**Abstract:** The attitude construct is widely used by teachers and researchers in mathematics education. Often, however, teachers’ diagnosis of ‘negative attitude’ is a causal attribution of students’ failure, perceived as global and uncontrollable, rather than an accurate interpretation of students’ behaviour, capable of steering future action. To make this diagnosis useful for dealing with students’ difficulties in mathematics, it is necessary to clarify the construct ‘attitude’ from a theoretical viewpoint, while keeping in touch with the practice that motivates its use. With this aim, we investigated how students tell their own relationship with mathematics, proposing the essay “Me and maths” to more than 1600 students (1st - 13th grade). A multidimensional characterization of a student’s attitude toward mathematics emerges from this study. This characterization and the study of the evolution of attitude evolution have many important consequences for teachers’ practice and education. For example the study shows how the relationship with mathematics is rarely told as stable, even by older students: this result suggests that it is never too late to change students’ attitude toward mathematics.