**ORT Israel**

Scaling Up a Network-Based Program to Fifty Schools to Increase the Number of Five-Unit Graduates in Mathematics and Physics by 45%

Zvi Peleg, General Director; Yoel Rothschild, Head of Pedagogy; Ran Sofer, Head of Professional Development

**How will the proposed program promote the Foundation's strategy?**

The Foundation works in partnership with school proprietors (local networks and authorities) to promote the advancement of excellence and to create sustainable change in the education system. Further to the discussions of the Foundation's Advisory Board in 2016, the partnership with the proprietors includes professional work with teachers, as well as work with school principals. The Foundation currently operates joint programs with five networks, whose main activity is in the country’s geographical periphery (ORT, Amit, Darca, Amal and Branco Weiss), which began as a pilot program in several schools and following completion is expanding to a systemic level in the network. The goal is for the program to become a language that is implemented into the network's regular way of working.

**The organization**

The ORT network comprises the largest network of schools in Israel, with 205 educational institutions throughout the country and approximately 100,000 students. 90% of the network's schools are located on Israel's social and geographic periphery. In recent years, the network has partnered with the Foundation on various projects on a limited scale, as well as on a major project to increase the number of students graduating with five units in mathematics, which focused on training department heads in 20 schools within the network. Thus far, the project has been headed by Dr. Leah Dolev, head of mathematics at the Goralnik Institute, (the network's professional development institute), who is now retiring. The network is now proposing to appoint as its head Dorit Suzin-Davidov, a social psychologist who heads the Unit for Educational Dialogue and Management Development at the Institute. The unit includes psychologists, social workers and educational counselors.

**The need:**

Two years ago, the Foundation approved a grant (950,000 NIS) to the ORT network for an experimental project over three years, during which the network worked with mathematics department heads in 20 of its schools. The goal of the project was to increase the rate of students taking five units of mathematics in these schools by 30% within three years. The work with the department heads was designed to include three joint annual meetings and seven individual sessions with a mentor, who helps the mathematics department head guide teachers and establish coordination with the school principal, counselors and educators. The plan was to integrate practical tools for communities, video, and diagnostics, with the help of the Foundation's programs in these areas, and to implement tools and routines for data collection and analysis. Our expectation was that starting from the third year of the project, if successful, the network would expand to all 52 schools that offer five units.

The plan was implemented gradually. In the first year, 10 schools took part and an additional 10 joined in the second year. Although it had been determined in advance that only schools in which at least 8% of students had taken five units in the past three years would be selected, in practice, there were fewer students in 10 of the schools on the program (ORT did not update the Foundation on the change and on its discretion to implement it). School principals were aware of the program and took part in one workshop only. Sometimes the junior and senior high centers from each school were also selected. Six of the mathematics department heads and their teachers joined the "Five Club" community at the University of Haifa as a separate ORT community. Considerable efforts were made to teach the department heads how to work with data and information systems, in order to prepare individual learning programs for students and provide an appropriate response to difficulties experienced by students. The main lessons learned to date are related to gaps between the schools and to the strengthening of ties between school principals and the program.

In terms of results, the proportion of students graduating with five units across the entire ORT network increased by 10% (from 10% in 2015 to 11% in 2016). For the first 10 schools in the project, the average number of students graduating with five units rose by 55% (from 9% in 2015 to 14% in 2016). Of the first 10 schools, 7 schools saw an increase, 2 schools were growing schools (they had not yet offered the matriculation examination), and in one school (Ort Melton Bat-Yam) there was a drop from 6% in 2015 to 5% in 2016. ORT estimates that in 2017, there will be enrollment in eight of the ten additional schools. One school is experiencing special difficulties and no change is expected, while the tenth school is a growing school and will not offer the matriculation examination this year.

ORT now sees the need and desire to expand the program to an additional 30 (out of 70) schools that are offering five units in the matriculation examination; to include physics in the program; and to improve the program based on the lessons that have been learned.

**The program**

The ORT network proposes expanding its program to an additional 30 schools that offer the mathematics matriculation exam at a level of 5 units (so that there will be a total of 50 schools participating in the program), which is a growth target across the network of an additional 45% (from 11% in 2016 to 16% in 2019). In addition to the program that has operated to date in the initial 20 schools, the proposed program will include additional components based on lessons learned:

1. The schools' pedagogical directors will join the program alongside the department heads. The school principal, the school pedagogical manager and the grade-level coordinators. They will participate in four regional training sessions and a two-day intensive seminar, in which they will learn about data-based management, goal-setting and progress indicators for every student. In addition, they will take part in two days of simulation workshops (probably at the simulation center at Bar Ilan University) to drill and observe the work of a department head and the work of a teacher around the dilemmas and issues that arise in professional teams in mathematics and physics, and in 5-unit classes. In each school, the pedagogical director and the department head will receive coaching in 4-5 meetings a year, in which they will learn how to plan team meetings, prepare work plans, etc. The coaches will be selected from among those who have developed from the first stage of the program, and will be specially trained for the job.
2. The addition of physics to the program. There will be 30 physics department heads from the six-year schools taking part in the program, but the program does not specify how physics will be integrated into the program and presents only general goals in this area.

**Expected outputs:**

30 pedagogical administrations in 30 schools (270 staff members) will be trained to grow excellence in the schools.

9 leading teachers will be trained and will work as instructional coaches in the schools.

A set of simulations for the pedagogical work of the pedagogical administrations.

**Expected results:**

An increase of 45% in the rate of students graduating with five units in mathematics in the ORT network (up to 16%) in 2019.

An increase of 18% in the number of students graduating from the ORT physics track (up to 13%) in 2019.

**External opinion:**

**Yael Bots**, director of the Bat Yam municipal program for the advancement of 5 units of mathematics and a former school principal: "*I would also include the high school counsellor and the junior high principal in the program's pedagogical administration. The pedagogical language must come from junior high level. The joint work focuses on data management, but it is important that the teachers themselves are partners in the process and that parents are also exposed to it."*

**Tovah Mittelman-Boneh,** director of the Ashdod municipal program: "*The program is at an early stage and there are no details. There is a desire to innovate here, but there are many gaps, and not enough deep thought has been given. The network is presenting a rosy snapshot of its activity, a variety of successful programs and continuous focus on the target, it is not clear why another plan is needed. In particular, a program named LAVA stands out, and for a moment it seemed as if this program was an attempt to find funding for it, but LAVA is not solely concerned with the goals of five units in mathematics and science. It is not clear if the program is based on external and expensive experts, or ORT personnel. The notion of relying on simulations at Bar Ilan is too expensive relative to their added value. It seems that ORT has created a collection of their previous plans here, together with all sorts of ideas that they would like to realize, but these do not really have a thread connecting them. It reminds me of a school that is run without any clear direction and becomes a "guesthouse" for a large collection of different projects. The program is presented as being "one size fits all," a kind of unified experience for all schools, but each school tackles a different reality, expulsions and dropouts, teaching quality, teachers' lack of perceptions and positions, and so on. The program focuses on the management team, but neglects teachers and pedagogy and teaching. The division between pedagogy and organization is not clear to me -- what will be done separately and what will be done jointly, and how. It is difficult to understand why the main weight is with members of the organization who do not understand the field, and it is difficult to suppose that the goals will be achieved like this."*

**Aharon Karish**, former Vice President of the AMIT network: "*The program presents a significant and important process that includes the assimilation of concepts and approaches through working with a broad pedagogical team and building a school system that is responsible for, and leads, change. However, it is not clear what learning process the team will go through -- what is the meaning of raising awareness? Which methodologies will they develop? (In my opinion, they provide an answer in the document as to how, but they lack materials. Plans. Tools.) Another point that is unclear is the measurement of success -- what this will look like and what it would look like for the program to be defined as a success -- with an emphasis on the outcome of the change that the pedagogical team would undergo in addition to the results of the achievements."*

**Summary of the Grants Committee:**

The goal of influencing the organizational culture of the school is a worthy and important one, in order that strengthening the five units of mathematics will permeate, assimilate and be long-lasting. Therefore, the component of coaching in the schools is the most important and represents the added value of the fund's contribution. The program gives precedence to matters of school management, as opposed to a successful pilot created from engaging in mathematical content. Therefore, the program will need to give more weight to the discipline and its integration into the program. The goals, the indicators and the program in physics are less crystallized and will need to be rebuilt well.

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| **Request** |
| The total budget is 4,500,000 NIS over three years, of which 2,216,000 NIS will be covered by ORT and **2,284,000 NIS** is requested from the Trump Foundation(600,000 NIS – Regional training for 30 schools; 651,000 NIS - Five two-day workshops; 1,000,000 NIS – 10 Simulations days; 374,000 NIS - School-based instructional coaching; 1,125,000 NIS – Training 9 instructional coaches; 350,000 NIS - Management and administration; 160,000 NIS – Evaluation; 240,000 NIS - Technology infrastructure) |
| **Recommendation** |
| **1,200,000 NIS over three years** |
| **Timetable of Payments** |
| 2017- 250,000 NIS; 2018- 400,000 NIS; 2019 - 400,000 NIS; 2020- 150,000 NIS |
| **Conditions** |
| 1. The Network will present criteria for the selection of schools according to student and teacher capacity and data, to be approved by the foundation. 2. The program will add two experts in physics and mathematics teaching to serve as co-directors of the academic component. 3. The program will present data and trends in physics studies and will determine a comprehensive goal for the program and in each participating school. 4. The grant will not fund the costs of technology infrastructure and programming, nor the costs of the simulations workshops and evaluation. 5. The network is requested to reexamine and resubmit the cost of the program, with special attention to the training of nine instructional coaches (1,125,000 NIS), the school-based coaching (1,700 NIS for 4 hours) and the simulations (1,000,000 NIS). |

**Israel Center for Excellence Through Education**

Creating 15 School-based Communities of Practice for Mathematics Teachers in the City of Modi'in and the Surrounding Area

Prof. Nava Ben-Zvi, Chairperson; Dr. Avi Poleg, Director of Teaching Department

**How will the proposed program promote the strategy of the Foundation?**

The proposed program is one of the first fruits of a new cluster of programs in the Foundation's strategy, whose aim is to help strengthen the professionalism of junior high mathematics departments. The assumption is that the more practical the quality of teaching in junior high schools, the more students will arrive prepared at the higher level. As a result, we expect an increase in the number of students who are able to opt for, and succeed on, the five-unit track.

**The organization**

The Israeli Center for Excellence in Education is a long-term partner of the Foundation, especially in programs for the instructional coaching of new teachers. The center has expertise in practical teaching and in some programs to date has incorporated elements of a professional community. Its advantages are in high-quality "boutique" work, which offers close coaching by first-rate professionals. Historically, the Center was established as a development body alongside the School of Science and Arts in Jerusalem. In recent years, the Center has experienced administrative and budgetary fluctuations and is now at a crossroads. The chairperson of the center is Prof. Nava Ben Zvi, and the director of the Center serves as the school principal, in addition to this position.

**The need:**

It is well-known from research and experience that when teachers who work together, develop professionally together and in so doing strengthen the professional discourse between them, the level of the students becomes more suited to the and abilities of each student. In this light, in recent years, the weight of teachers' professional development has shifted onto the schools themselves, and while in the past most professional development was conducted externally by experts who were not necessarily teachers, now there is a greater tendency toward hands-on and practical learning.

In mathematics in particular, the school operates a policy of groups and learning levels, the students advance from class to class and sometimes move between levels. Therefore, the concept of school teaching is of great importance and the teaching staff must coordinate closely, both pedagogically and organizationally. When a group of teachers from a school initiates the use of a practical teaching method, the chances of success are higher than if a single teacher tried to do that on his/her own.

In practice, however, school mathematics departments rarely engage in pedagogy, practical skills or in formulating shared teaching concepts. School mathematics departments hold occasional meetings, convened by the program director (who receives a bonus of several percent of his/her salary), and these mainly deal with administrative issues or on handing down instructions from above. In this light, the need has arisen to help school mathematics departments to grow as a professional community that is committed to practical teaching.

**The program:**

The proposed program is to train 30 leading mathematics teachers from 15 junior high schools, in order to develop the mathematics departments in their schools into a professional practical community. The schools that will participate in the program are high schools in the city of Modi'in (12 schools) and a number (3) of schools from the region.

The leading teachers will study on a two-year program, which shall include 60 hours in the first year and 30 hours in the second year. They will study management and leadership skills, issues and difficulties in teaching various subjects, methods to improve motivation in mathematics teaching, analysis of films of mathematics teaching, etc. They will document their work and bring evidence of the topics they have learned to their meetings, as a basis for shared learning.

In the second year, the leading teachers will be trained to observe teachers' lessons and in how to analyze and provide feedback. As a result, they will observe teachers and share their experiences and difficulties with their peers. Throughout the program, each pair of leading teachers will receive private coaching in their schools from the program team, at a rate of four times per year.

**Expected outcomes:**

30 leading teachers trained to lead the school community

15 school communities established in schools in Modi'in and the region.

**Expected results:**

The teaching of the teachers in the participating schools will become more practical.

Improved exploitation of student potential, which will be reflected in a rise in elective courses, perseverance and success in the five-unit program.

**External opinions:**

**Rina Zabudnik**, Director of Mathematics, ORT: "*The program is deserving and fitting. However, the definition of the program and its aims lack reference to the program's impact on quality of learning and on students' achievements, success indicators are not sufficiently clear and detailed, and it does not appear that they rely on current data from Modi'in. In addition, the program should be clearer about what will transform the department heads' and teachers' meetings into learning communities, and what the added value will be beyond the training or the staff meetings. The training program lacks any explicit reference to improving the department's work and data-based work. The program needs to ensure the commitment of the school principals in advance to allocating two hours for school community meetings including at the end of the program, as well as their support for the teachers' mutual expectations. There is no reference to documenting the meetings of the community of department heads, the personal coaching or the school communities. The program's budget is too high for a small-scale program."*

**Asaf Dabir**, mathematics department head, Herzliya Gymnasium. "*The program is detailed, interesting and promising. It should be emphasized that the concept of the coordinator's role should be that of a managerial role, and therefore the department heads should develop team management and resource management skills. Personal coaching in schools has an importance and an added value beyond the community meetings. There is a lack of familiarity in the program with sources of knowledge and support in and outside of the education system, from functions that produce procedures and guidelines and provide information, through programs and various non-profits that the coordinator can recruit according to the needs of his/her school. It is worth expanding the program to more than just one city."*

**Dr. Zahava Shretz**, Manager of the Program for Training and Coaching Science Department Heads at the Weizmann Institute: *"The program is important and deserving, however, it's scope is small and it is worth expanding it. It lacks reference to the program's impact at the student level, and also lacks explicit reference to the process of transforming the mathematics department into a school community – this is not a trivial or simple process. The professional development program should be 60 hours over two years, and not 30 in the second year. The development should also include documentation of what is happening in the community of coordinators and in the school community as a basis for expanding the program in the future."*

**Summary of the Grants Committee:**

It would be advisable to consider establishing school communities in six-year schools, and not just in junior high schools. We note here that there is already extensive activity in high schools and in the classroom, and it is important to present these activities in the program. It is clear that the Modi'in municipality is not sufficiently connected to the program and that the program is not connected to the city's targets and data for the five units in mathematics. In light of this, it must define targets and success indicators in junior high schools. It is important that the Israeli Center for Excellence in Education, which is an excellent organization, have a more sophisticated method with clear standards and detailed practical skills. The costs of the program are high and it is essential that the Ministry of Education, as a leading partner in the program, be a significant partner in the funding.

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| **Request** |
| **845,000 NIS over two years** (300,000 NIS – Instructional Coaching; 200,000 NIS – Course; 166,000 NIS – Management; 95,000 NIS – Online Coaching; 44,000 NIS – Administration; 40,000 NIS – Evaluation( |
| **Recommendation** |
| **Up to 600,000 NIS over two years** |
| **Timetable of Payments** |
| 2017 – 130,000 NIS; 2018 – 285,000 NIS; 2019 – 185,000 NIS |
| **Conditions** |
| 1. The program will include at least 30 department heads and lead teachers from 15 schools in Modi'in and the surrounding area. If the program's scope decreases, the grant sum will be modified proportionally. 2. The program will prepare an operating plan to be submitted and approved by the foundation within three months, including measurable goals in terms of student selection, retention and success in the five units track in Modi'in. 3. The cost of operating the course will not be funded by the grant, rather than by other sources, preferably the Ministry of Education or the Municipality. 4. The Municipality will commit to facilitating the work of its teachers' communities, including, the allocation of time, space, reimbursement, equipment and refreshments. |

**Interdisciplinary Center Herzliya**

Development of Mathematical Growth Mindset Workshop and Training 200 Teachers

Dr. Tal Ben Shahar, Founder and Chair of Maytiv Center for Positive Psychology; Prof. Uriel Reichmann, President

**How will the proposed program promote the strategy of the Foundation?**

The Trump Foundation works to further excellence in mathematics and the sciences, as expressed in the increase in students who choose, persevere and succeed in the five unit tracks. The studies are difficult and require determination and perseverance; many students do not believe in their ability and so they give up in advance or when they experience their first difficulties. Therefore, the teacher's role is critical, a teacher who believes in a student's abilities, sets ambitious goals with him/her and supports him/her along the way.

In recent years, research has begun to develop in the field of psychology that suggests a close connection between the worldviews of teachers and students regarding the ability to learn and the chance of success, and with success itself. The idea that a student is born with the skills that predetermine his/her ability to learn, severely restricts the ability to advance, in that it becomes a self-fulfilling prophecy. Professor Carol Dweck makes a distinction between a fixed mindset and a growth mindset, and Professor Jo Boaler, a researcher in mathematics education at Stanford University, has developed methods and tools to help mathematics teachers and students shift from a fixed mindset to a growth mindset.

We hypothesize that, if appropriate tools are developed for the Israeli mathematics study program at junior high, and if teachers and students use these effectively, the number of students on the five-unit track in high school will increase.

**The organization:**

The Maytiv Center is an applied research center in the School of Psychology at the Interdisciplinary Center Herzliya. The Center was founded in 2010 as an initiative of Dr. Tal Ben-Shahar, a world expert in positive psychology. In the field of education, the Center runs workshops and courses in Israel for teachers and students, in which they are exposed to insights and tools from the research. The Center has extensive experience in training and mentoring leading teachers to lead professional development peer communities in schools. Through the intervention program, which operates in 100 schools across Israel, it works with teachers to strengthen students' self-image and social and emotional skills, to foster a sense of responsibility and determination in achieving goals, and on motivation and a sense of ability, investment in learning, etc. The Center reports an improvement in attitudes toward learning and an indirect impact on improving academic achievement in English and mathematics.

**The need:**

The study of mathematics is saturated with fear and stereotypes common to both students and teachers. It is widely accepted that only those born with mathematical ability can succeed in learning mathematics at a high level. Others believe that boys are more likely to succeed in mathematics study than girls, and that strong populations from the center of Israel have a greater ability than weaker populations. This is a familiar phenomenon in Israel and its influence in peripheral communities is more pronounced. There is a tendency in many schools in the periphery to lower expectations, not to believe in students, and to give up on, and with, them in advance. Often, as a result, the prophecy fulfils itself, teachers and the students do not believe in their ability, and hold themselves back from setting high goals.

However, in recent years, research has been developing around the world suggesting that, in appropriate conditions, many students can succeed and that to this end, a more open mindset is needed. Teachers have an important role in shaping a growth mindset and in undermining a fixed mindset. Teachers' verbal and covert messages can influence these mindsets and foster cognitive flexibility among students, as well as a willingness to deal with challenges and difficulties and the ability to find their mathematical potential. According to research, teachers who use strategies and messages that encouraged this succeed in leading their students to greater success.

**The** **program:**

The Foundation has approached the Maytiv Center, which now proposes to develop and run a two-year course of 30 hours each year for 200 group A mathematics teachers in junior high schools in peripheral cities, to assimilate and implement mathematical development cognitive tools (mathematical growth mindset). The program will include exposure to psychological content that represent barriers to using a student's mathematical potential; exposure to neuroplasticity studies of the brain; learning, implementing and initiating interventions to foster a developing pattern of thinking in mathematics studies; the development of modular tasks in mathematics; learning from mistakes; visual representations of mathematics in everyday life; mathematical discourse; adaptive learning to each student's way of thinking and learning, etc.

In the first year, the Maytiv Center will establish a development team with clinical psychologists specializing in positive psychology, and will include experienced mathematics teachers (who teach in the periphery), and academic experts in mathematics education. The team will study Joe Boaler's method and, together with the active mathematics teacher community, which will be a pilot, will plan and develop a training program suitable for the unique needs of mathematics teachers and students in the periphery. The challenge at this stage is to identify the unique characteristics of mathematics learning in group A in junior high schools, the needs and expectations of the five-unit track in high school, with emphasis on teaching and education difficulties, typical errors and bottlenecks and on developing specific tools.

Ahead of the course's opening in October 2018, a program guidance team will be trained in 10 groups of 20 leading teachers in the periphery. The Maytiv team will establish contact with local authorities, education authorities and other programs running mathematics teacher communities in order to recruit teachers onto the program. The expectation is to integrate into existing communities of leading teachers, so that each leading teacher will return to the teachers with whom he/she works and utilize the tools and methods that he/she has learned with them. The program will be accompanied by a formative evaluation that will examine the program in terms of changes in the mindsets of the teachers and students, the use of strategies that promote a growth mindset, personalized instruction for students, motivation and perseverance in mathematics study, mathematics achievement and more. The development materials will be updated according to the research findings.

Beyond the courses for the 200 teachers, the program does not present a detailed sustainability model. The Maytiv Center writes that it has other activities in Israel, as part of the "Hashkafa ["Outlook"]" program of the Ministry of Education and Yad Hanadiv, which identified the needs for mathematics teachers (in the Jerusalem district and its settlements). It is not clear whether and if this activity could be integrated into that. The Maytiv Center adds that it will also work to offer the the mathematics component to the local authorities with whom it currently works (Eilat, Nazareth, Carmiel, Yokne'am, Ashdod, Acre etc.), as well as to the teaching staff development centers across Israel.

**Expected outputs:**

* Two-year training program of 30 hours per year
* Tools and methods of developing a growth mindset specific to teaching mathematics in junior high
* A coaching site that includes presentations, teaching materials for teachers, supplementary enrichment materials
* A detailed training booklet for program coordinators
* Running the program for 200 teachers
* Evaluation study to examine the effectiveness of the program

**Expected results:**

An increase in teachers' sense of ability in mathematics teaching, and in the students' motivation to learn.

An increase of 20% in the choice of the five-unit track among students of the teachers taking part in the program.

**External opinion:**

**Miri Gottleib**, head of the department for the professional development of teachers at the Ministry of Education: "*In recent years, the idea that emotional, and not just cognitive, skills are important has permeated the professional teacher development field. Maytiv's program answers this need and therefore I welcome it. The challenge is to create a shared language between psychology and mathematics, this is not easy at all and it will be necessary to build this up ahead, together with the Ministry's Mathematics Profession Center Supervisor, in order that the impact of the program will go beyond the specific impact on just 200 teachers. I have doubts as to whether the program will succeed in conducting a pilot before it runs, because in the second half of the academic year, teachers are busy, and it will only be possible to integrate it into existing frameworks."*

**Yaniv Sofen**, mathematics teacher, leader in the "Five Club" mathematics teacher community and mathematics director in the Beersheba municipality's excellence program.  *"The practice of child psychology is lacking for mathematics teachers, who usually focus mainly on the teaching side. However, I think that a regular teacher would rather go to advanced study in math rather than to this course, unless there is a significant emphasis on the link between mathematics and psychology. The link to math teaching must be clear and tailored to the subject of study and to difficulties in learning, so that teachers can apply the tools the next day in the classroom. Therefore, I think that the place of mathematics experts in the program is not sufficiently central, for example the scope of their role should be the same. The program would be more suitable for leaders of the teacher community, so that they can decide if and how to integrate the tools that they learn into the teacher communities. Attempts to bring external people to convey this content to the communities themselves will end in failure. The program offers extensive research that is quite unnecessary and it would be better to invest the money in the activity and not in research. It seems that the budget is too high and that it will not be sustainable in the system in the long-term, so it is important to base the model now on acceptable market prices."*

Shulamit Davidovich, mathematics teacher in the Central District and leader of the "Five Units" program: *"Changing teacher attitudes is a critical development for student success and this depends on psychology. However, the proposed program does not include enough mathematical content, and is not specific to the curriculum or to learning content. I am afraid that the course would be too theoretical, and that teachers' response would be limited, because they are looking for practical tools. One must remember that there is a great deal of competition for teachers' time. I think that the mathematics in the program must be 70% and the psychology 30%, otherwise the teachers won't come. It may be worth integrating the program into the Ministry of Education's accreditation expansion program, which focusses only on mathematical content, this could create a good combination."*

**Grant Committee summary**

**In the first stage of the program, there is the challenge of specific mathematics development in Israeli high schools, since such content does not exist in a ready-made format. This component of the program should be strengthened. In the second stage, the program succeeds only if it is integrated into a teacher professional development program (like the communities) and not as an external training course, and incorporates significant practical experience. Therefore, the operating model of the program must be reexamined and linked up ahead to professional development frameworks, including practical coaching.**

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| **Request** |
| **4,154,000 NIS** over three years (972,000 NIS – Management; 648,000 NIS - Psychology team; 852,000 NIS – Mathematics teaching experts; 600,000 NIS – Operation of Course for 200 Teachers; 480,000 NIS – Research and Evaluation; 60,000 NIS – Pilot with 20 Teachers; 542,000 NIS - Overheads [15%]) |
| **Recommendation** |
| **3,000,000 NIS over three years** towards the development of mathematical growth mindset workshop and training 200 teachers |
| **Timetable of Payments** |
| 2017 - 1,000,000 NIS; 2018 - 1,000,000 NIS; 2019-700,000 NIS; 2020-300,000 NIS |
| **Conditions** |
| 1. The development program as well as the operating model will be submitted for approval by the foundation within three months. 2. All content and tools developed in the program will be available in full to the professional community free of charge. 3. The budget for operating the courses and communities for 200 teachers (600,000 NIS) will be funded by other sources, preferably by the Ministry of Education. If successful, it is expected that the program reach an agreement with the ministry to secure ongoing operation. 4. Course instructors will include mathematics teachers. 5. The operating model will include agreements with operators of teachers' communities and training programs across the country. 6. The grant will not fund the research component (480,000 NIS). |