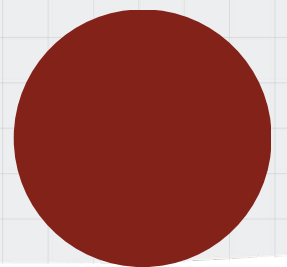


# Who Are the Mathematics Teachers of Middle School Excellence Classes?

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Abstract based on a survey by Elad Roth



There is very limited data available about middle school mathematics teachers. Once every few years, the Central Bureau of Statistics publishes a report, which is based on Ministry of Education databases about teachers' tenure and academic education. This report shows that the number of mathematics teachers is steadily increasing and that most of them were trained at teacher colleges. In these reports, the data does not specifically refer to teachers in excellence classes, rather than gives an over whole picture.

For a foundation that concentrates on the teaching and learning in excellence classes, this data is not sufficient. Therefore, we commissioned a targeted study in order to identify particular characteristics of teachers in such classes. Using questionnaires and focus groups, the study examined the motivations, attitudes and perceptions as well as their professional insight and experiences. Participating in the study were veteran and new teachers, from the center and the more area of the country, across genders and ethnic affiliations.

## Main findings

1. The study comprised 145 teachers, most of whom teach in the 'Science Technology Program', and some who teach in the MOFET Program. Sixty-five percent of the participating teachers held an MA or higher academic degree; most of them graduated from a university. Sixty-four percent were teachers with over 16 years of teaching experience. Thirty-nine percent also teach in high school while 61% teach only in middle school.
2. Ninety-six percent of the teachers expressed high satisfaction with teaching in an excellence class. Eighty-six percent would recommend teaching in an excellence classes to their colleagues and 91% would recommend that their friends register their children to study in excellence classes. Teachers from the center of Israel and those who have higher academic degrees express higher satisfaction than others.
3. The main reasons for their decision to teach excellence classes are an opportunity to go more into depth with the students in mathematical knowledge and thinking (77%); the opportunity to enhance and diversify teaching methods (50%); and, preparing more students for the five-unit study track in high school (41%). They chose to teach in middle school and not high school because of the ability to have greater influence on the students at this age (43%).
4. When asked about skills they need as teachers in excellence classes, they emphasized the mastery over the material (53%); the familiarity with the high school five-units curriculum (46%); and wide-ranging mathematics knowledge (42%). The teachers pointed to the fact that they work effectively together (78%) but only a minority have a professional connection with teachers in other schools, a connection which they would like to deepen (84%).
5. In the focus groups, the teachers pointed to the fact that do not use a textbook. They prefer to choose from repositories of assignments. The downside of this, they said, is that their teaching is not structured in a traditional manner, making it sometimes harder for students to progress. As for other teachers, they claimed that teaching in an excellence class is suitable only for teachers with high capabilities, motivation and flexibility who are willing to put in a lot of effort.
6. The study also identified four "archetypes" of mathematics teachers of excellence classes: the **educator**, who is motivated by the desire to influence the students and their personality; the **coach**, who aspires to train the students to succeed in various life milestones in the future; the **system booster**, who recruits students and teachers to join the ranks of excellence and aspires to expand them; the **sensitive one**, who agonizes over the emotional toll of teaching and learning in an excellence class.