

Tafnit program
Closing educational gaps, preventing dropout and increasing academic achievements

2001/2002 - Math Project for 11th Grade Students In Bedouin Localities

I. Goal and Target Population

82 grade 11 students from the comprehensive high schools of four Bedouin localities in southern Israel were selected according to their mid-term grades and the recommendation of the school. These students were originally expected to fail the summer matriculation exam in math (1st level).

The project was designed to help the students realize the importance of education for social mobility and integration; to build their confidence in their ability and to enable them to pass the exam successfully.

Table 1: Participants

School	Students in the project	Students taking the exam *
Ar'ara	21	19
Tel Sheva	21	20
Kseifa	20	19
Hura	20	19
Total	82	77

* All the students in the project continued to the end. 5 didn't show up on the day of the exam.

II. Method

A. The "Learning Operation" method (abridged)

Research shows that lack of academic success is usually not caused by cognitive factors; its main reasons fall into 2 general categories:

- Internal school causes connected with the school structure – channeling pupils into tracks and levels, “labeling” of pupils etc.
- Out-of-school causes connected with the influence of “meaningful others” – parents, peers, the general environment, or emotional reasons related to the pupil's personality.

The method – its principles, mode of operation and structure – addresses all of these causes. But above all the method deals with the ‘incapability’ of the pupil as he perceives it, along with his parents, teachers and others.

Most of the pupils labeled as “under-achievers” (or any alternative name) develop a false perception of themselves as lacking the ability to reach significant achievements. This subjective self-destructive perception is the result of years of accumulated failures, and it spreads to the pupil’s classmates, peer group, parents, teachers and so on. The pupil is caught in a vicious circle that is out of his control, which is reinforced by every new failure. The conflict between the false self-perception of the “incapable” pupil and the school’s expectations from him is usually resolved by rationalization, expressed in non-conformist behavior or in statements about the worthlessness of a certain subject or of studying in general.

Consequently, in order to allow these pupils to succeed it is necessary first and foremost to destroy the false perception of failure by leading them to success within a short period of time, demonstrating the connection between effort and success. For example, pupils in comprehensive schools in Be’er Sheva took part in a 3-week project in March 1999, during which they learned about 45% of the material for the matriculation exam in math (a subject they failed before). At the end of the project they took an external test and their marks were quite impressive. In Yeruham the method is used now in all the high school grades, and the proportion of pupils who acquire matriculation increased dramatically from 17% to 57%.

B. Principles of the “Learning Operation” method

The project is based on the creation of a ‘mini-organization’ within the school that operates by the following principles:

- Building up the motivation of pupils, parents, teachers and community agencies before, during and after the project.
- Focusing on one subject (or a small number of subjects).
- Strict and relevant course of study with a clear, measurable goal.
- Accelerated learning for a short period (4-5 weeks), aiming for success every day from day 1.
- Changing the school routine and creating a different learning environment.
- Learning in a group with personal interaction between teachers and pupils and differential investment in pupils according to detailed regular mapping.
- Simultaneous learning and rehearsal (no homework, at least in the first stage).
- Teamwork (coordinator, teachers and teaching assistants) and leadership.
- Continuous evaluation.

III. Mode of operation

- Project coordinators were trained for the schools.
- 20-21 pupils were selected from each school according to the results of the mapping.
- Teachers from the school staff were selected for the project team.
- The project included 65 hours of teaching in each school during March-April 2001.
- The curriculum covered about 90% of the material for the matriculation exam (1st level).
- At the end of the project the pupils took a ‘mock exam’ under external supervision.
- The matriculation exam took place 1-2 months after the end of the project.
- The schools offered the pupils a refresher course before the exam.

IV. Results

Table 2: Summary of results

Number of students:

Started the project	82
Finished the project	82
Took the exam	77
Passed the exam	76

Success rate of participants in math exam:

Students who started the project	92.7%
Students who took the exam	98.7%

Marks of participants:

Average mark before the project	41.5
Average mark at the end of the project	94.1
Average school yearly mark	91.6
Average mark in the matriculation exam	95.5
Average final mark in the matriculation certificate	95.1
Difference between the yearly mark and the matriculation mark	-3.9

Table 3: Comparison of marks by school

School	<u>Average Mark</u>		
	Before the project	At the end of the project	Matriculation (final)
Ar'ara	28.3	96.0	91.8
Tel Sheva	37.4	95.6	92.5
Kseifa	57.9	92.7	96.2
Hura	43.3	92.3	94.7