weizmann Institute.

2 For additional conditions supporting SoC development, see Waldman & Blonder, 2020, pp. 111-139.

3 A Community of Practice (CoP) is a professional development framework similar to the PLC. Both are based on the situated learning concept (Lave & Wenger, 1991). In this chapter, we use the two terms interchangeably.

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The National Impact of the Trump Foundation

Oren Magar

Natioanal Crisis

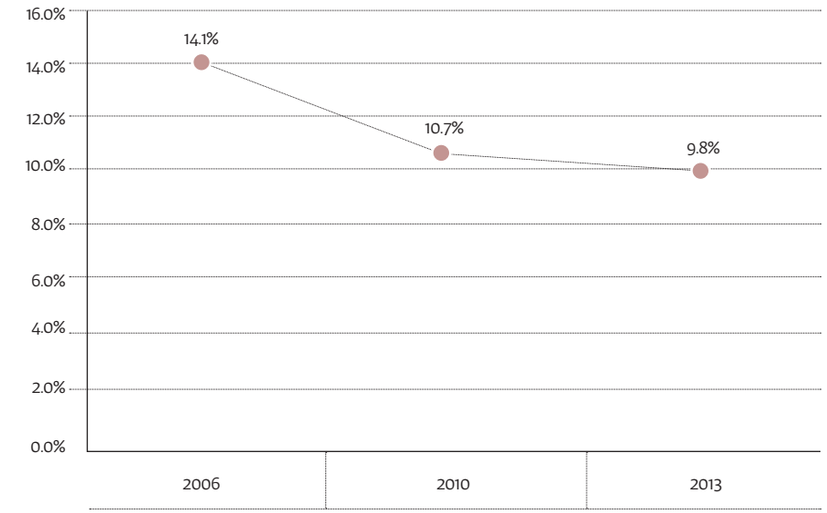
Since the 1990s, mathematics and science studies have occupied decision makers in the Ministry of Education and academia. They were concerned about the decline in the quality of instruction in these fields and there was increasing evidence of a deterioration in the knowledge level of students. Two committees were formed to deal with the subject: the Harari Committee, established in 1990, which examined the state of the sciences and technology in Israel's education system, and the Ben Zvi Committee, established in 2000, which examined the subject of mathematics study and proposed a program for strengthening and developing the field in elementary and middle schools.

The committees, having recognized several problems relating to the study of mathematics at that time, recommended methods for addressing them. The Ministry of Education implemented a substantial number of the recommendations. In the beginning of the 2000s, weekly study hours were increased and new study programs were introduced into elementary and middle schools. However, student achievement was low on national and international tests and the achievement gap between different sectors of the population, and the gap between the center and the periphery continued to concern policy makers.

The crisis intensified between 2006-2012 when it became clear that there was a steady decline in the number of students studying mathematics at the five unit level and that the percentage of Israeli students studying mathematics at an advanced level was low in comparison with other western countries. Whereas in 2006, 14.1% of 12th grade students (nearly 13,000 students) took advanced mathematics matriculation exams (five study units), in 2010, the percentage was 10.7% (slightly more than 10,500 students), and in 2013, the number was less than 10% (9,100 students). This decline existed despite the increase in the total number of students during those years.

This documentation paper, part of the 2016 mid-course review, is included here to provide a more complete look at TTF processes and past insights

Percentage of Students Taking the 5 unit matriculation Exam in Mathematics [Figure 1]



Source: MoE, 2014

Additional statistics indicated that the percentage excelling in mathematics in Israel was lower as compared to other countries in the world, and stood at 9.4% in contrast to the average 12.6% in OECD countries (in 2012).

The report by the state comptroller, issued in 2014, indicated that increasing the number of students taking the four-unit and five-unit matriculation exams in mathematics was a Ministry of Education objective as part of the "Strategic Program" implemented by the ministry from 2009-2012. The program received a budget of 820 million shekels, which was entirely spent. However, implementation of the program did not prevent students from opting to take three study units. The program succeeded in achieving other objectives, principally, Israel's standing on the international TIMSS tests, where there was considerable improvement.

Media Preoccupation with Accelerated Mathematics

Articles published in the national media (*Ha'aretz, The Marker, Calcalist, Ynet, etc.*) indicate the public interest in mathematics in general, and specifically in the area of accelerated mathematics learning. Public interest in the topic, once limited, has focused on two major angles.

The first is the level of difficulty of the five-unit mathematics matriculation exam. For example, in May 2010, the former minister of education, Gidon Sa'ar responded to claims that the mathematics matriculation exam held that month was more difficult than usual and saying that if that were the case "necessary steps would be taken to ensure that students weren't harmed" (Walla! Website).

Two years later, in May 2013, the five-unit mathematics matriculation exam again captured the headlines when students, after having finished the exam, complained about especially difficult questions. In an interview published on the Ynet website, chairperson of the National Union of Israeli Students, Yuval Cachlon, who had also taken the five-unit exam, said: "There were questions that were very hard to understand and it wasn't because we weren't prepared for the exam — simply, the level was too high. When I left the test, I discovered that I wasn't alone and that everyone thought as I did…students who were tested on other question papers of four and five units said that it was hard for them." Mathematics teachers explained that the material that appeared on the exam had been taught, but the questions on the exam had a component of high level thinking. Ron Yechieli, mathematics coordinator in the Ankori school network was quoted as saying: "You can't say that the exam wasn't fair or that the topics on it weren't studied in class. However, on the three question papers, especially on the four and five study units, some of the questions required a very high level of comprehension, thought, and ability and for those who weren't "A" students, there was no real chance to solve them. The level on this exam was much higher than on previous exams."

The Ministry of Education, which saw the appointment of Shai Piron as its minister in May 2013, promised to examine the issue and in June of that year, the ministry issued an announcement supporting the students and it admitted that the test was more difficult than usual. The ministry went on to say that the average score of the examinees was lower than usual and that the exam had too many questions for the amount of time given to the students to solve them. The ministry decided to add a factor and retroactively reduced the number of questions on the exam while giving preference to correct answers. At that time, Director-General Dalit Stauber announced that the ministry would also re-evaluate the mathematics curriculum for five units and would adapt it to the number of classroom hours given to the subject (*Ha'aretz* website, 2013).

The second angle of media focus dealt with criticism of the level of mathematics study and the decrease in the number of students and teachers. This concerned decision makers in industry, academia, and the military who were troubled about national vulnerability and the quality of the future generation in engineering, research, and computer technology. There was concern regarding the potential damage to the Israeli economy and the State's advanced industries and increased vulnerability to Israel's defensive strength. For example, in October 2011, senior commentator for *The Marker*, Meirav Arlozoroff, published an item with the headline, "University lecturers: Math teachers' professional knowledge is appalling." According to the item, 15 mathematics, physics, and computer professors, among them seven mathematics department heads from seven universities, sent a letter to Minister of Education Gidon Sa'ar, titled "The crisis of mathematics teachers in high school." The letter maintained that "faculty members in all the universities complain that new students in mathematics, science, and engineering are less prepared than in the past, a phenomenon that goes together with the worrisome trend of an increasingly severe shortage of suitable mathematics teachers."

Expanding the Circle of Excellence

In light of these issues, The Trump Foundation was established in 2011 with the objective of turning the attention of the public and decision makers towards the data reflecting the decline in excellence in mathematics and science as well as the causes for this decline. The Foundation maintained that it was not possible for the existing attitudes and proposed programs to provide a response to this rapid decline and that it was necessary to adopt new patterns of action.

Underlying the Foundation's activity is the assumption that strategic philanthropy can assist the education system to expand the circle of excellence in mathematics and science learning. The Foundation assists in the implementation of a program designated for teacher training and professional development and for building instructional tools and methods. Furthermore, the Foundation joins districts, municipalities, and school networks to implement the developed components and to demonstrate how sustainable improvement in student performance can be achieved when these components are implemented and integrated. The Foundation also founds and convenes networks for education professionals for joint study and collaborative activity. It engages with the media to inform the public and motivate its active involvement on this issue.

When it began its work, the Foundation board determined that its success would be measured on three dimensions:

1. Did it motivate change in the measures of excellence? If so, was there an increase in the number of graduate with five units in mathematics?

2. Did the change permeate the education system and to what extent?

3. Were capabilities and awareness constructed to allow for change to occur upon conclusion of funding by the Foundation, after it ceases operation?

After five years of operation, it is now worth examining whether, from a public viewpoint, the Foundation has met these objectives or acts in a way which will enable them to be met in the coming years.

The basic question that needs initial examination is whether the Foundation successfully convinced the system's leadership and created a sense of urgency when it first sounded the alarm about the rapid decrease in excellence in mathematics and science studies. The opposition to this sentiment needs to be examined as well, as to how and whether this sense of crisis was translated into preparation for action. It is important to learn who was enlisted and why, and whether there were also negative effects. For example, was there a sense of despair, a sense of concession from the outset? Was there evidence of refusing to see improvement once it had begun?

Shai Piron, Mnister of Education 2013-2014, is an important figure when considering these questions. In an interview in March 2016, he maintained that, at the time, he wasn't convinced that there was an urgent need to deal with the crisis in mathematics which required action on his part as the head of the system. Nevertheless, in May 2014, the Ministry of Education waved the flag of excellence and initiated the "Math First" program headed by Mohana Fares, a member of the Ministry team who was appointed as the integrator to lead the program. "Math First" set a first stage goal of doubling the number of students studying five units of mathematics and its second stage goal was to double the number in science and technology subjects.

The program and its implementation were accompanied by a joint steering committee led by Mohana Fares with the participation of Ministry of Education representatives and representatives of "5x2" (see box below).

Piron explained his position: "I agreed with the program not because I had chosen accelerated mathematics as an area that needed reinforcement. I was choosing the principle of excellence according to which each child should fulfill his abilities. A lack of self-fulfillment and laziness has dominated the system. The education system and the Israeli public lack a yearning for excellence; they do not encourage the child enough to believe in his abilities, to "sweat." I have seen too many children who do not take five units due to considerations of convenience. Why does this happen? Essentially, when there are both psychometric exams and matriculation exams, it's not worth it for the student to be tested on five study units and get a score of 80, when he would rather take four study units of mathematics and get 90. Therefore, in 10th grade, the students choose a study track according to the bonuses. My goal was to have an effect on the value of excellence, so that a child doesn't give up on five-unit mathematics due to external considerations. Therefore, my criticism of the Ministry of Education's mathematics campaign today is that it is a campaign for mathematics and not for excellence (referring to the "Give Five" campaign, part of the national program for the advancement of mathematics). Furthermore, I haven't seen statistics showing that the number of students tested in mathematics in Israel is less than the accepted percentage in other populations. It's very similar to the percentages in other places, and also, there are no statistics as to the precise need for five study units in mathematics."

In 2013, the 5x2 coalition began operation, with the aim of doubling the number of students who complete high school study tracks in mathematics, science and engineering at the five-units level. The initiating and financing bodies that support its activities are the Trump Foundation, the Rashi Foundation, Intel, SanDisk, Microsoft and World Ort Kadima Mada.

The 5x2 initiative was joined by many bodies from the business, public and social sectors and the partner network includes around 100 representatives of organizations including the Defense Ministry, the IDF, local authorities, along with academic institutions, school networks, science museums, educational organizations and philanthropic foundations. The Ministry of Education joined as a partner in leading the process. The backbone organization of the initiative is Sheatufim, Strategies for Social Impact, which specializes in the management of social, philanthropic and dialogue between sectors. This is all managed by the 5x2 steering committee, which is responsible for policy making and strategy formulation.

Piron explains why, nevertheless, he supports the initiative: "The advantage of the program for reinforcing accelerated mathematics, led by the Trump Foundation, was that it didn't come from me, that it wasn't 'mine,' but rather, that it came from civic society. They established a coalition and that was a very effective step, due to the sense was that it wasn't the initiative of one person, but of a significant group in society. Because the professional staff in the Ministry of Education was involved, the director-general came to me with a wonderful program and I saw that they had brought in Mohana Fares, and so I supported it."

According to Piron, there were also opponents to the initiative: "I explained to them that I was simultaneously raising other flags, that it wasn't only mathematics. Those flags included the regeneration of vocational schools, providing a bonus for five units in literature and other areas.

In other words, I saw this as part of a comprehensive program and therefore, I agreed to promote accelerated mathematics as well." Piron maintains that if he had not supported the program, it would not have received the backing of the Ministry of Education and if he had opposed budgeting the program, it might not have been implemented.

Lea Dolev, director of math instruction ORT Israel Network, also maintains that she wasn't convinced of the existence of an urgent crisis. "I have been serving in this position for five years. Six months after starting the job, it became clear to me that a problem existed. Not enough schools were preparing for five units and there were more students who could study the subject if they were given the opportunity. I didn't see this as a crisis, but as an unwelcome trend that had to be dealt with. In previous years, most attention had been focused on eligibility for a matriculation certificate in general, including the area of mathematics. It was clear to me that a need existed to carry on and deal with the issue of accelerated mathematics learning at the four and five study unit level in order to encourage more students to learn at a higher level."

The Importance of Timing

In May 2015, Naftali Bennett began his position as the new Minister of Education. In contrast to Piron, Bennett was convinced of the importance of accelerated mathematics and science studies and it was a burning issue for him when he began his new role. The title of his speech at his Ministry of Education opening ceremony was, "The strength of a country is not only measured by the flight range of its planes, but by the values beating in the hearts of its children." In his speech, he declared "I believe that Israel needs to be and can be a world leader in some of its achievements, as well as in mathematics and the sciences. I believe that if we know how to lead in technology all over the world, this must also be seen in our education system. The decrease in numbers of students completing five units in mathematics from 13,000 to 8,000 is, in my opinion, a strategic threat to the State of Israel. Whoever doesn't create an educational Iron Dome for a child in 8th Grade, won't reap an Iron Dome developed by that same child when he finishes 12th grade" (from an announcement by the Ministry of Education's spokesperson).

When Bennett assumed his position, the Trump Foundation had already been at work for four years, the "5x2" coalition had been in operation for two years, and "Math First" had begun the previous year. Bennett's clear commitment may have stemmed from the Foundation's effort to "sound the alarm." It is also possible that the new minister's personal experience entered into this due to his high-tech background and his awareness of the difficulty recruiting personnel with a high level of mathematics. In his previous position as minister of the economy, he had met the leaders in the high-tech industry and they may have spoken with him about the issue.

An important perspective on this question is supplied by Ofer Han who served as Minister of Education Shai Piron's chief of staff and who today serves as an adviser to Minister of Education Naftali Bennett. According to Han, the issue of mathematics was not a burning one in the ministry during Piron's period in office beginning in 2013: "It's impossible to say that from 2013 to 2014, mathematics was center stage, although the issue received consideration and we understood that there was a need to act. I didn't know back then whether this understanding was because of the Foundation. On the other hand, Minister Naftali Bennett 'came with it': he came from the high-tech world; he knew how to read the need, and in my opinion, he came with his own understanding of the issue of strengthening the areas of mathematics and science. Bennett is 'crazy' in the good sense of the word, and I don't think the Foundation is what roused his understanding regarding the importance of the issue."

Han continues: "Nevertheless, the Trump Foundation has an important place in the implementation of the measure, which is a rare step for the Ministry of Education to take and worth teaching as a model for developing national programs. This is due to the fact that it operates by harnessing the force of a round table that includes the third sector which is led by the Trump Foundation but also includes other institutions such as academia, the IDF, hi-tech companies and industry, that are all dedicated to the issue. This has allowed the Ministry of Education to take the lead while they operate effectively behind the scenes. Presently, it is impossible to expect that education will filter down — that it will begin with the director-general and move down the Ministry of Education's chain of command from subject coordination supervisor to principal, to teacher and student. Therefore, the contribution of these different groups, such as high-tech companies, to the process, is huge. When we began operations, all we needed to do was to 'raise the curtain' because these different groups already had the motivation to encourage mathematics learning. If it becomes clear that the Trump Foundation roused them to action, then I will say that the Foundation's contribution was priceless."

Han believes that the change would not have occurred without the commitment of the Ministry of Education by Minister Bennett: "The revolution wouldn't have occurred if Bennett hadn't placed it center stage and said, 'I want this' again and again, along the entire chain of command in the Ministry of Education. However, it can be said that it wasn't particularly difficult to engage the ministry because it already had Mohana Fares who was prepared for this objective, and Ministry Director-General, Michal Cohen, who had been recruited to it. I believe that at an early stage, Bennett had already identified Eli Hurvitz and the Trump Foundation as a central partner."

Zeev Bielski, Mayor of Ra'anana, reinforces the latter point raised by Han. He believes that timing had great importance in the promotion of the issue to the public and decision makers. "The Foundation was 'lucky' inasmuch as it promoted the issue before Bennett assumed his position as minister of education. Then, a minister of education came along who raised the issue on his own, which has greater resonance. In one of my first meetings with the minister, he asked me about the Trump Foundation and whether I was familiar with it. It was as if he had discovered an extraordinary device for fulfilling his dreams. In my opinion, Minister of Education Bennett didn't go into this because of the Foundation, but rather because he was a high-tech person himself. Every minister of education looks for things that he can innovate. Usually, it's so he can leave his mark. Ministers of education deal with matriculation exams, with cutting short or extending summer vacations. The discourse among the public and decision makers in the Ministry of Education also generally deals with the need to reinforce weak students, to operate in development towns, and to narrow gaps between strong and weak students. Up until now, no one has come with a structured program like the Foundation has in its area. Once the minister had understood its benefit for fulfilling his objectives, he was happy to join forces with them."

The Ra'anana Municipality is an example of the way the Trump Foundation successfully enlisted local authorities. Bielski attests that the Foundation created marked change in his attitude as mayor towards the issue: "In the past, I had little interest in excellence in mathematics and science. The issue was never discussed or a high priority in our system. My attitude and the attitude of others in the municipality dramatically changed towards the issue after the foundation's entrance into the area, its appeal to the heads of the local authorities after becoming acquainted with it, and the understanding that it was something serious. I am sure this was true for other places as well. The significant monetary grant made me roll up my sleeves. I had gained a partner who not only spoke about and explained what had to be done, but who also funded different programs such as a program for hiring teachers."

Meirav Arlozoroff, senior commentator for *The Marker* who often writes about economic issues and the relationship between them and education and society, believes that the Trump Foundation is responsible for the increase in public conspicuousness of the mathematics five unit crisis and for the issue having gone from being a societal coalition to being a central program in the Ministry of Education: "The Trump Foundation is responsible for encouraging public awareness of the mathematics five-unit crisis. They brought the topic to the fore, enlisted the Ministry of Education and influenced its programs. They should be given credit for this."

Creating Demand

The Center for Educational Technology is one of the prominent bodies enlisted for action in five-unit mathematics and science learning around the same time as the establishment of the Trump Foundation and in cooperation with it. According to Gila Ben Har, CEO of the Center for Educational Technology, awareness of the need to develop and promote the field of mathematics was already present in the Center before the Foundation's operation: "The need to assist accelerated math students who weren't reinforced by private mathematics lessons, to prevent them from dropping out, was part of the Center's DNA before the Foundation's activities. For example, we held marathon study days for Israeli students in preparation for the mathematics matriculation exams and the response was great because the need was great. So, we were aware."

"Furthermore, we worked to raise the percentage of students studying science in the periphery, without any connection to the Foundation. In 2012, we decided to develop programs and study materials in mathematics and the sciences for middle schools. We discussed the issue with the Yad Hanadiv Foundation while also developing language learning programs for immigrants, programs for students of Ethiopian origin and more. We implemented the Nachshon Project that supports students with difficulties in mathematics and science with financial assistance from Yad Hanadiv and

later with funding by the Ministry of Education. The initiative for the promotion of mathematics learning arrived on fertile soil and it was very natural for us to work with the Trump Foundation later on. Nevertheless, in keeping with our agenda, we didn't think that it was our job to claim that there was a crisis in the area of mathematics as the Trump Foundation claimed."

Ben Har provides an additional perspective for evaluating the influence of the Trump Foundation on Ministry of Education policy and its subsequent recruitment to the issue of accelerated mathematics and science because of its urgency. "In my opinion, the Trump Foundation had an important role in 2012 in the project developing the virtual high school, which allowed students from locations where there were no accelerated mathematics and science classes to study remotely and synchronously, with the help of teachers and practice session tutors. The Foundation pushed for the development of a virtual high school focused on the areas of mathematics and physics in 11th and 12th grades, which it had targeted as primary and important areas. Otherwise, we certainly could have focused on different areas of study. The Trump Foundation had a very significant role in thinking, initiating, assisting, and funding. Today, approximately 900 12th grade students study in the high school. In July 2015, the first session of 12th grade virtual high school graduates from the periphery in mathematics and physics came to a close. These students took five-unit mathematics and physics matriculation exams. Their scores were above the Israeli average: 84 in mathematics and 85 in physics."

She notes that the Trump Foundation's influence was also evident in the "creation of demand" for other programs in the Ministry of Education: "The minister of education asked us to develop an asynchronous mathematics course for five-unit study, open to the public. I believe the minister wanted this because of the Trump Foundation's push to raise awareness. The course, including elaborate media, had already been developed by us with government funding." According to Ben Har, the Trump Foundation's push created shock waves affecting other places: "The moment the Foundation created a dialogue with the Ministry of Education, different forums were created to deal with the subject of mathematics — in other words, something happened. The Foundation managed to create a situation in which mathematics and science would stand out in the conversation of the minister and the policy makers."

Ben Har also believes that the Foundation had fortuitous timing by having a minister of education who came from high-tech and who held the area of excellence close to his heart, albeit ascribing less significance to the minister's identity: "The shifting ministers of education, Shai Piron and after him, Naftali Bennett, did not bring about negative change regarding accelerated mathematics and science. Clearly, the minister wouldn't say 'I don't want to strengthen the sciences.' In general, the Foundation was right to recruit academia, the state, and also different non-profit organizations. It focused on an issue, but was open to the different groups that it approached."

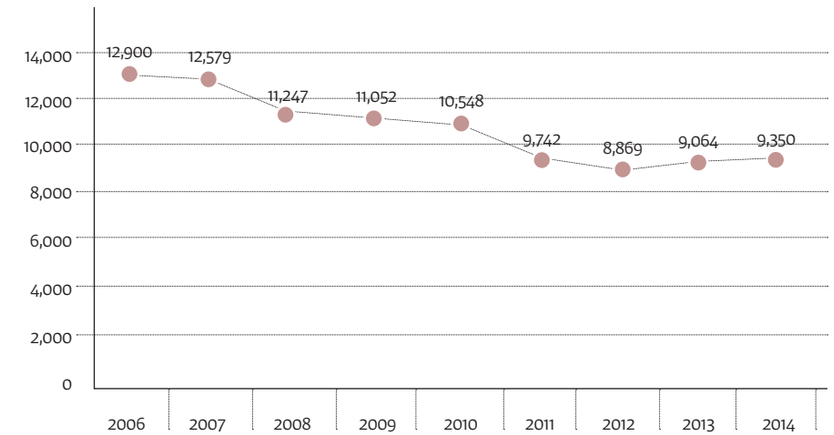
Avi Kaminsky, chairperson of the Israel Union of Education Directors in Local Municipalities and head of the Education Department in Ashkelon, surmises that the timing of the Foundation's activity was advantageous because it fell on attentive ears: "There was a minister who viewed mathematics and the sciences as an important part of education and who understood the significance of a decrease in the number of students learning five study units of mathematics. The timing was excellent and therefore, 'the two fit together' (the Ministry of Education and the Foundation) and it's important for it to be that way."

A Changing Trend

In 2014, the decrease in the number of students taking five units in mathematics and sciences was curbed and there were early signs of improvement. For example, after seven consecutive years during which the number of students taking the five-unit mathematics matriculation exam had been in steady decline, in 2014, the trend reversed and there were 9,350 students who took the exam [Figure 2]. In addition the number of students taking the five-unit matriculation exam in physics rose for the first time since 2010[Figure 3]. Particularly encouraging were the statistics regarding the number of students who had completed 11th grade physics studies, which showed a steady increase— 10,300 in 2013, 11,500 in 2014, and 11,700 in 2015 [Figure 4].

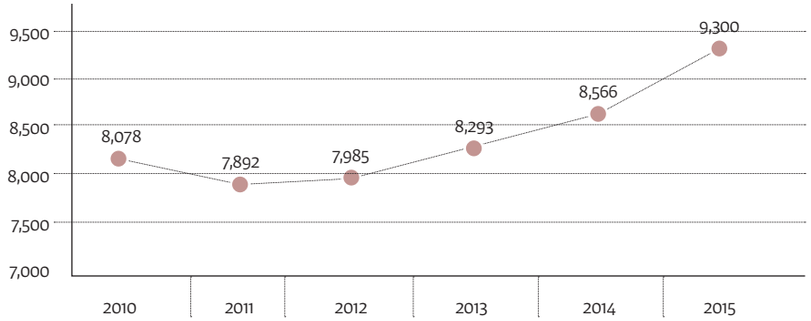
In 2016, the Trump Foundation was five years old. In the world of social change, five years is not considered a long time, certainly not when attempting to influence large and complex systems such as the education system. However, there is good reason to now examine the results in the field in order to reach understandings, to draw conclusions in a dynamic situation, and to improve.
This section examines the decision makers' positions in the field. Its objective is to understand whether, in their estimation, it is possible to draw connections between the Foundation's activities and changing trends as described above, and to clarify which of the Foundation's activities they believe contributed more and which, less. For this purpose, the interviewees were requested to consider both the numbers of students who took the five unit mathematics matriculation exam and softer qualitative measures, such as awareness, teacher and parent organization, enthusiastic sentiment, etc.

Students Taking the 5 Unit Matriculation Exam in Mathematics [Figure 2]



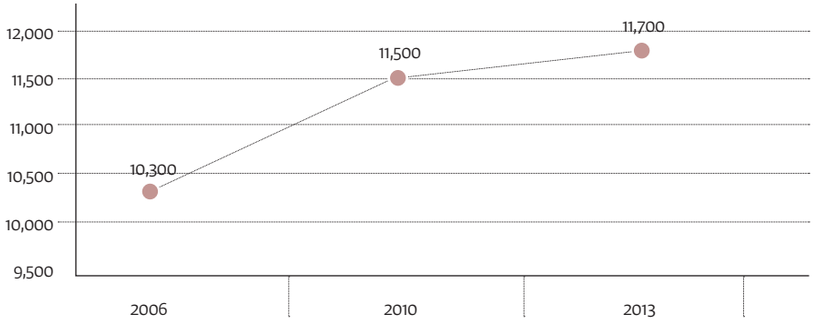
Source: The National Center of Physics Teachers, Weizmann Institute, Szold Institute for the Trump Foundation, 2015

Students Taking the 5 Unit Matriculation Exam in Physics [Figure 3]



Source: The National Center of Physics Teachers, Weizmann Institute, Szold Institute for the Trump Foundation, 2015

11th Grade Graduates Studying 5 Units in Physics [Figure 4]



Source: The National Center of Physics Teachers, Weizmann Institute, Szold Institute for the Trump Foundation, 2015

Meirav Arlozoroff, senior commentator for *The Marker*, believes that dry statistics are less important at this stage and she would not emphasize them in evaluating the Foundation's endeavors: "What is important is that they put the issue at the center of public discourse."

On the other hand, Foundation Chairperson, Eddy Shalev, believes that the current day statistics suffice for making the claim that the Trump Foundation's influence is already evident: "The trend has reversed: the number of students studying is on the rise; the public is talking about it; and of course, professionals in the field of education are talking about it. There is particular awareness in the municipalities that operate higher learning institutions and we have heard from them that they are very interested in promoting the issue. This is especially important because the councils and local authorities have a lot of power and influence. They are the high schools' 'landlords.' They have say in the selection of principals and teacher compensation and they have room to maneuver."

Zeev Bielski agrees with Shalev's concluding words: "Without a doubt, an increase has begun in the numbers studying mathematics and physics. One of the factors for this is the awareness that can be seen among students and parents in preparation for the school year. Each year, for example, we invite parents and students to Eshkol Payis (community center) to hear about opportunities for accelerated mathematics studies. I come to these events and the auditorium is packed with hundreds of people. This certainly reflects the atmosphere."

Gila Ben Har also agrees that awareness regarding mathematics and science learning has increased dramatically: "The Foundation has created a high level of awareness among subject coordination supervisors and the subject supervisors in schools. The heads of local authorities know that they are being judged on this and parents are questioning them. It's possible to say that the Trump Foundation has shaken up the system. For example, when it gave money to the mayors and said to them: show me that you have stopped the drop-out trend."

However, Ben Har also expresses doubts: "It needs to be examined whether awareness has risen in all parts of the country or only in certain locations where the parents have demanded to put a stop to the drop-out trend and know to ask questions about the issue. In Ra'anana, parents are aware that they have to pay for tutoring and they accept this, but what happens in Ofakim?" Ben Har also doubts the claim concerning the increase in the number of students and raises the question as to whether it indeed reflects a changing trend: "The number of students has increased, but is this change proportional to the growth of the population? I suggest waiting and examining the latest matriculation scores."

"Without a doubt, the Trump Foundation has succeeded in putting mathematics and science on the agenda," says Michal Beller, president of Levinsky College, which also operates a "Teaching Plus" program, with the assistance of the Trump Foundation. The program's objective is to integrate quality teachers into mathematics and physics instruction at an advanced level after training them in advanced teaching methods in the field. "The choice of mathematics is important, because clearly, they have started with what was most urgent. In my opinion, they have created a wave effect, because everyone is talking about mathematics today, even when the Trump Foundation isn't present in the room."

Beller points to teachers' professional development as very important for achieving positive results and recommends: "It's worth continuing support of teachers' professional development in the schools' upper levels. You can't just walk in and out in this area. The teachers must receive continued guidance, particularly new teachers who will be introduced into the system in the coming years, for example — to work according to the Teach First Israel model, which works with the program's students for a number of years after they enter teaching."

Ofer Han, former chief of staff for Minister of Education Piron and current adviser to Minister of Education Bennett, believes that even if there are signs of improvement, a waiting period of four years is necessary to determine this with certainty: "We have set a goal of 18,000 students completing five units of mathematics in four years. Let's see if we attain this. That's the first stage, along which there are midpoint goals at the three year mark amd until that date. Even if we meet the quantitative goals, it still won't be enough because we're not doing this just to 'win the championship.' We also want to 'keep the title' for ten, twenty years and that requires something else: building infrastructure. The issue of teachers is the one that determines whether we have made a quick fix for two or three years, and then another crash. We will succeed if, in the coming years, we learn how to reinforce current teachers and bring good teachers into the education system, expand their certification, and equip them with the right tools. We will have made it if ultimately, a teacher stands in the classroom who has strong content knowledge, knows how to motivate the students properly, and uses the tool box we have provided."

Han lingered on the nature of the program implemented by the ministry to ensure a change in the trend: "One of the good things in this program, as opposed to many government programs, in general, and those of the Ministry of Education, specifically, is that the program addresses issues longitudinally and horizontally. It addresses what surrounds the issue as well as the root problems and infrastructures. It defines metrics, knows how to implement a campaign and talk about motivation, to shout 'Let's go' and prod everyone onward and it never stops doing things, even things related to root problems. In between, it provides creative solutions. Thus, we've caught mini 'bugs' that were creating interference and we've dealt with them. For example, we've raised the university bonus by 35 points, and have provided a safety net, etc."

A Sustainable Infrastructure

The Trump Foundation declared at its outset that it would aspire to fulfill its goals within a decade and that it would work to create sustainable systemic change that would continue when the Foundation ceased operating and the programs did not rely upon its funding. In light of this, the Foundation acts in different ways so that the change will be systemic: it invests in teachers and indirectly in students; it avoids funding incremental activity that is solely dependent upon the Foundation (pay raises, camps, museums, etc.); and it builds coalitions of players and networks between professionals. The question has now arisen as to whether the Foundation has succeeded in creating the necessary network. Have measures been constructed that will presumably exist without it? What needs improvement?

These questions can be evaluated by looking at one of the first activities implemented by the Trump Foundation, the teacher communities. This project enabled excellent physics teachers to join a community of physics teachers for their joint professional development and development of classroom instruction. The teachers meet at the Weizmann Institute once every two weeks, on their own time, to exchange opinions about current classroom activity and discuss how to improve their methods of teaching.

Today, ten communities are in operation that bring together approximately 200 physics teachers, constituting a quarter of the total number of teachers in the field. The Trump Foundation funded the operation of the communities of physics teachers for three years. This includes meetings at the Weizmann Institute and a modest payment to the communities' leaders. At the end of this period, the funding of the sessions was transferred to the Weizmann Institute: "The Foundation has succeeded in creating a sustainable infrastructure for the physics teachers' communities," states Kobi Shvarzbord, science coordinator at Leo Baeck High School and the recipient of the Trump Master Teacher Award in 2015 and coordinator of a community himself.

According to Shvarzbord, the communities are a strong example of the Foundation's activities and will be able to carry on in the future without its support.

In the ORT network of schools, a slightly different opinion has been voiced. ORT has adopted the terms of a quality matriculation certificate or a matriculation certificate with excellence, which includes five-unit mathematics study. According to ORT Director of Math Instruction, Lea Dolev, the Trump Foundation projects help teachers prepare students to meet the subject's demands, and for this, the Foundation's infrastructure is critical: "The actions of the Trump Foundation support the introduction of more students to five units. I don't know how we will operate without the Trump Foundation." However, she also expressed doubts: "Our programs began before the Foundation's support and they will continue even if it stops supporting them because we are committed to the goal of achieving a matriculation certificate with excellence."

At Levinsky College, the partial dependence on the Foundation's budgets for implementing programs for career changers to mathematics instruction has also been noted. According to Michal Beller, president of the college, without the Foundation's support, the Levinsky College's program will change: "The program will stay, but not in the form it is in today. We will be able to implement its logic on our own, but we will have to let go of certain aspects." To ensure the long-term effect of the Foundation, Beller proposes considering the creation of online courses: "These courses have become more and more effective in the field of education throughout the world. Since mathematics is a field that hasn't changed significantly, if the Foundation can provide a one-time investment for high quality on-line courses in the field, its influence will continue even after it has ceased its operations."

Avi Kaminsky, chairperson of the Israel Union of Education Directors in Local Municipalities, believes that without continued support of different projects by the Foundation, a significant amount of its influence will disappear: "There are many programs that the foundations and non-profit organizations have tried to implement in the local authorities beyond the content provided by the education system. They come for 3-4 years, and afterwards they are implemented and become a regular part of the curriculum and are successful in some locations, while in other locations, they fade away the minute the money disappears. The Trump Foundation is a professional foundation, but if something isn't in the Ministry of Education's work plan — its continued existence is doubtful."

Mayor Zeev Bielski of Ra'anana maintains that the moment the Trump Foundation ends its support and involvement in projects in the city, the priorities may return somewhat to the priorities that existed before the Foundation's activities: "In a city like Ra'anana, we wouldn't claim that there wasn't any money and cancel everything, but in many other places, life is such that the minute public opinion veers to other issues, the focus of education will also go there."

Gila Ben Har, CEO of the Center for Educational Technology, notes that the nature of an organization such as CET allows it to continue implementing projects that were supported by the Foundation, such as the virtual high school, even without direct support: "Next year the Foundation's budget will end for the virtual high school project anyway. The Center for Educational Technology relies upon a variety of forms of financing and therefore, we can enlist the needed resources for the continuation of the project."

Ben Har raises another issue, a very important one related to metrics. In her opinion, the Foundation still hasn't learned to create sustainable infrastructure: "The Trump Foundation wants to know whether its actions have succeeded in increasing the number of mathematics and science students and the quality of their knowledge. It also wants to know which of the interventions had the most influence on this success. Was it the opening of additional classrooms? Was it the development of models for instruction and learning? Today, the Foundation is analyzing the data itself. However, looking to the future it's important for the country to do this and in this area the country is still far from being independent. The Trump Foundation needs to help the state create databanks to ensure that it has appropriate systems for information and data analysis of the programs in the area of mathematics and science learning."

The process led by Minister of Education Bennett to anchor an annual budget of 75 million shekels for reinforcing accelerated mathematics study in the Ministry of Education's regular base budget is an important stage in the creation of a sustainable infrastructure. This budget has been principally designated for the opening of small classrooms for the study of accelerated mathematics in the geographic and social periphery in schools that do not have accelerated mathematics programs. "The minute you anchor the budget in the ministry's regular base budget, you are in a different situation. The regular base budget, by virtue of its automatic pilot function, continues from one year to the next, so that essentially the 75 million shekels are always guaranteed, unless someone decides to cut them. This is important money that goes directly to the periphery, mainly to the weak sectors; for example, we opened approximately one hundred new mathematics classrooms in locations where they hadn't existed," says Ofer Han, adviser to the minister of education.

In the world of social change in which the Trump Foundation operates, anchoring a designated budget in the ministry of education budget constitutes "the holy grail" for social organizations that seek to influence government policy. This can be seen as a fantastic success, certainly in light of the fact that it occurred soon after the initiation of the Foundation's operations. It also removes the need to determine the issue of the Foundation's direct contribution to this, a subject discussed in the previous section.

Public Opinion

The Trump Foundation sees the general public as a springboard for creating meaningful change and acts to convey public messages designed to motivate more students to select and persevere in five-unit studies, to encourage suitable candidates to opt for careers in education, and to strengthen the public's trust in its teachers. These messages for formulating public opinion can be conveyed on a local level, for example, in conferences, events, competitions and meetings in the school environment or in the local authorities where the target audience is students, parents, and teachers. They can also be conveyed on the national level, for example, in speeches by decision makers, by holding competitions and awarding prizes, and in general, in the media via articles or interviews with opinion makers, advertisements in newspapers, on the radio and on commercial television channels during prime time.

In this section, we will examine how the Foundation has conveyed these messages up to now. Have they succeeded and to what extent? This section will also propose an answer to the question of how it should continue to act in order to recruit wide swaths of the Israeli public.

It is not at all superfluous to ask why the Foundation needs to affect public opinion. Eddy Shalev, Foundation chairperson, maintains that it is important to convey a message to students: "One of the programs to encourage mathematics study among female students is called 'Break the Glass Ceiling," and it operates in Bat Yam at the initiative of the Alliance Israélite Universelle. The program's initiators have tried to understand why in low or middle socio-economic populations the number of girls studying mathematics is significantly lower than the number of boys, in spite of their similar backgrounds, and given the fact that they share the same teachers and schools. We visited a Bat Yam high school and met the female students and their teacher. We understood that the female students receive negative feedback from their environment, the spirit of which is that if they make an effort in mathematics, 'they won't get married,' or 'they won't get anywhere,' and in any case, 'a woman's place is in the home.' To change such perceptions it's necessary to act to shape public opinion."

Shai Piron, former Minister of Education, maintains that the Ministry of Education's present public campaign ("Give Five") misses its mark. "Not enough effort was made to turn studying five units in mathematics into a language ingrained in the education system and its students. It doesn't open a conversation that conveys a message of 'don't be lazy,' when what's important is to maximize their potential. In reality, the children won't study mathematics or science because this advances the GNP or because there is a shortage of engineers, which is the message of the 'Give Five' campaign. In my opinion, the campaign is wrong. It needed to be 'don't give up on yourself.'"

Nurturing Teacher Status

Kobi Shvarzbord, a physics teacher and science coordinator at Leo Baeck High School and recipient of the 2015 Trump Master Teacher award, presents another reason for enlisting public opinion, which is to positively influence the status of the teacher: "I think that the teacher's status in the country is fairly bad. There is a sense that the profession has been cheapened. Many people believe that it's a very simple profession. There are people who compare us to babysitters. If a perception were promoted that teachers lead the success of their students and influence them, thus, recognizing our work, that would be beneficial to the teacher's status."

Shvarzbord believes that the Trump Foundation has not succeeded, or perhaps has not done enough to gain media exposure: "It seems that they haven't managed to receive exposure in the national media.

One example of this is that not one of the four recent Trump Master Teacher Awards, which the Foundation bestows on the teachers in the presence of the prime minister, has received significant newspaper exposure. The government was toppled on the day they gave the first prize and attention was focused on that. When I received the prize the next year, it wasn't in the newspaper because something about the president of the country captured the headlines. I was interviewed by Army Radio's Niv Raskin but on the day of the interview, the series"The Beauty and the Nerd" either began or was over and that item received more attention than the prize. The third candidate didn't meet with the prime minister at all because there were elections and he postponed bestowing the prize and so on and so forth. This is in contrast to another competition, "The Teacher of the Year", which receives a lot of exposure. This is despite the fact that the selection is not according to professional parameters in comparison to the Trump Master Teacher Award, where a professional committee recommends the recipient after examining the quality of instruction and pedagogy, and the prime minister bestows the prize. In my opinion, there needed to be more of a stir surrounding it and thereby, it would affect teacher status."

Shvarzbord suggests an activity that has succeeded in exposing the world of physics to the general public — such as the series, "Bar Lectures," which the Trump Foundation supported, but he has doubts about the extent of the exposure created: "The result of an absence of proper exposure is that many teachers, perhaps even physics teachers in certain schools, are unfamiliar with the Foundation and certainly, the public is not familiar with it."

The Danger of Too Much Exposure

It seems that exposure via the national media, including commercial campaigns, has been felt by the general public. Ofer Han, adviser to the minister of education, believes that the campaign for encouraging mathematics study has reached the point of being too pervasive and that it is advisable to let the programs be seen in the field without continuing their aggressive promotion in the media.

His thoughts were reinforced in an unusual manner, which must receive consideration — on the NonStop Radio program, "Mashal in the Morning," on May 3, 2016 with Rina Matzliach and Haggai Golan. Matzliach, a senior media figure at Channel 2, expressed her sentiments rather strongly: "What really annoys me is the television ad for five units in mathematics. Forget that anyone who doesn't take five units because it's not right for him, because he's not capable of taking it or doesn't want to, now that person feels like he's not a worthy individual. So I hate this campaign and I want to say that whoever doesn't take five units in mathematics ...may be very smart, very talented, very successful and even very happy. The campaign says five units will get you ahead in life. You can also get ahead without five units. Each student should be pushed into whatever he's talented at and into whatever he'll succeed at. Five units in mathematics is not right for everyone and students aren't supposed to feel not okay because they haven't managed to take five units in mathematics ... what is that? Some supreme value?"

Without reference to the question of who funds or is responsible for this publicity campaign or any other (the Trump Foundation, the Ministry of Education, a coalition of organizations, etc.), it may arouse antagonism and even cause future damage to the Foundation's objectives as it seeks to influence public opinion.

What's Been Missed

The Foundation has a directed and precise strategic outline and is strict about not deviating from the tasks it defined for itself at the beginning of its operations: it focuses on mathematics and science learning at the highest level; it focuses on high school; and it focuses on teachers and not on students.

This section will try to clarify what the decision makers think about the advantages and disadvantages of these choices. What was the price the Foundation had to pay for this? What are the issues and problems it hasn't considered, whether consciously or not, and what are the future dangers inherent in this?

Shai Piron, former minister of education, believes that in general, the focus on strategic activities by the Foundation was correct, although he thinks that it would have been more correct to act in the middle schools because "research shows that the greatest gaps occur there."

Eddy Shalev, Foundation chairperson, referred to the issue of the target audience's diversity. According to him, while the Foundation has operated in a balanced manner relating to diversity in terms of Jewish and Arab populations and has reached both audiences, the Foundation has not operated in the ultra-Orthodox community: "In the meantime, the ultra-Orthodox present an insoluble problem because they don't study English, physics or mathematics. They complete their arithmetic studies in 3rd grade, basically after they've learned the multiplication tables, so that any programs designated for them are only relevant after they've completed yeshiva at the age of 18. It's so remote to them. Many years will have to transpire until the ultra-Orthodox are integrated into high school mathematics studies. The Trump Foundation doesn't operate in the ultra-Orthodox sector because that is a task on the national level."

Gila Ben Har, CEO of the Center for Educational Technology, believes that a focus of five units in mathematics is legitimate and correct for a philanthropic foundation. However, from a national perspective, if the minister of education had consolidated his own plan on the issue, he should have focused on something else: "The Foundation has the privilege of only dealing with excellence and doesn't have to deal with lower levels of mathematics. Despite this, the agenda of the minister for education has to be different. Aside from excellence, the minister has the responsibility for there not being a single student who completes 12th grade without at least three study units of mathematics."

Furthermore, Ben Har notes the project of the virtual high school, which the Trump Foundation was a partner to, that provided yeshivas and ultra-Orthodox girls' high schools with access to mathematics study at a high level: "They have the desire; there is teacher as well as parent awareness. We discovered that the yeshivas and ultra-Orthodox girls' high schools were starving for this. They have students with very high learning potential and there was no reason why they shouldn't study mathematics and science at a high level, except for the fact that they didn't have enough students to open classes.

The success was extraordinary in this sector, and this year there are two full classes of ultra-Orthodox girls in the virtual high school and we have even trained ultra-Orthodox teachers to teach them."

Another group that has enjoyed the opportunity to study accelerated mathematics is Bedouin students: "This year, these students are studying in three classes. This has raised unanticipated difficulties. A portion of virtual high school learning is done at home. However, in the homes of the Bedouin students, there is no access to the internet. Therefore, we provided laptop computers and cellular modems for the students because we didn't want a child to not attain five units because of defective infrastructure. The ultra-Orthodox sector also doesn't have computers, and we built a different model there. The students remain at school or in a community center to learn mathematics using the computers there. It is evident that these populations demand more extensive consideration than what they are presently getting."

Ben Har proposes a number of insights relating to the strategic outline that the Foundation has implemented until now. First of all, in the area of the sciences, most of the Trump Foundation's activity has been in physics, and the Foundation has done nothing significant in the area of chemistry (if at all). It would be advisable for the Foundation to expand its operations into this field as well. Another comment raised by Ben Har relates to the need to extend the Foundation's focus to younger grades: "The Foundation may need to enter the middle schools to create a future group of learners for the high schools. Most of the science teachers in middle schools have training in the field of biology. They don't know how to teach physics and chemistry and certainly, they are not specialists. They have approached us for help. If the Foundation doesn't reach these students in middle school, how will they know that they want to study physics or chemistry in high school?"

Technology study is another area that is close to the heart of the Foundation's strategic operations. In Ben Har's estimation, the Foundation will need to make decisions regarding the promotion of this area further on: "Throughout the world, the talk is of STEM (the knowledge areas of science, technology, engineering, and mathematics). It's not entirely clear how the Foundation team has dealt with technology learning. This is different from mathematics and the sciences for which there is consensus that they should be part of the students' general education and later on whoever has the opportunity and potential can specialize in these subjects. I don't think that it's right to say that from first grade, everyone needs to learn programming in the same way that they learn mathematics because I don't think that it's the mission of the education system to produce new workers for industry. However, the position of this important field must be considered."

Looking to the Future

It's important to examine the challenges placed on the Foundation's doorstep at the conclusion of five years of activity and looking forward to five additional years.

Similar to any organization operating in a complex and uncertain environment, decision makers have also been asked about what might risk or interfere with fulfilling the Foundation's objectives and in light of this — what steps should be taken to deal with them.

"Presently, I don't see a threat to the Foundation's endeavors or successes, aside from the fact that they intend to shut down the Foundation at the end of ten years of operation," says Michal Beller, president of Levinsky College. According to her, the Foundation has done amazing work in identifying a vulnerable issue and advancing it. "They have influenced the decision makers in Israel, have operated in a focused manner, and are very influential and impressive."

"After they deal with the acute issue of high-level mathematics and science, looking toward the future, they should expand the focus. For example, as part of mathematics study, there is a need to look at the younger age group as well, inasmuch as high school studies are built upon what students have already learned in middle schools and before that, in elementary schools. In my opinion, the most urgent issue is to deal with the middle schools, beginning with 7th grade. The transition to this grade creates a crisis, because the mathematics subjects are different from those studied in elementary school. It's possible to continue to the higher grades from that point. The Trump Foundation could also further expand into the area of four study units in mathematics. In my opinion, that doesn't involve a huge expansion. The issue that is worth continued support is teachers' professional development in the higher grades. I also think it's important to stress that this is an area that you can't just walk into and then leave. The teachers must have guidance, particularly new teachers to be absorbed by the system in coming years." Beller points out another issue that creates a threat to one of the efforts focused on by the Foundation: recruiting quality teachers, and keeping them, which is part of the effort to increase the number of mathematics and science teachers in particular. Another effort is, of course, to improve the quality of teaching instruction.

According to Beller, graduates of flagship programs for career changers to teaching, such as Levinsky College's Delta Program, suffer from depressed earnings. Most of these students have come from the high-tech world and they have been integrated into teaching in the framework of a second career. Their lower earnings are detrimental to their motivation and this may sink the efforts invested in them: "The program's successful graduates arrive at school and discover that their salary is 4,500 shekels. This is because the Ministry of Education doesn't recognize their seniority from their previous positions, and therefore, an increase in teachers' wages based on seniority doesn't benefit them. This creates both distress and insult as a result of the state not being a partner to their sense of mission and the importance they attribute to their newly acquired profession."

Gila Ben Har, CEO of the Center for Educational Technology, maintains that she does not have any criticism of the Foundation's activities, but she has encountered a sense of confusion among different bodies regarding the division of labor between the Foundation and the government: "Sometimes, an eyebrow has been raised as to whether the Foundation is filling a function that the government needs to fill. It's important that the state knows its responsibilities if tomorrow, the Foundation ceases to operate. Like a parent who lets go of his child, will the child know how to walk alone?"

Lea Dolev, ORT's director of mathematics instruction, further clarifies the point: "In the past when we worked with donors, they generally gave money and forgot about us and we forgot about them. In my opinion, this wasn't particularly successful. Today, we work with donors of a different sort, such as the Trump Foundation, and others as well, who are involved in the field of operations and determine the agenda.

So, if the ORT network didn't want to deal with the issue of five units in mathematics, we wouldn't have any collaboration with the Trump Foundation. However, I think that the pendulum has swung too far in the sense that a Foundation such as the Trump Foundation has to a certain extent taken the place of the authority, in other words, the Ministry of Education, in determining priorities."

The Trump Foundation does indeed consider the time frame of ten years as a window of opportunity for instituting change, although according to Eddy Shalev, Foundation chairperson, it will continue to operate beyond that: "We aren't in a race against the clock, and it's not essential for the Foundation to cease operation in another 10 to 15 years. We thought that we would take out such and such an amount each year, and apparently it's not a simple matter to withdraw the money. We select the projects individually, invest modest amounts in each project and examine the results for a year or two. Only if the project is suitable, do we continue funding it." It may be that conveying a different message regarding the continued operation of the Foundation will allow partners to re-evaluate programs and to plan differently, more for the long-term.

The Importance of Documentation and Measurement

In the 2015-2016 school year, Minister of Education Naftali Bennett initiated the national program to strengthen mathematics study, an emergency program that for the first time, would allow all of the high schools in Israel to teach five study units in mathematics by opening 100 new study tracks. The ministry set a goal of doubling the number of students studying five units to 18,000 students in four years. An additional goal is to double the number of teachers teaching five study units from 1,000 to 2,000 teachers. (In the "National Crisis" section above, the involvement of the Trump Foundation in consolidating this program is mentioned).

Ben Har notes that the shortage of teachers is a strategic threat to the success of the Ministry of Education's program and indirectly — to the success of the Trump Foundation: "They opened a class for every five students who want to study five units in mathematics. Where will the teachers they're talking about come from? I know that there is a shortage of teachers. I don't see a significant increase in the number of teachers who are now being trained, and as a result of the shortage, schools that haven't managed to find teachers, certainly quality teachers, have had to give back hours they received as part of the program. Another question is what happens in classes that have been opened now? Who's teaching them? Are they good teachers? And if so, where were these teachers in the past?" Ben Har is also concerned that the schools will be unable to continue operating these small classes for only two or three students if there is drop-out from higher levels.

Opening the small classrooms harmed the activity of the virtual classroom operated by the Center for Educational Technology and Ben Har believes that the state has made a critical error: "The virtual high school is very transparent with clear and quantified data. We know how many students were at each study level in every stage and how many are promoted from one grade to the next. Once they had generously proposed study hours to the schools, the schools took students out of the virtual high school in order to open classes for every 4-5 children.

A gap was created in quantification. A situation may have been created in which in the future, schools that opened new classrooms won't report when some students drop out. Some of the statistics will appear at the end of the year when the schools report that a certain number of students have taken the matriculation exam. However, without documentation it will be impossible to monitor and see what has caused the students to drop out and whether the small classrooms have affected success," says Ben Har.

The desirable solution, according to Ben Har, is for the Trump Foundation to make a special effort to coordinate the data in the field and to analyze it: "I believe that the Trump Foundation must put pressure on the Ministry of Education to collect and share the statistics about what has actually occurred in these classrooms so that it is possible to monitor the program. I expect the state and the Trump Foundation to monitor the students entering 10th grade, examine who advanced to 11th grade and then 12th grade, the students who took the matriculation exam and the scores they attained. Without real data, it will be difficult to evaluate which of the different interventions led to the students' success. It should be remembered that the Trump Foundation has encouraged the state to invest more money, which has happened — and therefore, the Trump Foundation has a responsibility. Quantification must be carried out for another reason: it is uncertain whether two years from now the budget that currently exists for small classes will exist. Measurement will allow us to know the relationship between gain and benefit, and where there was a high return on the investment. Therefore, the Foundation must insist and demand the data from the state."

Multiplying the Success

Kobi Shvarzbord, science coordinator at Leo Baeck High School, points to an important perspective which deals with what seems to be a duplication of something already in existence: "I have the feeling that in certain situations, the Trump Foundation has sent out too many feelers, sometimes in the same direction. The Foundation team can fund the same item from several angles and then there's overlap and the programs become inundated. For example, in relation to the middle schools where there are plans to set up science teacher communities similar to the communities established for high school physics teachers. There's a "Kadima Mada" network program operating with the Trump Foundation's funding while at the same time the Weizmann Institute is working on building communities for middle school teachers, which the same Trump Foundation is funding. Perhaps each one of the programs is different and fits different populations. However, this could create duplication."

There is a great deal of importance attached to the issues voiced in this context by Ofer Han, adviser to the minister of education, regarding the Foundation's future. He goes further and wonders, in light of the program's backing by the Ministry of Education, whether the Foundation's original objectives weren't realized: "The Ministry of Education is already extensively and forcefully implementing the program. The Foundation needs to re-organize, especially relating to the question of its present role.

When the Foundation was instituted, if its role was to place mathematics at center stage, so now, when mathematics is at center stage in the Ministry of Education's endeavors — what does it want to do further?"

Han also proposes two options for possible future focus: "The Ministry of Education needs a fast 'commando unit,' a quick executor. My advantage, as the Ministry of Education is great, but the disadvantage is the ministry's slow speed. It may be that the Trump Foundation needs to become the body of execution to whom I can say, 'come, take my ideas into the field, go ahead before I submit a tender that will take a long time.' The second option is for the Foundation to enter other areas. For example, the subject of English is very interesting to us."

Risky Dependence on the Minister of Education

On the eve of the 2015-2016 school year, Minister of Education Naftali Bennett expressed his aversion to the title of the education system's central program, "The Other is Me," designed under his predecessor. He said that he believes in strengthening identities and that he will increase the number of students going on identity-formation trips. "I don't agree with 'The Other is Me,' the other is not me, each person is different," the Minister of Education said at a meeting. (*Ha'aretz*, August 2015). In March 2016, statistics of students eligible to receive a matriculation certificate were published. They were revealed by the Freedom of Information Law and showed that "according to the statistics, during the present academic year, the Ministry of Education has spent 75 million shekels to increase the number of students tested at the highest level in mathematics (five units). Nevertheless, the Ministry statistics reveal that the small number of five unit students in mathematics is only the tip of the iceberg concerning the education system's troubles: in 2014, approximately 50% of 17-year olds did not receive matriculation certificates (among Arabs, 55% were ineligible for matriculation certificates and among the ultra-Orthodox, 91% were ineligible for a matriculation certificate)" (Ha'aretz, March 2016).

These two items demonstrate possible and rapid changes in the Ministry of Education's focus: the first item, which is not directly related to mathematics, indicates the relationship between the personal positions and the apparently political positions of the minister of education, between encouraging and funding certain educational programs. The second item, dealing with mathematics, presents statistics that could create public pressure — or be used as an excuse, depending on one's perspective, for changing the policy of expenditure for achievement in accelerated math in favor of promoting the value of equality in the Ministry of Education.

These case-studies, which serve only as examples, do not depend on research relating to the policies of Israel's ministers of education, but constitute a backdrop for the interviewees who wondered about the ability of the Trump Foundation to continue advancing its objectives when ministers of education are replaced. The new minister then seeks to introduce different emphases into the system. . "The Trump Foundation was lucky that Piron agreed to their agenda, and Bennett has made it the first sentence spoken at every opportunity. However, what would happen if a minister of education came along for whom this was not his agenda?

Would the Foundation undermine the goals of the new minister?" asks Lea Dolev, ORT's director of math instruction.

"There were ministers of education before Piron who never placed this on any platform, or in any plan of action. Ultimately, the budget is limited and if there's a minister of education who has a different priority, the present harmony will be destabilized. Without the monetary support and professionalism of the Ministry of Education, it would become more difficult, because a school principal is under obligation to the Pedagogical Secretariat and its whims."

An additional danger stems from the possible identity of the Foundation's measures with a rightwing, anti-humanist agenda. The person who today is identified with such an agenda (without referring directly to the correctness of this claim) is present Minister of Education Naftali Bennett, who is portrayed in the public as desiring to influence the values studied in the education system. An echo of this can be found in the words of Dr. Zeev Dagani, principal of Gymnasia Herzliya, who has earned a relatively high public profile. In an interview with *Ha'aretz* newspaper, Dagani said that "Education doesn't interest him [Bennett]. He only uses it as a platform to advance his nationalist political ideas. He fires and gets rid of all the people who think and express themselves otherwise…and introduces into the system people who serve his ideology… even this whole business about studying mathematics above all else. The budget goes to this. What does he say about it? That other things aren't important. Humanism, combatting racism, ignorance. People don't understand what's bad about it. They say, what do you want, what's bad about mathematics?" (*Ha'aretz Supplement*, 13.5.2016).

In contrast to this approach, Ofer Han, chief of staff to the minister of education (during Piron's time as well as Bennett's) diminishes the claim that the minister of education's identity is important because the budget for strengthening mathematics studies is anchored in the regular base budget of the Ministry of Education, beginning in 2015-2016:

"The significance is that the next minister of education won't need to say 'I want this' and be judged by obtaining a budget like Bennett was. It's very dramatic. If a future minister of education wants to back out of the program, he'll need to go to the Treasury and say that in a budget of 50 billion shekels, there are 75 million shekels designated for mathematics and he wants to decrease this as part of a budget cut or to divert it to another destination. However, then he'll be asked, 'Why mathematics? Find something else in the budget.' To make a comparison, there are a number of programs undertaken by Shai Piron that weren't anchored in the regular budget and that's the whole difference. A new minister of education apparently won't fight to obtain a budget for a program that the previous minister initiated and that was identified with him. However, once you anchor the budget in the regular base budget, you are in another world. The regular base, due to its automatic pilot function, continues from one year to the next. Thus, there will be 75 million shekels forever. It would be very difficult to trim the amount because it would be necessary to face the senior personnel in the high-tech branch, 8200's commander, academia, and anyone lobbying forcefully for the program."

Shai Piron expresses a different concern. According to him, the campaign encouraging mathematics only scratches the surface and won't become ingrained in the values of the Ministry of Education: "When I was a school principal and I was told that we were receiving hours for a project, I would have joined the project — not because I wanted the project but because I wanted more hours. It may be that this is also the case today in the schools. I am concerned that too few things are done here deeply, gradually, and in an organized way. One of my concerns is that as a result of the campaign that focuses on accelerated

mathematics, teachers will simply change the scores or some minister of education will give an order to make the exams easier in order to increase the number of five unit graduates and attract other students. When will we see this? Only on the comparative international tests."

Piron goes on: "Different from other subjects, mathematics and English are part of the consensus, but the initiative can easily crumble. In Israel's political DNA, it is customary for the minister to show achievements. What will happen if the pace of progress in increasing the number of students isn't the pace that satisfies the political needs of the minister of education? If the minister of education sees that it hasn't succeeded — he'll move on to English. He'll come out with a new program for English." In Piron's opinion, in order to avoid a situation in which a program disintegrates, there's a need to create a deeper infrastructure within the education system so that it won't be dependent upon the minister: "I think that the more something goes from being a project to becoming a culture, something at the heart of learning, at the depth of things, it will have a greater chance of success." ■

The Trump Foundation's Relationship with the Government

Dalit Stauber

Introduction

Soon after beginning its activity, the Trump Foundation brought the decline in the number of high school graduates in advanced mathematics and physics to the public's attention, while creating a connection between these numbers and the future strength and prosperity of the State of Israel. The Foundation did more than just sound the alarm. It decided that its top priority would be strengthening the teaching of physics and mathematics in secondary schools, focusing on teachers and their practice. Soon after, the Foundation developed a portfolio of programs to increase the number of teachers who are trained to teach these subjects at a high level, to empower them to teach clinically and to develop and improve their teaching methods, and to build teacher communities so they could learn from their peers and support one another in their practice.

The Foundation deliberately decided not to act alone; rather, to engage in deep collaboration with all the relevant stakeholders, including the governing institutions of the education system — the Ministry of Education, its districts, the municipalities, and school networks. These partnerships were created based on an understanding that the provision of education is the responsibility of the government. This notion, which recognizes the inherent limitation of a philanthropic body, was crucial to the Foundation in order to ensure broad implementation and sustainability of its programs that can only be guaranteed by public organizations.

A period of five years may be too short to draw conclusions and to discuss the question of whether the Foundation was right in taking this route, and to determine if it achieved its goals and how it did so. It would be even more presumptuous to try to point to specific elements that were more conducive to the success, whether the clinical teaching programs, the media campaigns, the central government policy, or their mix. However, this period is sufficient in order to reach meaningful intermediate insights, which allow learning "on the go" and mid-course corrections.

* Former Director General of the Ministry of Education (2011-2013) | This documentation paper, part of the 2016 mid-course review, is included here to provide a more complete look at TTF processes and past insights

From Strategy to Practice

The Role of a Foundation

The Trump Foundation defined a clear strategic approach which guides the way it operates and allocates its resources. The Foundation's papers describe the Foundation as a "persistent engineer," constructing plans and overseeing their proper implementation, while at the same time operating as a "polite pyromaniac," setting fires in different locations and blowing, so they will spread. However, all its work is based on a fundamental assumption that the government is the leader of education and that its responsibility should be empowered and respected. The Foundation sees its place as a mosquito near an elephant, a catalyst for its movement and a buzz in its ear.

This principle of "government responsibility" had a great impact on the pace and scope of the Foundation's activity during its early years of operation, when the Foundation was busy planting seeds. It collected data, conducted an ongoing data-backed dialogue and tried to win over hearts and minds, with the goal of making an impact on policy. The Foundation also tried to reach an understanding with the professional echelon of the Ministry of Education and - as the ministry was willing - to put in place a budgeted policy consistent with the Foundation's goals. These steps formed a concrete basis for understanding the importance of the mission and for creating a practical joint vision, objectives, targets and agreed metrics of success for the activity.

Eli Hurvitz, executive director of the Trump Foundation, explained this in the following manner: *Education belongs to the government and the government must lead. The government's responsibility cannot be delegated to any other party and it is their sole responsibility, from start to finish. Philanthropy has a different role - philanthropy can be a supporting catalyst, and its advantages and disadvantages must be predefined. Once the matter of responsibility is clear, it also becomes clear why a philanthropic foundation must have an expiration date, so the government will maintain its long-term commitment. When a shared priority area is jointly chosen, where philanthropy is going to assist, it has to have clear goals and methods of operation for how the philanthropic system will help the government in alignment with the rules of the market that are dictated by the State. The foundation then works like scaffolding of a building, supporting the initial construction processes; and when the foundation exits and the scaffolding is removed, the building will continue to stand.*

Strategic Partners

The second assumption of the Foundation's work is the importance of creating comprehensive impact by recruiting as many significant partners as possible and shaping public opinion through opinion leaders in the areas of its activity. The Foundation tried to create a "tail wind," active involvement and support for the process (a collective impact ecosystem). These activities stem from a belief that shaping broad public perceptions that recognize and support the importance of the processes that are taking place will help progress through public awareness, social awareness and public pressure, ensuring continued influence after its activity ceases.

Hurvitz notes that he believes in collective impact:

Throughout the work year we worked with Sheatufim, the Rashi Foundation, Intel, and the Ministry of Education. If I were to define the three components of creating collective impact, they are (in reverse order):
a) Formulating a policy, vision, goals, and metrics
b) Creating extensive cooperation between all of the relevant actors
c) Developing capabilities in the field

Measurement

The Foundation determined that its success would be examined on three dimensions: A. Did it effect change in the excellence metrics and was there an increase in the rate of high school students completing the five-unit matriculation? B. Did the change indeed seep into the education systems, and to what extent? C. Were capabilities and awareness built in a way that will allow them to prevail even after the Foundation stops funding the program?

It is clear that beyond the predefined objectives it is important to listen to the "field" in order to learn lessons "on the go" to help the activity succeed and to establish collaboration with the Ministry of Education. It is also important in order to provide a working model and to leave behind a body of knowledge, which will serve as a tool that will allow the minister, the director general and the decision makers to act properly in future cooperation with philanthropic foundations as well. As such, the Foundation hoped to offer a cure for the "disease" of a lack of information management and thoughtful documentation of methods of activity in the government offices, which keep reinventing the wheel every time a difficult and/or pertinent topic needed to be addressed. Hurvitz argues the following:

We do not receive regular feedback or in-depth reflection from our partners, and it is important for us to understand- especially at this time - what can be done otherwise... It is important to us to document what we are doing with the government, so that when the director general of the Ministry of Education wants to cooperate in the future with philanthropy and wants to do it right, there will be a reference or a set of references. It is amazing when you think about how many previous attempts were conducted and the level of cooperation that took place, and there is no documentation of the knowledge or the creation of recommended working patterns...

It is important for the Foundation to know and understand what government officials think about these questions in order to do better work together, and in order to instill this body of knowledge in future cooperation...
It is important to reach a situation whereby when the government wants to tell a story about philanthropy and how to work with philanthropy, we will all know what the government needs in order to be satisfied, and where compromises can and cannot be made.

Objective and Methodology

The objective of the following study was to examine the positions of government officials regarding the Foundation's activity: assumptions, methods, and insights regarding further collaboration. Six in-depth interviews were conducted with senior staff members selected by the Foundation. In addition to the executive director of the Trump Foundation, we also interviewed Mr. Shlomo Dushi, executive director of Sheatufim, Ms. Yulia Eitan, deputy head of the National Economic Council at the Prime Minister's Office, Ms. Michal Cohen, director general of the Ministry of Education, Mr. Zvika Aricha, chief inspector of physics, and Ms. Dasi Be'eri, director of the High School Education Department at the Ministry of Education. All of the interviewees were happy to participate in the study process, put time and thought into it, and answered honestly and with great transparency, out of a sincere desire to contribute to the insights and continue the successful cooperation with the Foundation.

They addressed the necessary conditions for success when working with a philanthropic foundation, issues where cooperation with such a foundation is appropriate, the importance of the style of operation of the foundation and its executive director, the recommended channels of communication and their frequency, the level of satisfaction from the activity and suggestions regarding what can be implemented in order to create a successful model for future cooperation between the government and foundations. The interviews provided insights on matters pertaining to the implementation of the strategy and the theory of change, the impact of the Foundation on the education field, the quality of management of the cooperation with the government and the Ministry of Education, and recommendations on how to effectively utilize social networks and evaluate the concept of excellence that guides the Foundation's activities.

The Research Question

A number of key issues were examined, ranging from questions regarding the basis for the Foundation's objectives, to evaluating the activity that took place and addressing further activity:

"Working within the system" - The Foundation decided to operate within the system while using the tools at its disposal and not to offer any supplemental extra-curricular activity that is dependent on philanthropic grants. This was done in order to ensure government responsibility. What is the "price" that the Foundation paid for this decision, if any? Retrospectively - was this the correct decision?

The partnerships strategy - The Foundation's strategy of partnership with the public sector in general and the Ministry of Education in particular, involves being a co-investor. As such, the Foundation and the Ministry of Education invest in the project independently and separately, with no direct agreement between them. What were the alternatives to this kind of partnership? How is this put into practice?

Creating partnerships with stakeholders - In order to expand the circle of excellence and to build the required networks for this purpose, the Foundation decided to work closely with the larger "eco-system" and initiated cross-sectoral collaboration [the 5X2 initiative], which includes the Ministry of Education as a central player. The goal was to build a coalition between various actors in government, academia, the high-tech industry, the army, local government, etc. Is the Foundation successful in nurturing the required network in order to promote the desired change? What can be improved?

Sustainability - Are the partnerships the Foundation established achieving the ongoing and wide scope of implementation and sustainability that it would like to achieve?

"Looking toward the future" - What are the challenges the Foundation faces in the next five years? What are the future risks entailed in the Foundation's ability to continue its activity? Is it able to cope with them, and how?

Findings

Foundation Leadership

One of the things that came up in the interviews is the centrality of the Foundation's executive director as a leader of the endeavor. The interviewees referred to the centrality of the leading personality of a philanthropic foundation and his personal style, as part of the foundation's positioning and as a decisive factor in the success of the process and strategy implementation. Eli Hurvitz is considered a determined and consistent person, who knows how to express the Foundation's objectives very well,

with a clear perspective regarding the Foundation's role in the process, while at the same time emphasizing the importance of the government as the leader who takes overarching responsibility.

This is how Shlomo Dushi describes him: *Organizations are made up of people, and Eli's role here is very important and complex when it to comes to creating connections between people in order to build relationships - relationships that leave space for others-, in a manner that each person's voice holds equal value, with some compromises, even though many concepts are positive and they become part of the consensus when different things are combined.*

Michal Cohen added her own emphasis: *The personal aspect is very important. Everything depends on the relationship between people....the Trump Foundation's strength is in the fact that nobody cares who is leading and there are no ego games. The Foundation practices what it preaches. It doesn't just talk about partnership, it operates as a partnership.*

Zvika Aricha adds: *This is not an organization that talks about "expanding" the Ministry of Education and rebuilding it. Rather, we recognize the system and listen to it, unlike other foundations, which required a veto on what they were trying to achieve while fully ignoring the ministry.*

Dasi Be'eri also thinks that: *The importance of the person who represents the foundation and his personal style is unequivocal. The more a person encourages partnerships and is attentive, the greater the chances of success. I sat down with foundations that were very knowledgeable. And here you have a foundation that is very powerful and at the same time it has an extremely admirable level of humility…*

Yulia Eitan continues to describe the uniqueness of the Foundation: *The Trump Foundation acted the entire time as a partner, instead of as a client; a partner in understanding the problem and in taking action to expand the window through conversation. This is a challenge that should not be taken for granted.*

The Role of Government Vis-à-Vis the Role of Philanthropy

The interviewees, civil servants who represent the establishment through their various positions, are all convinced that the government must not allow anyone else to lead in the core areas. The civil servants are extremely familiar with the government's obligation and its responsibility for education, as well as their personal professional responsibility which stems from this. They bear responsibility due to familiarity and desire. At the same time, as those who follow its procedures, they are well aware of the system's weaknesses and its limitations. As such, they experience severe frustration at times with the fact that their extraordinary efforts do not always bear fruit at the pace and scope that they would like due to organizational, bureaucratic, economic, and sometimes political difficulties, including frequent policy changes owing to the frequent turnover of ministers.

They often become tired of serving as society's "punching bag" for any number of problems and they are often not recognized and appreciated for their efforts and professional investment, which is rarely disclosed to the public. However, the interviewees referred to the advantages of "combining forces" with a philanthropic foundation that knows how to work in real cooperation with respect for government and its responsibility in order to promote topics that are clearly important and central. In these cases, they greatly value the cooperation and are willing to assist and to be assisted so as to achieve the shared objectives, to meet the targets and to realize professional dreams, which would not have come to fruition without the help of the Foundation.

The Trump Foundation also receives substantial praise for the choice and focus on the important challenge of promoting excellence in science and mathematics. Over the years, the Ministry of Education has made a variety of attempts to increase the number of students in the five-unit matriculation tracks for mathematics and to increase the number of teachers who are trained to teach them, but without any noticeable success. Among all of the ministry's objectives, there was no emphasis placed on this goal in the past in terms of focus and resources to bring about the desired breakthrough: a significant increase in the number of mathematics and physics students in the five-unit track and putting a team of teachers with high capability levels at their disposal, that would enable them to address the demand. Partnering with the Foundation facilitated focus and success for all the ministry partners, as they strive toward a high level of work and motivation for further cooperation in order to achieve the goal and additional goals.

This is how Zvika Aricha describes it: *When we met, Eli asked me: How do you view the system and what is important in your eyes? The conversation was in 2009-2010 and the numbers were revealed two-three years later. The number of students completing four units in mathematics increased among those studying physics. I was the first to feel that something was happening. Although the number of 7500-8000 completing matriculation was maintained, those completing four units of mathematics constantly increased. The result is that the mathematics level of physics majors was lower in the universities as well. Without the top tier, the number of teachers and experts consistently decreased. This is what I described to Eli and I asked for his help, and I could not imagine at the time - during the first conversation - how much help would be provided.*

Yulia Eitan emphasizes the role of government in setting the policy, stating that: *I believe that it is critical to understand the government's need even before building the tools. Eli Hurvitz immediately allowed for a professional conversation from which he took some things and left out others, but there was a dialogue about all of the challenges. From my standpoint, the government does not have to manage foundations or organizations instead of the foundations or organizations managing themselves. The method that the executive director of the Trump Foundation chose is a good way to teach about the process, how to get an organization to run properly, and then we go back, and ask again about the need. There was an attempt here to create a meaningful process and to clearly elucidate the real need.... The government must be responsible for most matters and the foundation must contribute at the margins with a sense of respect for the government's responsibility. The government operates the system, and the foundations assist in the areas determined by the government. The nature of the content will always be determined by government, while the mediator may at times be from the foundation staff. The non-profits have a conceptual advantage, but the material must be presented in a creative manner, in a way that will enrich the government's toolbox. The government must consult with the non-profits, in order to address blind spots. However, the policy is decided by the government.*

Michal Cohen uses the image of an "octopus" to describe the model of working alongside philanthropy: *If the government wants to succeed with the foundations it has to be confident about its added value and its leadership, and that the topic is on its agenda*.

Collaboration with foundations strengthens the government and the public service. There is room for everyone. The definition of tasks must be clear and include clear setting of expectations. Topics on which there should not be cooperation with philanthropy are regulatory matters that require a sovereign authority. But other than that, there is no hindrance to partnering with a civic organization according to the aforementioned rules. The model of a coalition that is formulated behind the ministry with many arms, like an octopus - is a successful model.

Dasi Be'eri emphasizes the importance of the Foundation for the strength of the activity: *The government has many important goals, but it goes back and forth between them and must balance its energy dispersal. The Trump Foundation comes and provides a focus, requiring "high walls" around the topic all the time. As a department director, I learned that when there is a person who keeps pestering you (in the positive sense), he creates a great amount of action.*

Shlomo Dushi refers to the added value of philanthropy: *What is appropriate for cooperation with philanthropy? The most problematic part is the governmental perspective - that someone who brings money is desirable in our parts because it generates extra cash for the senior officials' pet projects. This is the most problematic thing possible. There is a great temptation to work with philanthropy, of all kinds, due to the State's troubles. Philanthropy's place should be in an area where there is value to working in various sectors to address a matter in which government requires extra help in order to create added value, and not just taking available cash."*

The Partnership Model

Throughout the period, from the moment the Foundation was established, there was an ongoing dialogue with the Ministry of Education, ministers, and director generals, so that the ministry would lead the process and positively view the importance of the objective and fully identify with it and its responsibility to achieve it. The joint focus of all parties on the goal of promoting science and mathematics only came about following significant steps the Foundation took over a few years. These steps included properly understanding the situation, increasing public awareness, recruiting numerous partners from the relevant government ministries, university representatives, non-profits, museums, and significant parties in industry and the private sector. All of the above came together to build a mechanism of dialogue and create a roundtable where 100 organizations and companies that decided to join the cause, would sit and provide a tailwind for the government.

This model of partnership with many parties who joined together for the process was based on an innovative concept, since at this roundtable each one of the parties recognized the government's responsibility and leadership, but also had an equal status in the conversation as a student and teacher, regardless of its size and the importance of its role. This mechanism, which was closely managed with great sensitivity by the Foundation and Sheatufim, is what ultimately neutralized extraneous or hidden interests involved in a process of many organizations. Even if these organizations had a motive of promoting their interests, such as - for example - teaching computer science, or focusing on training engineers, ultimately the proximity to the ministry, the minister, the director general and the professional staff, was considered an immense profit in itself, with a place of honor at an influential table of decision makers.

The great power of the eco-system, where all partners support and understand the work from close-up, and address difficulties and opportunities while operating as a coalition, is a great asset to the minister of education and the ministry. This strength can also face significant opposition if it is not used wisely. The minister of education at the time, Rabbi Shai Piron, was not on the same page as the Foundation regarding the importance of promoting excellence specifically in mathematics, but the data that was carefully collected by the Foundation presented a situation on the ground that could not be ignored. The process received an extraordinary window of opportunity with the arrival of Minister of Education Naftali Bennett to the Ministry of Education, with his deep understanding gained from his high-tech background and as a former minister of the economy, of the importance of the process and the revolutionary implications for the education system, society in Israel, and for the development of the economy in coming decades.

During his tenure as minister of the economy, Bennett took note of the great deficits and the immense need in the labor market and in the various industries for engineers and graduates with mathematics training. The continued professional training of these graduates, when provided on the right level and adjusted to the market's needs, can address the industries' developing needs and guarantee Israel's economic vitality. The fact that the leading officials in the Ministry of Education at this time are deeply convinced that the process is essential from a professional standpoint, along with the unequivocal statement that the minister received from the National Economic Council that supported the process, provided fertile ground in order to make significant wide-ranging decisions. And indeed, immediately after taking office in the Ministry of Education, Minister Bennett's understandings were translated into the significant strategic target of doubling the number of mathematics students completing five units, and this target was backed up by his decision to provide a 100 million NIS budget for the process.

Shlomo Dushi referred to the cooperation between the parties and declared: *This kind of work involves crises that occur from time to time, as well as players who are trying have an impact with secondary agendas, such as those from industry or from the civic sector who want to take a slightly larger cut. But if you understand that you are in an eco-system with the potential to be very effective and that there is a need to compromise, not on your activity but in the public domain, then you can create something very significant. Here, the Trump Foundation saw a real concrete value in the collective impact model, instituting a different paradigm or more concentrated work, with no ego, and a joint front dealing with the ministry in order to maintain a routine of constant contact. If you eliminate political aspects, the most important thing is that an amazing system was built based on trust, which proves that with such organizations you can reach more meaningful achievements than what is possible with each organization working on its own.*

Yulia Eitan expounded on this topic: *Any philanthropic entity encounters a reality in which it can be an agent of change, but at times you have to wait for a window of opportunity that will allow for a breakthrough. The topic of five units of mathematics could not be breached during Minister Piron's tenure, since this topic did not interest him. Minister Bennett announced that this was his plan on his first day in office, because as minister of economy he worked on the engineer deficit, where the cause of the deficit in this profession in the labor market is a lack of mathematics knowledge and the small number of five-unit students. He understood that the system is producing graduates who are unable to enter the work force, which created dynamics that made him ready to listen. Bennett himself got on the phone and asked the Council what they think.*

He came prepared and he understood the need. He entered a ministry that understood what is on the table, following the processes that the Trump Foundation already put in place. The fact that the Foundation succeeded in ensuring their place at the table for the first discussion immediately when the minister began his tenure is a double success for the Foundation. Firstly - the fact that the professional ranks did not object. It is easier for a minister if he doesn't have to fight with the professional ranks. At the same, when a serious external party speaks it is worthwhile to listen to them.

Michal Cohen explains that: *I understood that if the ministry fails to embrace this program, it won't happen. Shai Piron began with the "Mathematics First" program and then Naftali Bennett put 100 million NIS into it - much more than what was required for the original plan. He provided resources and made it a priority, and this direction will achieve the targets that were set. Naftali deserves credit as the minister who included the topic in his strategic plan, and also provided a significant budget of 100 million NIS, and he also speaks with people in high-tech, in industry, and with the school principals, and he verifies everything. There are status briefings, and there are incentives and rewards. At the end of the day the ministry built the plan, but the Foundation initiated it.*

A change cannot be created on the national level without the government and without an authentic and potent partnership along with it. The new innovative organizing structure, which led to the partnership strategy, provided significant added value, which created extremely precise answers to needs born out of a sense of urgency and intensity. There had been plans before, and officials and entities took action. Evaluation plans were conducted, and the number of five-unit mathematics students still continued to drop. Once the new concept was put in place, suggesting that if the ministry makes this matter a priority and appoints one party as an integrated address for all execution, backed by an extensive support network with additional flexible resources at measurable rates, the breakthrough would occur.
This is the reality that we face now. After consistent focused work for a few years, the Foundation's vision was embraced, during Minister Bennett's tenure as mentioned, and a generous budget was allocated.

With recognition of the government's responsibility, with an understanding of the importance and urgency of the goal, and with a view of the window of opportunity provided by the joint venture and leveraging public awareness through the many partners that came to the collective impact table, the process reached an unprecedented scope. This scope accelerated the process of meeting goals even before reaching the agreed deadline for achieving them. We can certainly conclude that the ministry considers the advancement of excellence in mathematics as its responsibility. The minister and the director general are leading the way, regularly monitoring compliance with the goals; a joint steering committee accompanies the process and advises, the work plan is detailed down to the class and teacher level.

The work plan includes the assignment of tasks among the partners and close monitoring down to the level of a weekly status report. There is a large array of incentives, there are public relations and media activity to provide leverage, and there is noticeable mobilization of all partners in accordance with the needs on the ground. There is consensus among the government personnel and the Ministry of Education personnel that the Foundation's decision to operate from within the system was a correct decision, and after the "birth pangs" stage the strategy is proving itself as the only way to work harmoniously with the ministry.

Michal Cohen continues to talk about the joint work, explaining that: *As far as working within the system is concerned, the Trump Foundation is currently working very well with the Ministry of Education. The policy is determined by the ministry and the Foundation serves as a multiplier that leverages the ministry's ability to achieve goals. In the beginning it was not like this. They came in with their decision to promote science teachers and they were asked why specifically science? At first they declared what they want to advance, without asking if this is what the ministry wants, just assuming that the ministry will say "yes." Today they are on the correct path. Now there is joint work, with the formulation of strategy, metrics, and methodology, and they are involved in accompanying the integration process. A Foundation that wants to push an agenda and have an impact on the national level must connect to the professional level at the ministry that will lead the process.*

Regarding the question of working "within the system or outside it," Dasi Be'eri replies: *I don't know what is correct from a research standpoint, but from my experience the Trump Foundation is an excellent role model when it comes to focusing on the target - science and mathematics. The Foundation doesn't deal with mediocrity or a lack of clarity and focus. They are more precise than the ministry... Therefore, the discussions with the Trump Foundation are very clear-cut and this is very challenging for the ministry, which is not always so "clear-cut"... Excellence - this was always the ministry's focus*.

Zvika Aricha sees the process as one that can be learned from: *Trump's work from within the system, including its support of development and governmental entities, contributed greatly to the success. This investment is an investment over many years, because it included all of the required elements: research, fieldwork, conditions for success, and adaptation.*

The "Co-investor" Strategy

Notwithstanding the above, government officials had an ambivalent approach to the co-investor partnership strategy. On the one hand, they are aware of the difficulties, the bureaucratic foot-dragging and the time that is wasted during each process of tendering a contract with the ministry. Everyone has criticized the way the tender processes drag on, their complexity and the fact that they sometimes pose an obstacle. On the other hand, some people see the tender contract as a guarantee of stability and continuity throughout the years of the contract, as it serves as an "internal barrier" against the risk of policy changes, due to frequent changes in personnel, which are a result of ministers being replaced and the governing crisis in the State of Israel.

The fact that the Trump Foundation can execute joint decisions and its own decisions so quickly was not seen as lacking disadvantages. Some of the ministry personnel consider the relationship with the Center for Educational Technology (CET), a grantee of the Foundation, a contractual process like any other that suffers from all of the problems and defects of the ministry's tender process. Some of them also criticize the exclusivity of CET, which is undoubtedly seen as a provider of a quality product but is considered expensive. With a lack of competition, it hinders opportunities to utilize the potential for contracting with parties that would have allowed for cutting down on expenses and an intelligent use of resources over time. At the same time, the ministry's personnel did not offer an alternate solution that would address the weaknesses of each one of the sides of the coin.

Regarding the partnership strategy, Michal Cohen notes that: *The Foundation decides where it invests. On paper we do not have a relationship with them, rather with CET, so in any case there is a tender process.*

The Foundation does not want to get stuck dealing with government bureaucracy. Over time I think it would be a good idea to consider institutional cooperation processes. Since the cooperation is a result of the relationship with Eli, what exists today may not be possible tomorrow. The fact that there is no legal relationship also does not bind the ministry over time, for example if the minister were replaced. When there is a legal contract, the government is bound by it. As such, the method that they chose has some disadvantages, but there are advantages as well.

Dasi Be'eri is also ambivalent about the fact that the Trump Foundation avoids contracts and legal relationships with the ministry and argues: *Conceptually, they are right. Practically, today the ministry funds the Virtual High School program that is becoming too expensive for the ministry. I ask myself how did this happen? Budgetary methods are not my expertise. From a rational standpoint I understand that the Trump Foundation is right. CET's energies are directed at providing services for the issues where Trump is involved, while at the same time they are very expensive in other areas, and as a result it is very difficult for the ministry to move to the next step. CET is the most appropriate entity from a professional standpoint, but from a cost standpoint working with them is becoming impossible. I had experience with another foundation where the contractual difficulties doomed the plan. At the same time, the presence of this important foundation, the Trump Foundation, should serve as a red light, that a monopoly should not be created, which would increase the prices of the parties that provide services to it and to the ministry, which would negatively impact the rest of the process.*

Creating an Eco-system

The Trump Foundation's strategy for creating an eco-system has been met with a mixed reaction. It is supported unreservedly by Sheatufim, which views the recruitment of such a large group of organizations with various interests and their transformation into an orchestra that plays in harmony, as an immense achievement of great value toward creating sympathetic public opinion. Sheatufim also recognizes the possibility of opposition being created if there weren't such a large circle of partners. Such voices could have undermined the ministry's work. The fundamental, extensive, and ongoing process, which such a large coalition produced, is an extremely valuable asset for any minister or director general, and they can use them to achieve a decisive impact and make meaningful changes on the ground.

In its own way, this coalition helped introduce new role models into the system: successful engineers and high-tech professionals. They visited schools to raise awareness of the importance of and motivation for studying mathematics at a five-unit level, and to assist in changing the branding of five-unit mathematics from elitism that is appropriate only for the few to a subject that is appropriate for the masses from all sectors, communities and sexes, and that everyone can succeed.

I should note that it appears that government officials are aware of the leverage that can be provided by the numerous partners to the process, especially key figures who are public opinion leaders. The Ministry of Education officials certainly benefit from the dialogue as well, which uncovered the various organizational cultures, challenging the ministry and allowing it to "sharpen its tools" and improve work methods. Furthermore, there is satisfaction with the extensive public consensus that was created and with its results, as well as the recognition that the Ministry of Education is receiving from partners from other sectors due to the exposure to the ministry's work.

These partners, who were at times the most critical of the ministry, learned to appreciate its work from up close, to understand the difficulties and complexities, to value the quality of the human capital found in the professional teams, the activities performed and their scope.

These numerous entities and their leaders serve, as of today, as goodwill ambassadors for the Ministry of Education in Israeli society and they are spokespeople for its work and achievements. At the same time, the ministry is clearly very sensitive to its status and importance as the program leader. The ministry would like to receive appropriate credit for its part, as they see it, via publicity in the media targeting the public, and at events where the partners are present. Some do not feel like this credit is given appropriately, consistently, and accurately. Some ministry officials are critical of the limited financial contribution of some of the partners and the way they are satisfied with an advisory role. These officials expect the participants, who joined the ministry and the Foundation in this program, to open their wallets. Some ministry officials would like to see the partners take responsibility for leading overlapping topics, which are not the core of the ministry's work, such as documentation and research. These are areas where the flexibility of these organizations can be leveraged in order to empower a systemic learning process that can be derived from them.

The method, which gives each organization - big or small - an equal voice around the table regardless of their objective contribution, is not to the satisfaction of all ministry officials. On the other hand, no other proposal was raised to provide representation based on relative weight or another structure. Sheatufim sees the Trump Foundation's decision to provide an equal voice to any organization regardless of its size, and its ability to reach agreements about an equal process, as an immense virtuosic achievement, and Eli Hurvitz is given the credit for his negotiation abilities.

Shlomo Dushi says: *In this case a situation was created in which it has a great impact. It starts with the Trump Foundation's understanding that there is no organization, even a large organization that operates in an arena involving a complex issue that can independently create a decisive impact. And if they do have such an impact they will face criticism from the government. The Foundation was willing to act in a dual manner. They would promote their agenda in their own way, while at the same time putting aside their ego in order to create a wide-ranging coalition of partners that generally suits the strategy. One of the things we learned is that as long as the issue is authentic and there is a sense of urgency and many organizations want to work together, each organization still works on its own and employs its own manipulations, but they are willing to huddle under one flag with the same measurements and criteria in order to impact the government. If Eli and I sit with the government in a closed meeting and explain the problem, and also show them 60 organizations that got together to work as a coalition, the system can also hear alternatives from the opposition. And why should the government create an opposition? So, in a case of many groups who came together to support a central data-backed issue, no minister in his right mind wouldn't embrace the opportunity in one way or another... Such an organization has the kind of unbelievable momentum that carries all the forces forward on behalf of a shared objective, after they've made sure that the senior ministry officials share the same goal... Once a minister comes in and raises the flag to the top of the pole and allocates resources, the system still has a weak point, such as how to create motivation for students to sign up for the track, which requires a great amount of effort.*

This is difficult for the system, and the external force does the work. Thirty-seven commercial companies that send senior engineers to conversations with students, 407 schools that visit high-tech companies and learn about their systems, and then these become the current role models for the youth to identify with... There is something very unique here, very effective, even more then what we could have anticipated. The minister of education and the director general beside him, are very seriously pushing the issue and it is at the top of the agenda. This is an issue that could have been an elitist issue, and instead it removed obstacles that was in place for sectors of the population that did not have access - ultra-Orthodox women, children at youth villages, peripheral towns, regions that did not have an option to complete five units. You are bringing a package with a real value that is also easy to digest from a social standpoint.

Zvika Aricha claims that the eco-system generated a "buzz" in the system, a feeling sensed by the public, by partnering with the high-tech field and bringing them down to earth: *It even created humility among the engineers, who went into the classrooms and learned from the teachers' work. They learned to appreciate them and understand that they have what to learn.*

At the same time, Aricha was disappointed that, *These partners all come in for one part - an engineer who comes to one lesson and gets the students excited cannot be compared to what a teacher does over time. I won't agree to projects of expert engineers. I want teachers who will be with the students over time. Long-term teaching provides deep insights that cannot be received through “glimpses.” I don't need and I don't want anyone to come to us as "saviors" or advisors. On the other hand, if they open their wallets and contribute to the system so it can do more, that would be appreciated... The Trump Foundation, unlike the various advisors, allows for a dream to be fulfilled with real ongoing assistance.... A partnership was created in which the system was harnessed to the project just as much as the external partner. I must note that one of the things that really bothers me in the publications about the leading teachers in the academic field, is who takes credit from among the academics, the government, and the people on the ground. Instead of publicizing “come see a jewel of a process with long-term partnership thinking, that connects interests, and come join us because we will do something that you can learn from," the Weizmann Institute published it as the Weizmann Institute’s teachers’ communities. The Ministry of Education fully funds all of the communities at the moment. The Foundation left after three years. There is continuity and they are copying the methods that were learned. Today there are 600 teachers in 200 communities.*

Dasi Be'eri sees the eco-system that the Trump Foundation worked so hard on, as a correct concept from the standpoint of partnering and recruiting public partners in a way that empowers the ministry:
At first there was contempt from the private organizations towards the ministry, but as we moved forward it turned out that the ministry was much better than what was perceived. On the other hand, the organizations challenged the ministry and forced it to improve. There is great value in partnership because it creates deep recognition and mutual appreciation. At the collective impact roundtable some of the partners learned to see more things in the ministry's work.
But Dasi adds that: *At the table something public is missing. In the partnership circles everyone is equal, there is something related to personality or character; you may be a manager in a low-level organization and you become a partner who is listened to, even though your contribution as an organization is unproven. And a person like Eli, whose personality is quiet, may be heard less. Something in this model may require examination, regarding the relative strength of the partners, which may get lost in all of this, because each organization has one voice. I don't know whether it is bad or good, but there isn't always consistency between the amount of work and the amount of involvement in the discussion. It is worth thinking about this.*

Michal Cohen says that: *As far as the eco-system is concerned, I don't know whether the Trump Foundation brought all of the partners. Sheatufium, the Trump Foundation, and the ministry all joined together, and everyone brought partners. The Foundation knows how to work with partners. It doesn't fight for its place and it looks for ways to increase our combined strength and to leverage it, and it backs up the ministry well. The ministry feels like there is public resonance at times. But it is important to emphasize that when I come to an event with partners, for example, the event that took place at the Sheatufim conference, I am not sure what the purpose of the event was. Is the purpose to connect all of them, to promote the partnership, to create public noise about the plans? Many times I felt that when Minister Bennett came and put an emphasis on mathematics, the issue was in any case pushed forward with the ministry leading. Sheatufim's event with the minister was an enormous, bombastic, grandiose event that was covered by the media, and I didn't understand its precise purpose. If as a Foundation you don't want to take ownership of an issue, and you really want to be behind the scenes, even an event like this sends a message. When the minister and the director general come to such an event, it raises a question for me. Because the event put them in a place that was unclear to me, and I am not sure what the value of this event was in promoting the cause. It was weird for me and I did not feel like the ministry was at the center of attention, rather it was public relations that in my view is not so essential. The CEO of Intel and Eli Hurvitz talked about the great success and I explicitly told them "don't get confused." It was the ministry that determined the policy and invested one hundred million shekels. And contrary to the atmosphere of partnership in which we usually work together, there we got the sense that the ministry was just a sidekick. Nevertheless, among all the partners there is a great atmosphere and good work. Every plan they fund is in partnership with the ministry. Their added value is in the fact that they initiate, stimulate, and create public resonance.*

A very important and challenging point in each extensive partnership organization process is finding the precise focal point, an area on which all of the efforts must be concentrated. The choice of mathematics appears, at this stage, to be a correct consensual choice, because it is fundamental. Beyond the goal of creating technological scientific excellence at the high school level among about twenty percent of the students, it allows for the high school graduates to choose from a wide variety of subjects and professions in higher education and in the work force.

Sustainability

The question of the sustainability of the Foundation's activity and creating an infrastructure that will ensure further activity for many years is of concern to all of the interviewees. All those asked recognize that without a clear policy from the minister and without appropriate funding there will be no continuity for the work that is taking place. It appears that there are two sides to the success coin. On the one hand, the government and the Foundation recognize the importance of the ministry's leadership and funding as part of its overarching responsibility. On the other hand, the ministry recognizes the importance of the Foundation acting as an engine, an accelerator, a gatekeeper, an integrator,

as one that provides leverage and momentum, with a flexible ability to act quickly without obstacles and as such, it can assist at many junctures and in many different ways to help the process succeed and to meet the goals.

I should note that at this stage none of the interviewees felt that the infrastructure that was put in place guarantees sustainability. Many of the activities produced noticeable results on the ground. An increase in the number of students, more teachers, more quality clinical teaching experience, more forums for colleagues to learn from each other, more committed staff members, more public awareness. At the same time, after years of painful experience nobody feels confident enough to guarantee, or even to believe, that it can be assumed that the present infrastructure will carry the program into the future on its own.

A specific reference to the infrastructural gaps was expressed in the context of the importance of creating a mechanism based on precise data, which will allow for an understanding of the performance and needs of the teachers in the different stages of their professional development. A system that will allow a comprehensive view of the potential target audiences for teaching mathematics and sciences, where they will come from, what is required in the training and development process, and how many teachers will be required each year in order to meet the growing demand, the regular maintenance and the quality assurance.

This raises the question of which mechanism will most effectively allow for a precise collection of data from the field for the purpose of monitoring, remuneration, planning, and decision-making. Concern was expressed regarding the quality of the ministry's data, which is collected from the field through the school principals who are very busy and do not consider sending data to the ministry a priority of their job. In fact, it is a task that many complain about.

Dilemmas also arose regarding the proper basic tools needed to maintain public awareness over time and the importance of expanding the efforts to specific segments of the population, and whether creating an annual progress report on this topic and publishing it would help create appropriate public noise. The importance of establishing management, financial and organizational infrastructure to support the endeavor was emphasized, as this would ensure that the focus on intensive work is maintained. Emphasis was placed on the fact that the supplemental budget must be anchored as a basic element of the overall regular budget. This anchor will establish the long-term continuity and will reduce the concern regarding across-the-board cuts and sharp policy changes, or deficits in periods of political instability.

I would like to emphasize that all those interviewed feel like there is much work to be done. On the one hand, it is necessary to expand and deepen the program. At the same time there is a need for continued attention to the implementation of monitoring and oversight, of incentives and remuneration, and most importantly the continuity of a funded strategy of promoting and positioning a goal of developing excellence in science and mathematics, as an overarching goal in the coming years for the Ministery of Education. Michal Cohen notes that: *Looking towards the future, as long as the ministry continues to lead the program and to invest resources - there will be sustainability.*

Yulia Eitan says that: *On the sustainability level - there is no existence without the Ministry of Education. Sustainability will always depend on who the minister and the director general are. Despite everything that was done it is not possible to guarantee sustainability. Of course, we are building stable foundations, but the challenge is to anchor the activity with tools that are less reversible, to make the plans a fundamental part of the budget and part of the routine work of the ministries.*

Dasi Be'eri addresses the sustainability issue as follows: *Some of these activities are sustainable. The Virtual High School program, for example, cannot go backwards, but additional hours depend on the minister's policy. The mechanisms that were created are partially a fact on the ground. The question of sustainability is also related to the question of awareness. If there is no supportive public awareness, there is less confidence in continuity, because agendas change as the ministers and governments are replaced. I believe that leading teachers will become the norm. There is a deeply-ingrained tendency to avoid mathematics and science, and this perception will not disappear quickly. We are only halfway there. Over the last two years there has been a great increase in the number of students, but this does not guarantee that it will always be this way. Looking towards the future it is important to continue creating a public consensus, not only in the professional circles and within the ministry, but out in the public sphere. Within the next five years the government will be replaced and it is therefore important to establish guarantees and anchors so that the culture and routines will continue. The Foundation does not have to create this, but it certainly must push it forward and promote it in order to establish it.*

Zvika Aricha notes: *I am unsettled regarding sustainability. The problem is the ministry, which does not ensure sustainability. The government is always making cuts... It is still not clear whether the government will continue the process. Continuity requires government policy and budget... But I do not want the process not to continue and not be completed in another five years. The Ministry is not able to fill Eli's shoes and those of the Foundation and to continue to sustain the models. Eli and the Foundation have great respect for the system and they work with humility. They are like a small mosquito facing a large elephant. This is also true in terms of resources. Yet even a small steering wheel changes the direction of the boat. The change that we are starting to see now will only fully come to fruition in another three years. Now things are moving along well, but if it is halted it will take time for anyone to restart it."*

Shlomo Dushi notes on this matter that: *The issue of sustainability reminds me of what the minister of education said in the last meeting, that the system is jumping forward, but it is running on steroids. The truth is that we need to build muscles, since there is no sufficient infrastructure and the challenge over the next two years must be to ask: what is the required infrastructure?*

Intermediate Conclusions

As far as drawing conclusions from the Foundation's modus operandi is concerned, Ministry of Education officials feel that **the dialogue process must be established and improved.** Even if today, after five years of work, there is a sense that the work methods have become an established norm, this was not the case in the beginning and even today "tweaks" are necessary in terms of the quality and frequency of the partnership. Some of the people report that they would like to know about things from the conceptual stage and to participate regularly in meetings that take place from time to time. Even today some of the Ministry of Education staff, who are leading partners in the process, say that they only learn about activities after the fact from people on the ground.

At the top level, the director general emphasizes that as of today the partnership takes place in the correct dosages, efficiently and with a good atmosphere, but this was not the case in the beginning.

At the same time, it is clear that if there is a point that spans all lines and is shared by all of the government staff, it is the desire to be partners in a regular dialogue, which will provide them with a current status report throughout all stages, from the planning stage up to assessment of execution. The proper dosage must be consistent with the degree of involvement. The aspiration to establish a regular process and improve it indicates a desire to provide impactful feedback, as well as a desire and sincere willingness and professional need of the ministry staff to be leaders and true partners in the processes that are taking place.

Michal Cohen goes into further detail: *Already when I was deputy director general, I held a "crisis" meeting with them, because there was a sense that that they are talking about what is important to them, and even though they did have influence within the ministry, the ministry itself was not leading and it certainly was not leading from top to bottom. In this meeting I tried to set limits and get on the same page. Since then, we launched 5X2, and Sheatufim was very helpful with this connection. At least in the beginning it was hard for me to understand and to identify a driving force, so we defined the limits, the policy, and the leader. When Minister Bennett came and decided to put mathematics at center stage, we were able to immediately launch 5X2.*

Zvika Aricha clarifies what requires improvement: *The Foundation's management method doesn't always include everyone in the process in real time, from the dream stage... A while back I complained to Eli and Tammy that they do a lot of things related to physics that I only find out about indirectly. And if the Foundation conducts an activity at the Kibbutzim College that I am not a part of - how will there be sustainability and continuity? This is a point that requires improvement. It is important to conduct status updates that include all of the information. Without my cooperation as chief inspector of physics it will be difficult to succeed. I organized the program despite the coincidental manner in which I found out about it - I heard about it from the instructor - out of a sense of responsibility...*

Dasi Be'eri also distinguishes between "then" and "now": *Regarding the methods of communication with the ministry staff I observed something very random about the way the Foundation came into the ministry and only got to my department at a later stage, coincidentally. In many stages there was a work interface, but this was not planned and it was not managed, and suddenly we found ourselves partners. Why did we never act in an orderly fashion rather than "on the go"? Something about the entry method was disorganized. At first there was no clear awareness of the nature of their role and their involvement. This only happened as we moved forward. And this must be improved. Today the government is satisfied, and if, as we continue, there is measurable change whose presence is felt, this will cause the government to continue to be satisfied.*

Yulia Eitan focuses on the following: *The executive director of the Trump Foundation made sure to update and to receive updates in a non-intensive matter, but he maintained the partnership at an appropriate dosage. Nevertheless, once a year it would be good to have structured status updates. The process ran forward and entered the track, but it is still important to be there in order to identify what is needed and to maintain the focus.*

Furthermore, looking towards the future but also retrospectively, wishes and desires arise not only to continue the processes, but also to expand and to add to them. The need was identified for an additional circle of partners - that was not part of the current circle - from foundations and funding entities who can bring with them an additional resource of thinking differently, which has the potential to inspire the process.

The ministry staff would like the Foundation staff to help them fulfill additional professional dreams which, due to the ministry's bureaucracy or the lack of flexibility of immediate liquid resources, makes them difficult to realize. A precise dialogue with them can lead to expansion and to the addition of processes that are consistent with the primary objective. There is an understanding today of the importance of precise and comprehensive documentation of the process, and its absence is unfortunate since much information could have been produced from it going forward. It appears that the ministry staff would like to be assisted by research and development in this area, and by creating conceptual documents and academic research, which would help strengthen the processes, establish, and validate the questions that nag at them, and make tools available to leverage the process in the public sphere.

The nagging conceptual questions include, for example, questions about how to expand such a significant process without losing focus? How to create a practical plan for leading significant programs with such a scope? How to retain the insights along with the practical plan, which the ministry feels like it learned and upgraded, regarding the organizational ability it developed to generate processes of internal systemic progress with synchronization and coordination between officials? The ministry staff, who feel that today they have someone to talk to about these aspirations and they can even be addressed, are concerned about the day after.

Dasi Be'eri emphasizes the importance of the conceptual change: *Regarding the question of what is missing, I would like to put more emphasis on winning over hearts and minds within the system and among the public. I say this despite 5X2 and despite President Peres. Furthermore, we didn't spend enough time on in-depth conceptual documents, on making the concept more accessible and on the added value for the public. At the ministry it is very difficult to find time to prepare in-depth conceptual documents and perhaps this is the Foundation's role. Nobody transferred all the activity into a document that is submitted for the public's comment or for there to be an academic discussion, and then cynicism develops about other things. For example, a statement that the Ministry of Education does not care about violence because it is busy with mathematics. In this case there is a circle of partners. I would expect the Foundation to reinforce the partners and help develop a practical plan for raising awareness. Even for the student – the roundtable should explain to him the reasons for studying five units of math, as well as a virtual roundtable that will explain the importance to the entire public: students, parents, and the general public. I am certain that the Foundation has the documents and the documentation, and the ability to move a respectable process forward in a way that it will have an impact on the governmental level and become a national program with clear benefits laid out, in order to extinguish the cynicism with clear research-validated responses.*

Regarding the question "what would I nevertheless do differently?" Shlomo Dushi answers: *I would build another circle that we didn't build. There is a circle of companies that coordinates and funds the visits at about 450 schools. One thing I didn't do and I would have done, is create a coalition of foundations and funding entities, since we may be surprised to discover the added value of such a process for the initiative. What was lacking is a new resource, with thought put into it, which is not exactly our role, but we could have contributed to this indirectly. Because we are also lacking the method of work and the players from the philanthropy field. These players could have made a special effort in this direction as well.*

I don't identify anything beyond this. Overall, there is an atmosphere in this arena that is very positive.

I would like to emphasize that all of the interviewees expressed a great amount of confidence that the experience with the Foundation allows a model to be produced that can be learned from in the future and be used to lead partnership processes of great value with wide-ranging consensus. They assert that there are mandatory conditions that were conceptualized for success with a philanthropic foundation, and they are:

1. Choosing an important central topic on the agenda
2. In-depth study of the subject and collecting precise up-to-date information regarding the phenomenon
3. The government must lead while taking overarching responsibility for the process
4. Support from professionals in the ministry for the vitality and importance of the process
5. Precise coordination and consensus regarding the vision, goals, and methods of action
6. Determining an integrating responsible body within the ministry
7. A joint coordinated process from the beginning of the planning stage, while ensuring an ongoing dialogue with update meetings through all the phases of execution
8. Recruiting significant relevant partners to support the process and creating supportive public opinion
9. Winning over hearts and minds; increasing consciousness and public awareness in extensive circles
10. Creating a sense of urgency and maintaining motivation over time
11. Maintaining the proper balance of private resources versus public resources in all stages of the process
12. Maintaining a willingness to listen and empathy along with determination to promote the processes with all of the partners
13. All of the partners must remain humble and leave leadership to the ministry
14. Committed and determined leadership

The interviewees also referred to **situations which are tempting but must be avoided when working with a philanthropic foundation:**

1. Just because someone brings money to the table, it doesn't mean cooperation with them is desirable or appropriate. Cooperation must be avoided with those who come to address the senior officials' troubles by providing "petty cash."
2. Ensure that the partnership creates an added value for the State.
3. The State does not like to work with foundations that behave in a patronizing manner and gloat about "trapping" the government into a long-term obligation it may not be able to uphold.

Summary and Conclusions

If we examine how government perceives its success and the ability to meet the three objectives determined by the Foundation, already at this stage we can say that the number of mathematics students at the five-unit matriculation level increased to 13,000, well beyond what was determined for this stage of the program. Of course, it must be verified that all of the students take the matriculation tests at this level on their completion of 12th grade, and then it can be assumed that this index will be considered a success. Physics studies are growing in parallel, since in most cases they are the same students who take advanced mathematics.

Regarding the goal for the change to seep into all layers of the education system, it appears that the change is in process. The media and public campaign to convince parents and students of the importance of studying mathematics at the five-unit level is in full force, and the number of students studying five units is constantly on the rise. The increase in the number of teachers, the improvement in the quality of teachers who were and are being trained to teach these students and those who will follow them, the support frameworks that were developed for them, and the pedagogical practices that were developed by them, are an inseparable part of the success in meeting this objective. There is still a need for additional mathematics and physics teachers, and despite the "bottleneck" it appears that if the demand is tailing supply, then along with the steps that have to be taken, there is also reason for optimism.

The third objective, which deals with the aspiration to create infrastructure for continuity, to guarantee the sustainability of the process over the years even if the Foundation ceases to be involved, still requires "supporting scaffolding" and reinforcement. The Virtual High School exists, the teacher communities are working, and the processes of developing and training teachers are taking place. Furthermore, as public awareness develops and intensifies, the partnerships are expanding and becoming more established. At the same time, not all the partners express confidence in the infrastructural capabilities that were established in order to make this a permanent process for the long-term without the professional, budgetary and moral support network provided by the Foundation. They are concerned about the ministry's ability to maintain the processes without ongoing strategic leadership that is backed by the policy and budget of the current minister.

The answers to the question regarding the Foundation's chosen strategy indicate a very high level of satisfaction with the character of the head of the organization and his methods of operation. There is a sweeping consensus regarding the Foundation's decision to operate "within the system," to focus on one important and significant core topic, whereas government is entrusted with and exclusively responsible for leading the process. The Foundation serves as a catalyst that allows for and accelerates processes with flexibility and efficiency in order to help the government promote important processes with a consensus.

The decision to operate as an investing partner without a formal contract and without a tender is perceived by the ministry officials as being advantageous in the way it addresses the ministry's bureaucracy, but it has other disadvantages. It causes some of the processes to become more expensive and creates a risk of transience if there are changes in personnel.

Additionally, regarding the ecosystem issue there were critical voices concerning the partners' level of involvement and place. Nevertheless, it is apparent that the ministry officials learned to recognize the many advantages of working in a transparent partnership with this group that serves as a power multiplier, as goodwill ambassadors who generate supportive public opinion for the process, alongside additional advantages of the partnership. A partnership has the tendency to create an atmosphere, an environment and a synergy that inspire additional dreams and aspirations as challenges to be fulfilled, even beyond the shared challenge of creating continuity and sustainability for the process.

As with any intensive, comprehensive project there is room for improvement in certain areas, but all of the partners are convinced that the present partnership is a breakthrough that will lead to significant achievements.

The modus operandi of the Foundation and the strategy that was chosen has proven itself at this stage as being very powerful and effective in promoting the process itself, but also as something that can be learned from on behalf of future programs and on behalf of future partnerships.

This case study can be summarized in the words of Executive Director of Sheatufim, Mr. Shlomo Dushi, which reflect the spirit of all of those interviewed:

I believe the government has good reason to be very satisfied with the partnership model. The minister can take credit for a revolution in the education system. The action we are taking now will have an impact on the next 50 years of the State of Israel. The ministry embraced this as a flagship program and the minister can demonstrate that in three years he achieved a revolution, and then he can certainly be satisfied. There is a new different model here, which you won't find in any government book and is not familiar in the government world, since it comes from other worlds with great complexity and immense focus. The collective impact world instilled concepts that were intended to coexist well with this complex world, to contain the complexity as a present reality, not to be afraid of it, and to utilize it positively. The wisdom in this process is to solve problems while involving all the interested parties, and to build trust - a process that is much more interesting than working alone. The Trump Foundation, by just initiating the process, created a breakthrough and a strategic reality-changing process, and it would not have achieved these results without the process. It therefore deserves a lot of credit, for the process and for the results. This year there will be 13,000 students taking the [five-unit matriculation] tests. We only expected this to happen in another 5 years - and this is thanks to the Foundation's activity. ■

Excellence and the Israeli Character - Can They Go Together?

"Set thee up waymarks, make thee guide-posts" (Jeremiah 31:20)

Eli Hurvitz

Prologue For Two

It was a Friday morning in early summer. The school year had lazily drawn to its end, offering a quiet moment for a conversation with an education leader who had only entered his position a few months earlier. My conversations with him are always profound and open; this one was no exception, but it nevertheless proved to be special. "I think it's really important to expand the circle of excellence in education," I began. I intended to go on to present worrying figures showing that fewer and fewer students are reaching an excellent standard in mathematics and science in the international tests and in the matriculation examination.

Before I even managed to take the slides out, he gave me a stern stare. "When you say excellence, I hear 'grades,' and if there's one thing I plan to struggle against, it's what you said right now." I was horrified to hear someone in such a senior position say something like that. I quickly fired back: "When I hear 'excellence' I hear Zionism" (the two words sound similar in Hebrew). Meanwhile I was thinking to myself that the conversation could hardly have gotten off to a worse start, but once swords have been pulled out of their sheaths, there's no going back.

"I'll play along with you," he responded. "Let's say that a decade from now, one-fifth of Israeli students will excel in math and science. In what sense will that make Israeli society better?" I immediately replied: "In the twenty-first century, math and science are the cornerstones to solving the big problems facing humanity. Medicine, food, the environment, and security — for all of these we need extensive knowledge and skill in math and science. As a country that has built itself on science and hi-tech, human capital is our primary asset. It is our relative advantage, and we're about to lose it."

I sat back in my chair, convinced that my argument that "the Law shall come forth from Zion" would convince him and we would be able to move on. Instead, he flatly informed me: "You're wrong. You don't really understand the role of education." As he sees it, the purpose of education is not to prepare students for the work market, meet the needs of the economy, or solve the world's material problems. Rather, it is to develop thinking, considerate citizens with values. "The purpose of education is to create a model society based on values and equality. Your approach only widens the gaps in society," he scolded me.

"My approach widens the gaps?" I screamed politely. "When we told children from the periphery for years that they should make do with the basic threshold of eligibility for matriculation, not enabling them to study for five units, we created the gaps with our own hands. Their parents don't have connections to circumvent the problem. It's their fundamental right — and our moral duty — to enable them to excel and break through." At this point I pulled out statistics showing that eligibility for matriculation no longer provides a significant advantage. Those who realize this aim to obtain high-quality matriculation certificates, including five units in math and English, and one in the sciences.

"I'm not against excellence," he retorted, retreating part way from his opening position. Then he continued, "But excellence isn't only in math, it's also in literature or in volunteering. Everyone has some area where they excel. Education must identify and nurture that area." I felt that he had taken an important step toward me, creating room for consensus. But then he added: "But I know how it will work in the schools. Math and science will suck up all the attention and become a desert island overshadowing everything else. You will give them high ideas and raise the bar above their capabilities. Many of them will fail, so all they'll get out of it will be another unnecessary frustration."

I was taken aback, but I focused on his comment that he wasn't against excellence. In math, subtracting from a negative sometimes equals a positive. So I responded: "How it happens in schools is the bit where leadership and responsibility take over." I argued that a school that cracks the five units nut can develop a culture of excellence that spreads like a ripple and sets down firm roots. "After all, the choice isn't between math and literature, but between excellence and mediocrity. Between professionalism and amateurism." I finished my comments in high spirits, convinced that we were moving toward common ground.

He reiterated: "I admit that in mathematics and science you learn to aim high, to make an effort, to invest, and to persevere. Brick by brick, you build knowledge and skill, learning to cope with difficulties through determination and creativity." I seized the opportunity: "Those are qualities that will be important to the children in preparing for the life that lies ahead. Education has an important role to play in building these character traits." He sat back in his chair, reflecting on my comments, before remarking: "It's interesting that in Hebrew the word 'book' and the word 'number' come from the same root."

As I was leaving, and just before we wished each other Shabbat Shalom, he turned to me quietly. "I think it's against human nature to force students to choose between a humanities track and a science track." I responded enthusiastically to this insight, remarking that the great intellectuals who preceded our area — from Pythagoras through Da Vinci and on to Solzhenitsyn — combined math and science with music, architecture, and literature. "Let them rest in peace," he snapped back, holding the door knob firmly. "They were the special few — we have to worry about everyone, and the burden of proof rests with us." And so we parted to continue on our common journey.

What Is Excellence?

How did the lofty human quality of "excellence" come to be the source of so much controversy among educators in Israel? Is this a global phenomenon, or did we manage to create our own strange mutation, as sometimes happens when things are translated into Hebrew? I realized that I would have to go back to the sources and move forward in giant steps in order to understand how things evolved. In other words, I decided to try, with my limited capabilities, to clarify why we have so many words from the same Hebrew root, such as excellence, distinction, grades, and Zionism, yet so little agreement about what they mean. For a philanthropic foundation such as Trump, which devotes its attention and resources to promoting excellence in education, this is a particularly fundamental and important question.

Excellence as a Multidimensional Ideal

The ancient Greeks referred to excellence as arete. This was the supreme quality, the summit of humankind and humanity, and it was reflected in the individual's acquisition of extensive knowledge, professional skill, a high level of performance, and proper moral conduct. The sages of Athens declared that this quality is inherent in all humans — if not from birth, then through real effort as a habit and a way of life. This quality may be acquired, but only through study, practice, grit, determination, and perseverance. This perception focused on the image of the all-round individual who required a broad and general education and strong skills in numerous fields. The foundations were mathematics (the intellect), music (the emotions), athletics (the body), and ethics (the soul). This approach produced such giants as Pythagoras, who not only offered mathematical innovations, but also used them to revitalize the field of music. He found the formula for combining two contrasting sounds to create a pleasant harmony. Thanks to Pythagoras, the music we listen to today is not monotonic.
The Greeks saw excellence as a constant aspiration for human perfection, manifested in harmony and balance between knowledge, skill, human qualities, and values. Accordingly, they needed an education system capable of selecting the best candidates for advanced and in-depth studies. This is the essence of a meritocracy, where those who excel advance up the social ladder to leadership positions. The top rung is occupied not by the richest person, or the one with the best connections, or the strongest one. Instead, society seeks to be led by those who excel in all they do.

Excellence as an Infinite Scale

Asa Kasher, a recipient of the Israel Prize, has examined the subject of excellence in depth. (Kasher, 2003). He suggested: "Excellence is not a wreath of laurel leaves, permanently decorating the head of someone who has excelled in the past… Those who confine themselves to this definition… will eventually realize that they are actually wearing a wreath of parched brown and disintegrating leaves… Such a wreath must be won… over and over again, each time anew." Kasher adds: "Excellence is granted in a measured manner… it is not infectious and it should be revealed in each field in its own right… It lies in the eyes of the professional beholder."

According to Kasher, "excellence" is "a five-point scale," in which "only the top rung constitutes the stage of pure excellence:"

1. The first stage — developmental excellence. This is a person's individual development relative to their own capabilities and performances in the past. "But it is important to remember," Kasher emphasizes, "that a comparison between a person's achievements today and their achievements yesterday or the day before, however important and positive this may be, still does not constitute the essence of excellence."

2. The second stage — comparative excellence. This is a competition between individuals, groups, and organizations, in which excellence rests with the one that comes first, faster and better than the rest. "It is worth noting," Kasher adds, "that the aspiration for comparative excellence can be dangerous… raising one's own stature by humiliating others, and this is one reason why this is only a second stage, and not the ultimate stage."

3. The third stage — skillful excellence. This is the ability of a person or organization to cope with a new and unusual problem that has not previously been encountered. "In order to solve the problem properly," Kasher suggests, "the person or organization must make a real effort and move ever closer to the limits of their capabilities… But nevertheless, abilities differ from one person to the next."

4. The fourth stage — substantive excellence. This is absolute excellence measured according to objective standards, and requiring overt skill, profound understanding, and loyalty to values and ethics measured against a clear yardstick. "In this stage," Kasher explains, "we are no longer talking about a comparison between someone's current and past achievements, nor about someone's achievements compared to those of their peers or compared to their skills and abilities, but rather about an objective threshold."

5. The fifth stage — pure excellence. This excellence can only be attained by those who have successfully reached the fourth stage, but it requires two additional qualities. Each of these qualities is far from common, and their combination is particularly rare. These qualities are the courage to excel and modesty.

"Pure modesty," Kasher says, "demands overt loyalty to high standards of knowledge and skill, understanding, sophistication, and ethics… The pressure of mediocrity, the cynicism of corruption, and the frivolity of triviality all make it harder to adhere to substantive excellence… This excellence is not based on material motives but on a supreme obligation… The reward of a commandment is the commandment itself, and the reward of excellence is excellence."

Excellence as a Personal Journey

Educators in Israel sometimes make a distinction between "excelling" (*hitstaynut*) and "excellence" *(metsuyanut*), mainly in an attempt to praise "excellence" and express reservations about "excelling." Lieutenant Colonel Dr. Itzik Gonen, the commander of the IDF's Leadership Development School, wrote: "Excelling is a performance relative to others, external and limited in its conditions of presence. By contrast, excellence is a relative and internal process for the increasing exploitation of the potential inherent in the individuals themselves." (1994, p. 36).

Those who adhere to this distinction claim that excellent students are exceptional relative to others, and that it is unfair to praise those who have special talents, thereby causing frustration among others who attempt to excel but are unsuccessful.

They argue that "every student is an individual and complex being with their own unique needs... They should be regarded as an individual, without comparison to their peers and without fixing standards subject to comparison" (Fischer, 2007, p. 49). However, some of those who seek to nurture excellent students also accept this distinction. They argue that "excelling flourishes when it takes place in an atmosphere of excellence that encourages the members to aspire to realize and expand their potential." (Rachmel & Zohar, 2010, p. 12).

Excellence as an Eco-System

All the models of excellence focus first and foremost on the individual, examining the individual's ability to realize their potential, develop, overcome obstacles, reach new heights, and blaze new trails. However, all these models also recognize the importance of an environment that supports the emergence of excellence, a culture that encourages effort, and a system that provides opportunities to excel.

Malcolm Gladwell refers to this as the "ecology of excellence:" "We all know that successful people come from hardy seeds. But do we know enough about the sunlight that warmed them, the soil in which they put down the roots, and the rabbits and lumberjacks they were lucky enough to avoid?" (Gladwell, 2008, p. 20). Itzik Gonen writes: "Many people in an organization can be excellent, and the more excellence characterizes more people, the greater the chance that the organization will be more successful." (Gonen, 2016, p. 3).

In other words, in order for excellent people to grow and flourish, they need a system that supports them. This implies a systemic and professional system that includes discipline and exercise, routine and regularities, diagnosis and measurement, and constant improvement. Moreover, such a professional system is able to diagnose those with the potential to excel and to nurture them. It is constructed in such a way that it acts to expand the circle of those who excel and to provide opportunities for all those who are up to the challenge.

But Why Mathematics?

From ancient Greece down to the modern day, mathematics has been regarded as a cornerstone in the construction of "excellence." But why is this so? Why do comparative and screening tests in education almost always include a math test? Why do students who choose to study five units of math, unlike all other subjects, receive such a significant bonus in university admissions? After all, our education system developed historically on the basis of a division between the "humanities" and the "sciences," reflecting different and diverse tracks of excellence. So why is such a strong emphasis placed on mathematics?

The practical reason is that in the twenty-first century, the solutions to the problems facing humanity — finding medicines for diseases, providing food for all, cleaning up the environment, ensuring security, and improving the quality of life — all demand profound knowledge in the fields of math and science.

Moreover, studies around the world, such as those conducted by the economist Prof. Eric Hanushek of Stanford University, have identified a correlation between knowledge and achievement in math and the economic growth of nations, including gross product. An OECD study found a strong correlation between individuals' knowledge, depth, and understanding in math in high school and their socioeconomic status later in life (OECD, 2016). In Israel, too, math is a component in the admissions tests for higher education, and a long-term study by the Taub Center identified a correlation between the level of math study in high school and future salary levels (Kimchi & Horowitz, 2015).

But what is the substantive reason for this approach? After all, in Athens in the fifth century BCE, there was no market economy, no PISA tests, no screening for elite military units, and no hi-tech startups. Yet even then, mathematics was still seen as exceptionally important. Why is this so? Ron Aharoni, a mathematician at the Technion, offered an informed explanation. He identified nine qualities that characterize mathematics and highlight its unique importance in education to excellence (Aharoni, 2015):

A. Layered structure. "More than any other field of thought, mathematics is constructed one story on top of another. A mathematical argument... is based on a very large number of stages... and on extensive prior knowledge..."
B. Precision. "The components of the structure are linked by rigid and stable connections... There's no such thing as an approximate proof. Anything that you haven't proved exactly does not exist."
C. Discipline. "In order to meet the requirements of complexity and precision that mathematics presents, you are not free to engage in daydreaming. A strict discipline of thought is needed."
D. Respect for reality. "You have to respect reality and put it before your desires and longings... You come to realize that there is something more important than you, and understand your place and role in the world."
E. Hard work. "You cannot gain an understanding of mathematics without hard work and sweat. You have to practice solving equations... (in mathematics) the fact that work bears fruit is very prominent."
F. Reliance on evidence. "Mathematical thinking takes place through examples, by generalization on the basis of individual instances, and the abstractions come afterwards by themselves."
G. Lack of deference to authority. "In mathematics, anyone can perform the experiments by themselves... in other fields there are no clear criteria, for better and for worse, so people rely on authority."
H. Skepticism. "Not everything that is considered important is really important. Not everything that people offer you as the truth is really true. And above all: you should always check things for yourself."
I. Beauty. "Mathematics reveals a wonderful and profound order to us, so complex that we can't fully apprehend it."

Excellence and the Israeli Character - Can They Go Together?

Thus the impression is that, over the generations, the aspiration to excellence has been a lofty and accepted idea, whether by way of an ideal, a scale, a journey, or a culture. Regarding mathematics, too, there is clearly still profound agreement across cultures and periods regarding its importance as a cornerstone for that much-desired excellence. But how does this idea interact with modern Israel, and how does it integrate into Israel's unusual melting pot society, which is consolidating its own identity while in a state of rapid flux?

Nili Cohen, the president of the Israel National Academy of Sciences, considered this question, and dared to ask a heretical question: "Does society have an interest in aspiring to excellence?" (Cohen, 2002).

It emerges that the resounding "yes" of the sages of Athens when confronted by this question cannot be taken for granted in Israel. For the Greeks, a supreme manifestation of justice was the desire to build a social system in which everyone would enjoy an equal opportunity to learn and to excel, and where success depended only on talent, ability, and effort. This same approach underlay the establishment of the yeshivas of the ultra-Orthodox world, which produce geniuses in Talmudic study; universities that nurture scientists; and sports leagues that bring forth stars. The United States used this approach to build a dream that every individual — immigrant or veteran, poor or noble — has the opportunity to succeed, as long as they make an effort, persevere, and excel.

As a legal expert, Nili Cohen notes that law and the legal system cannot force a child to excel. "Most legal systems confine themselves to establishing laws that are suitable for reasonable individuals... Even if there were a legal rule demanding 'you must develop your full capabilities,' it would have no value. Law... can create the essential condition but not the adequate condition. Law can oblige us to study, but it cannot oblige us to excel in our studies."

David Harel, a scientist from the Weizmann Institute who received the Israel Prize and serves as deputy president of the Israel National Academy of Sciences, adds (Harel, 2006): "We talk a lot about excellence, education to excellence, and aspiring to excellence. I don't really buy it. It's not possible to educate an entire class, an entire grade, or an entire people so that they will all excel... Within any group some excel more and others less, and there are also those who don't excel at all, and that's fine — that's the way the world's made."

The perception of fixed mindsets, an innate potential for excellence, is not new. Averroes, who lived in Cordoba in the twelfth century, claimed that "truth" speaks to people at their own level — in a descriptive way to simple folk, dialectically to commentators, and in rational claims to philosophers. He believed that society was divided into three fixed circles between which there could be no transition. Everyone had the knowledge appropriate for them, the education they needed, and the teachers they deserved. Innate talent determines the extent of each individual's potential, as well as their status and fate. Not everyone can excel.

With hindsight, we may form the insight that this approach functioned as a self-fulfilling prophecy and a vicious circle. Even in Greece, excellence translated into success continued to be the preserve of the aristocrats who showed arete — excellence. They maintained their status zealously and prevented the circle of excellence from expanding. In Jewish society, the outstanding scholar was given the rabbi's daughter's hand in marriage. In Christendom, scientific tomes were held in libraries in the palaces and monasteries. Thus excellence was passed down by inheritance and preserved as the domain of a social elite.

From ancient Greece through the Golden Age of Islam, this exclusivist approach of elitist excellence reached Renaissance Europe and survived to this day. The English word "excellence" has its roots in the ancient French of the fourteenth century, and originally meant "sublime." Even today, in countries that maintain a nobility, the queen may be referred to as "her excellency." When we want to say that someone or something is unique, outstanding, precise, professional, and well honed, we sometimes refer to it as "par excellence."

There may be those who will feel that this discussion is academic or historical; what does it have to do with our own reality, in an era of democracy and universal education?

Those who have this reaction are invited to read the studies published by Israel's National Institute for Testing and Evaluation (Glickman & Lipshtat, 2013) and by the Szold Institute (Menny-Ikan, Rosen, & Dvir, 2014) discussing the correlation in modern-day Israel between parental education and the allocation of students to sets and levels in mathematics studies in high school. Despite all the changes, a profound mathematics border can still be seen in the Western world, including Israel, between a prosperous and well-educated social class and the rest of society.

But before we declare game over and give up, do we really have to feel inferior to ancient Greece? From the Hanukkah story to the European Basketball Cup, we have never been on the same side as Greece. Not to mention the order and strict excellence of Europe, which had its dark times as we all remember, and it can hardly be said to have been a blessing for the Jewish people. And yet Israel is renowned across the globe as a country of excellence, of Nobel Prizes and scientific breakthroughs — the Start-Up Nation, home of hi-tech and innovation. So have we developed our own unique strain of excellence here? Or is our excellence the preserve of an exceptional chosen few?

In order to examine this question, I plucked up courage and invited some 20 interesting people to a meeting over dinner. The participants included outstanding teachers, the heads of educational organizations, presidents of universities and colleges, directors of the big multinational hi-tech companies in Israel, technological entrepreneurs and investors, a former commander of the IDF's elite 8200 intelligence unit, a Nobel Prize winner, and a distinguished journalist. I presented all with the question: Excellence and the Israeli Character — Can They Go Together? — and the conversation flowed effortlessly.

In my opening comments, I remarked: "The fast-flowing pace of life in Israel distracts attention from some internal contradictions in our basic assumptions and in our worldview. We convey a double-edged message to the younger generation. 'My son passed the exam without studying', we declare proudly — we admire effortless success, and we are always on the lookout for shortcuts and bypasses. And then we wonder why a child doesn't have the patience to practice and invest effort, and we get mad when he is quick to give up studies at five units when the going gets tough."

"Here in Israel," the journalist commented, "ever since our homemade Davidka rockets saved Jerusalem, we've been ruled by improvisation and by the credo that 'things will work out okay.' Our favored approach is a short effort and sudden brilliance as a quick road to fame. We've learned to use fine-sounding labels to cover our weaknesses, such as 'creativity,' 'daring,' and 'chutzpah.' But qualities that were enough to establish a nation aren't enough to manage and develop it. We're amateurs, and what we need now is orderly management, fact-based decisions, careful processes, and professionalism."

A serial hi-tech entrepreneur who made a fortune from an exit tried to defend our honor: "The State of Israel was built by people who managed to survive the Holocaust. Those who survived were the entrepreneurs, the intrepid and brave individuals who jumped out of the train. We are their children and grandchildren, so naturally we are individualists. We aren't fans of big systems, careful planning, or standing in line. We run away from all that. But the real problem is that today's younger generation, which didn't get where they are from a background of distress and mortal danger, has developed a vicious cycle of laziness that we must smash."

"It's true that we sanctify improvisation," admitted the president of a prominent research institute. "But it goes deeper than that. My Israeli students are outstanding — better than the Europeans — because they do science like they drive on the highway. In other words, they treat the rules as no more than a recommendation. Their disorder and disrespect constitute a huge advantage because that's the only way you can break through barriers. So I would agree that we need to improve the system so that more students can be successful at five units in mathematics, but we mustn't abandon our messiness. Something about our makeshift culture works well."

A university president sitting next to the speaker shifted uncomfortably in his chair. "It's great that students for advanced degrees challenge their professor. I've had similar experiences. But that's not how things are with the undergraduate students. I'm worried that we're resting on the laurels of an education system that no longer functions as well as it did in the past." The Nobel Prize winner quietly added: "It's not just a matter of a declining system; the problem is also due to the growing gaps related to the tribal nature of Israeli society. There are outstanding individuals in the "State of Tel Aviv," but there's also appalling inequality. Once the army used to serve as a cohesive factor, but that's not so true today."

"I can see both sides of the coin," commented the former commander of the 8200 Unit. "The standard of soldiers who come to the unit is rising significantly every year. Every year over the past two decades, I've been amazed to see that the young generation is only getting better. But they come from certain areas and from very specific habitats. Today, when I lead my company's voluntary activities, I can also see the gaps. We are losing a lot of children who could excel. We need to take them, motivate them, and give them a vision for the future and a high standard of teaching."

At this point an outstanding teacher from one of the development towns in the south stood up and chastised us: "Enough already — it's not about the gaps." Everyone was amazed, but she continued: "The real issue is the willingness of the younger generation to make an effort and invest. To succeed at five units you have to practice, train, and sweat. There are no free rides. It's a marathon. The problem with the Davidka is that is looks like a sudden inspiration that anyone could have thought of. We've developed a culture of 'hackathons' where amateurs imagine that they'll be able to come up with overnight solutions to difficult and complex problems."

"In reality," she explained, "the Davidka was actually developed by two engineers who had studied for many years so that they could come up with a technological solution. That's what we need to explain to the students and the parents. That's the path to professionalism. There aren't any shortcuts." A college president reinforced the message: "Schools need discipline. Improvisation by itself isn't the answer — it must be combined with a high level of self-discipline. Apart from that, breakthroughs come from creative people, so it's critical that Israel manage to integrate graduates from the humanities alongside engineers."

The director of a large network of schools agreed: "I'd like to point out that excellence isn't confined to science and technology. You can also find it in art and dance. The more the students are exposed to effort, perseverance, and practice from an early age, the more ready they will be for high school studies at an excellent level. The problem is that our system doesn't support this. We still measure the system based on the low threshold of eligibility for matriculation. The entire culture of our schools pushes students downward toward the minimum effort. But all this is starting to change now, and I'm optimistic."

A college president who served in the past in a senior role in government was less optimistic: "The question is how to move a large system like the education system. A few years ago, the Ministry of Education asked the Finance Ministry for additional funding and the request was turned down, because of the perception that throwing money into education doesn't lead to improvements. So the Ministry of Education decided to make a coordinated effort, and an improvement began. But then a new education minister came along who doesn't believe in effort, perseverance, and practice, and certainly doesn't believe in ambitious objectives and demanding investment."

The former director of a major semiconductors company added: "There are two key words here — crisis and chaos. Everyone pulls together to restore order when there is a crisis, but Israeli society is great precisely because it is disorderly. The paradox is that the government is the only body that can take on this challenge, but the idea of a large, bureaucratic system adopting excellence as its central value is almost a contradiction in terms. So we all have a role to play, around the table and together with the government, to move all the systems in the direction of excellence."

The Israel CEO of the world's largest search engine company concluded the discussion: "The heart of the matter is culture — public culture and organizational culture. That's also the challenge facing company CEOs — how to build an organizational culture of excellence. Israel faces a special challenge and an unusual opportunity: How to build a culture of excellence against a reality of constant threat. How to create a sense of urgency and priority for excellence. How to recruit people to promote excellence like we recruit people to respond to external threats. Excellence is a choice, a profound perspective, and a way of life."

The Case of the Trump Foundation

The Trump Foundation is an Israeli foundation established in 2011 to help the education system expand the circle of excellence in education. The Foundation decided to focus on strengthening high-quality education so that growing numbers of students will choose, persevere, and succeed in math and science studies in high school at an excellent level (five units in the matriculation examinations). To this end, the Foundation is working to recruit and train a new generation of teachers; to help teachers nurture clinical teaching skills; and to cooperate to develop networks of support for high-quality teaching in the field.

In the context of the insights and dilemmas we discussed above, the Foundation is constantly under pressure to be able to prove that the Israeli public sees excellence as a desirable value and that it attaches importance to the study of math and science. The Foundation needs to be certain that the study at the level of five units in Israeli high schools meets an accepted definition of excellence and to ensure that the education system responds favorably to the value of excellence and to the goal of promoting excellence.

Excellence and the Israeli Public

A public opinion poll (Zemach, 2012) the Foundation commissioned at the beginning of 2012 found that 47 percent of the public believe that mathematics and science are the main study areas the education system should reinforce (followed by English studies, 25 percent). As for the question of how this should be done,

respondents under the age of 24 suggested: Drawing high-quality teachers into teaching (36%); enabling teachers to give individual attention to each student (28%); and reducing the number of students in the class (22%).

Another public opinion poll (Attitudes, 2014) conducted in 2014 found that the Israeli public sees excellence in mathematics and science studies as very important in order to help Israel maintain its advantage at the forefront of technology, science, and research (87%); in order to help the student to develop logical thinking and scientific skills (83%); and in order to open the door to the job market and to prestigious positions in the army (82%). The public attached less importance to the fact that these subjects help to solve humanity's problems (70%) and help strengthen the student's character traits and teach them to cope with difficulties (57%).

Two years later, in 2016, a further survey was held (Mathematics, 2016) among young people of the ages of 15-17. The survey yielded the following findings:

- Subjects that students feel are important to invest in at high school are: mathematics and English (82%), computers (33%), and physics (28%). The other subjects secured less than 15 percent support.
- 76 percent of students believe that it is important to take mathematics at the level of five units and 72 percent stated that their parents encourage them to do so.
- According to the students, the benefit of mathematics studies lies in the advantage in admission to university (80%); the chance of a better future and higher pay in the job market (60%); and the development of their cognitive abilities (55%). Factors mentioned less often by the students included acceptance to army units (38%), interest in the studies (27%), and social prestige (16%).
- 94 percent of students stated that the matriculation examination at the level of five units is difficult. They reported that their concern is that they will not be left with any free time (61%) and that the effort is too great (56%). Lower percentages stated that the level is too hard and not suited to their capabilities (30%) and that they do not think they will use mathematics in their adult life (27%).

What is this Excellence that We Seek

In order to answer this question, the Foundation turned to the Collective Impact Coalition "Five Times Two," a joint initiative launched by the government, academia, industry, local government, educational organizations, and civic society to promote common action to double the number of high school graduates completing five units in mathematics and science. The partnership with Five Times Two reflected a belief that such definitions should be made in a collaborative and consensual manner, while encompassing diverse viewpoints.

To this end, Five Times Two formed a working group including the Ministry of Education, academic researchers, education professionals, leaders of hi-tech companies, and math and science teachers. The working group reviewed and analyzed detailed definitions for the level of excellence in the mathematics and science curricula in Israel and in several other countries, as well as the criteria and threshold definitions of excellence as applied in the OECD's international tests.

On the basis of this learning process, the working group presented a definition which adopts the multidimensional model for excellence, including layers of knowledge, skills, character traits, and moral values. The definition is however not confined to a comparison of one's performance with previous personal or peer achievements, nor to their individual potential, rather it portrays a substantive external and objective measure.

The proposed formula was adopted by the 5X2 initiative, and later by the national program of the Ministry of Education, and it forms the foundation for the Trump Foundation's strategic plan, as follows:

Excellence is a high level of understanding, thought, and implementation in which students draw on the knowledge and skills they have acquired and apply these wisely and creatively in order to cope with a complex new situation. This ability entails the acquisition of extensive knowledge, analytical skills, and profound learning, combined with the qualities of curiosity, initiative, and communication and with the values of morality as well as personal and social responsibility.

Students at the level of excellence:

Knowledge

Gradually build a broad and deep knowledge base enabling them to conceptualize, generalize, retrieve, and implement, on the basis of research they have undertaken and models they have formulated for complex situations. They see the different aspects of a problem, are able to formulate and explain precisely their actions and thoughts, and use these to explain phenomena, solve problems, and create new knowledge.

Skills

They develop logical, spatial, and algorithmic thinking, as well as creative and critical thought. They are capable of planning and explaining the course of an experiment, identifying complex connections between fields, relationships, sources of information, and different representations. They flexibly translate between these fields, selecting, comparing, and evaluating strategies for solving problems and drawing conclusions at a high level of abstraction.

Character traits

They enjoy challenges and problem solving, assume independent responsibility for learning, and are willing to persevere, invest, and practice, and to cope with difficulties and situations of pressure while showing grit, consistency, determination and patience. They learn from their mistakes, show a passion for addressing complex, open, and unfamiliar situations, and do so with resourcefulness, creativity and a high level of interpersonal communication and cooperation.

Moral Values

They set themselves ambitious objectives and aspire to the truth, solutions, success, and breakthroughs, while internalizing the limitations of science and the principle of doubt. They show integrity, ethics, and decency, as well as tolerance and openness to diverse views and to their own mistakes and those of others. They are aware of the moral responsibility that derives from the use of scientific knowledge and act to improve the society in which they live.

Do Studies and Examinations at the Five-Unit Level Meet this Definition?

The ultimate criterion for evaluating students' achievements on completing high school is the matriculation examination. These examinations, together with the psychometric examination, are used as a standard for admission to higher education.

However, these examinations are not calibrated and their level of difficulty may vary from year to year. Some people claim that their threshold has risen sharply in recent years, and others suggest that they are not an appropriate tool for evaluating excellence. This debate must be resolved, since these are the accepted criteria for success in the education system.

For a foundation that seeks to expand the circle of excellence, and that relies on matriculation examinations as a key criterion for securing its objectives, this is a fundamental question. With this in mind, the Trump Foundation launched a process of consultation with the goal of answering the following questions: What types of excellence are evaluated in the physics and math matriculation examinations at the level of five study units? How are these compatible with the above-mentioned definition of excellence? What changes have occurred in the matriculation examinations of the past twenty years? And how do these changes influence the profile of excellence tested by the examinations?

The Foundation contacted two experts, both teachers by training and practice, who fill prominent positions in the Pedagogic Secretariat of the Ministry of Education in the field of curricula and matriculation examinations. Ms. Irena Wissman is a national physics inspector, and Mr. Genady Aranovich is responsible for mathematics curricula in the Science Division of the Pedagogic Secretariat. The experts were asked to undertake an in-depth inspection of the matriculation examinations at the level of five study units for the period 1990-2014, to analyze the examinations in light of the above-mentioned questions, and to prepare a concluding report.

After the experts submitted a draft and interim conclusions, the Foundation contacted a group of 95 leading physics and mathematics teachers in order to receive detailed written feedback. The review included the ranking of each question in the matriculation examination in terms of understanding, transition between different representations, technical skill, and literacy level. In the next stage, 35 teachers met for a day to analyze tasks from matriculation examinations. The final report (Aranovich & Wissman), was based on all these stages and reflected the different perspectives.

According to the report, the matriculation examinations in mathematics and physics at the level of five study units have undergone changes in recent years, particularly in terms of a transition from the requirement to show a high level of technical skill to in-depth learning demanding understanding, high order thinking, verbal explanation, and implementation. Outstanding students in the matriculation examination at five units in mathematics and physics acquire a profound conceptual understanding, are capable of drawing conclusions, and are able to connect different subjects and engage in reflection.

In recent years, the examinations have become more verbal and complex, with a greater emphasis on understanding the different levels of the questions, mathematic literacy, physical principles, the drawing of conclusions, and connections between subjects. The goal of these changes is to ensure that students are capable of understanding the origins of the question, its environment, and its context, so that in solving the problem they will not be confined to algorithmic action. As a result, the scope of material and the technical algebraic standard required to answer the questions has been reduced significantly.

These changes, however, demonstrate that the exam still focuses on the dimensions of knowledge and skill, and less so on those of character and values. However, the teachers noted that the learning process over the years preceding the matriculation examination requires the students to develop traits such as determination, emotional resilience, and an ability to cope with uncertainty, as well as the values of skepticism, criticism, and ambition. Conversely, neither the performance (matriculation) nor the process (studies) manifest the moral and social responsibility inherent in excellence.

How Does the Education System Respond to the Aspiration for Excellence?

One of Israel's educational leaders asked me, "Now that we've launched the national program, what do you think the next step should be?" I told him that he reminded me of a marathon runner who has trained for years for the Olympics. The big moment comes, and as he stands on the starting line, he suddenly asks what his next step should be. "Run! Now we need to run!" I told him. In other words, this isn't the time for summaries. The process is at full steam and the dust hasn't settled yet. Now is the time to make an effort, persevere, and maintain discipline during implementation. But nevertheless — what can we say so far?

The numbers point to success. The trend has been reversed: more students are now choosing to study mathematics and physics at a level of five units, and are preserving and succeeding in their studies. The dramatic decline of around 40 percent in mathematics from 2006 through 2012 has been reversed. In physics, the number of graduates has reached its highest point for a decade and is continuing to rise. The impression is that the effort to halt the decline has been successful. The challenge is now is to move from this breaking action to meaningful and sustainable growth. But how have schools responded to this message? That is the question.

I discussed this aspect with five school principals, since they are at the front line of education and encounter reality every day. I discovered a particularly complex and diverse reality. Judge for yourselves:

Excellence or Survival

The first principal reported: "The students understand the importance of mathematics. They recognize the practical side and the benefit for their future, and their parents push them to study." That sounds good, I commented. "Yes, but..." he retorted, "they look for shortcuts. They want to get an excellent certificate without making the considerable effort entailed. We tell them that it's strange to us that they are willing to train and sweat when it comes to sport, music, or preparing for the army, but less so when it comes to their studies."

So what do you do about that, I asked. "We tell them that in our school, they have to choose. They must choose between a track of excellence and a track of survival. You can finish high school with a minimal effort, both on their part and that of the teachers. But those who choose the track of excellence in any field — mathematics, dance, science, theater — must be hardworking and thorough. They are expected to put in a lot of overtime, and our staff will be there for them. It's a matter of choice."

Excellence for Narrowing Gaps

"We didn't even have a track for five units in mathematics and physics," the second principal emphasized. "Our town is part of the country's social periphery, and our focus was on increasing the percentage of students eligible for matriculation. I didn't think they were capable of completing five units, and to be honest I didn't see why they needed that." So what changed, I asked. "Now the first group of students is preparing to take their math matriculation at five units. The more you have, the more you want. Students come to me now and tell me that they want to take five units in physics and Bible, too. And they want the 8200 Unit to come to give them a talk."

I continued to press him. What does all this actually mean to you? "It means that I was wrong to assume that they weren't capable. I did them a disservice by directing them solely to the basic standard. But this change is accompanied for me by a real fear, because my responsibility has been doubled now. My staff believes that it's possible, but they also have real doubts. What will happen if some of the students aren't successful? These are kids who have faced disappointment all their lives — they can't cope with another failure. This obligates the teachers to support the students, help them, and keep their fingers on the pulse all the time."

Excellence or Nothing

The third principal began with a complaint. "Look what you've done to me. Everyone is telling us that mathematics is the most important thing — President Peres, Prime Minister Netanyahu, Education Minister Bennett, television, radio, and the newspapers. What am I supposed to say to a girl who loves music or to the civics teacher or social education coordinator — that they are less important?" Who said they're less important, I replied in alarm. "You didn't say that it's important to make an effort and invest in every field. You said that the State of Israel needs mathematics and science, and that those who don't take five units in these subjects will earn less in the future." That's true. So what do you do with this? "I tell them that it isn't true, and that they can also succeed in life without five units. I myself studied four units and managed to become a school principal. I encourage the teacher to find the area that appeals to each student and where they are relatively good." So do you offer five units in literature, theater, and music, I asked. "There are all kinds of tracks, but that isn't the point. What matters is that not everybody has to excel and can excel. But everyone needs to lead a meaningful life."

Excellence Comes From Inside

"This year we are switching to meaningful learning," the fourth principal began. "We focused too much on achievements and excellence in mathematics and science. Matriculation isn't everything." But last year you told me that you don't think that "meaningful learning" is a serious educational concept. You're a bit behind the times — there's a new education minister now, and the flagship is about excellence in mathematics and science, haven't you heard? "Look," he replied, "tell your friends in Jerusalem that I'm the one who decides what happens in my school, not them."

That sounds a bit like an ego complex, doesn't it? "I don't have any reason to apologize. Long before the Ministry of Education's program, we were a school of excellence in mathematics, science, dance, art, and music. But whether we have five units or not is my decision. The Ministry of Education has political considerations and considerations of rating, and it works with a thick brush and thinks that one size fits all. Every school principal knows best what is right for his or her students. That's why I'm here — not to transmit instructions by remote control."

Value-Based Excellence

The fifth principal heads one of Israel's most prestigious and outstanding schools. "It simply isn't important enough to be the top priority on the education minister's agenda," he declared. What are you referring to? "You are capable guys. I'm sure you'll manage to change the trend and more students will complete five units in mathematics and science. But those aren't the underlying problems facing education and society in Israel. You are distracting educators from what really matters."

I thanked him for the compliment, but added that I still didn't understand what he meant. "Look," he began, "we are facing rampant racism, intolerance, and tyranny of the majority, as well as rising violence. These are the challenges facing education in Israel. Schools are Israeli society's last chance for changing this. It's our role to educate a different generation — tolerant, volunteering, and rooted in values." But there are schools that define values exactly the opposite to you, I pointed out — what you see as good is bad for them, and vice versa. "Unfortunately you're right. And that only emphasizes the importance of what I'm doing."

An Epilogue on the Go

It all sounds too complicated, not to say conflicted, I thought. Who can help bring some order and logic to our discussion? At times like this, I always go to her. With her age, knowledge, and life experience, she's seen it all before. She knows when to get worked up about something, and more importantly — when not to. I showed her what I'd written, eagerly anticipating her clarity and razor-sharp wit. A fleeting look of pity crossed her face before she smiled, sitting back in her armchair. "What do you think?" I asked. "What does all this mean? What can we do?" I asked intrepidly. She responded slowly, almost at dictation speed:

"The question isn't what your worldview is, but what education system we need to build in order to bring the most benefit to everyone." What do you mean? "If we clear away all the verbiage you brought here, there remain three worldviews. The first says that many more can excel. The second recognizes that some people are more talented than others. And the third argues that there isn't one single track for excellence. If you're honest with yourself, you'll surely agree that all three approaches are worthy and correct."

When you put it like that, I definitely agree, I said. "If you start off by recognizing that not everyone can excel, then you also have to provide a response for those who can excel," she continued. "It's possible to build a school where everyone studies at a mediocre level. Some of the outstanding students will run off to private schools, and others will reconcile themselves to their fate and fail to realize their potential. The result will be excellent schools for the excellent, mediocre ones for the average, and bad schools for the weak. That's not good."

So what do we do, I asked. "You can create different study levels within the same school, and then educate each student according to their character. But the danger here is of a downward push. Any time a student is having a difficult time, instead of helping them cope, the easy and readymade alternative is to move them down a level. The answer to this problem lies in a culture of excellence — one that encourages hard work and a real effort, and that praises achievement. This isn't just a matter for the math teacher — she can't do it by herself. It's something for the whole school."

I immediately retorted that our figures showed a strong correlation between the parents' educational background and economic status and the division of students into different levels of study in mathematics. "That's a problem for sure," she acknowledged. "But if there's a chance of breaking the vicious circle, it can only come in the kind of school where everyone learns together and everyone can advance to the highest level. This is also the ethical thing to do, since it promotes excellence and equal opportunities simultaneously."

What about those who claim that mathematics isn't an essential cornerstone in building excellence?

"Education has always been expected to provide the foundation, and mathematics is an important pillar in the foundation. In modern reality, too, priority and preference are attached to mathematics. To deny that is to deny reality. It's true that some children have special talents in other areas, and we should nurture those talents. But they are the exceptions. Our task is to build an education system that benefits everyone in the best possible way."

I found the courage to return to the question that had been tossed into the corner: "So I guess we're still left without an answer to those who argue that the role of schools is to educate, not to teach," I said, preparing for a battle of wits. "Drop the nonsense," she scolded me. "Teaching is educating and educating is teaching." She rested her right hand on my shoulder, while her left hand subtly showed me the way out of her house. ■

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