“Algorithms”, “Big Data”, and “AI” are drawing considerable interest in popular media and several academic fields, such as Science and Technology Studies (STS) and Critical Data Studies (CDS). These terms typically refer to data science techniques, and are often used in conjunction with abstract claims about the disruption of various spheres of society, such as corporate industries and the public sector. Also in the field of education do we see on the one hand claims about algorithmic revolutions and on the other hand the proliferation of algorithmic systems. While some work from STS and CDS has already looked at the practicalities of the introduction of these algorithmic systems into the field of education, there has been seemingly little research on how they are constructed in practice.

At the heart of this thesis is an empirical case study of an IT consultancy firm which has developed an algorithmic system for a school of secondary post-vocational education (in dutch: MBO) in The Netherlands. The algorithm can predict which students are likely to drop out before they complete their diplomas. Despite its high accuracy, the system was never adopted in practice and the project was abandoned. In this thesis I am particularly interested in the role of those that were measured and classified by the algorithm: the students.

By applying a mixture of The Social Construction of Technology (SCOT) and Actor-Network Theory (ANT), I analyze how the algorithmic system was socially constructed. I focus on the role of the students in the system and how they are conceptualized by the other relevant social groups. A total of six interviews and several documents were analyzed using a grounded theory approach.

The results of this thesis provide important insights into the social construction of algorithmic systems. I contend that the development of this system is a continuation of numbers-based government styles and that critique of algorithmic approaches needs to take a broader societal context into account. Furthermore, the collaboration between the school and the IT consultancy firm proved vital in getting the project started. It appeared that private sector actors wield a certain influence over which problems are pursued by public sector institutions. Finally, it was striking that this project seemed focused on demonstrating the power of Big Data, thereby stressing especially its future potential. The students’ roles can be characterized as primarily providing the data that enabled this demonstration.