

Context

The Dutch Ministry of Education upholds ambitions whereby in 2025 all teachers in Dutch higher education will share and reuse each other's educational resources, leading to an increase in the quality of education. In order to increase the adoption of this ambition and to eventually put it into practice, two "flagship" projects were started in 2017.

The Open Up Math project was one of the two "flagship" projects. It focussed on a community of math teachers at the Dutch Technical universities, whilst the [other "flagship" project](#) including Hogeschool Rotterdam and Hogeschool Fontys focused on the sharing of training material for 17 training courses in nursing.

The overall goal of the "flagship" projects was to explore what would be needed to meet the ambitions set by the ministry, to experiment in practical settings (learning by doing) and to inspire and pave the way for future projects facilitated by the [SURF Open and Online Education grant program](#), by sharing the lessons learned during the projects.

- For more general information about the flagship project, visit <http://surf.nl/boegbeeldprojecten> or
- Watch the video: <https://youtu.be/OTRDvXbF3tM>

There are several reasons why sharing educational resources may be beneficial for teachers in Higher education. Not only can teachers make use of each other's work, they can also improve the quality of their teaching by getting inspiration out of each other's work, or combine efforts to create new resources fitting their own needs. Commercial solutions currently used, such as Pearson's MyMathLab for online books and testing, although ready to use, do not always meet the requirements of Bachelor Math education at Dutch universities, concerning level, quality, or variety of exercise resources or teaching needs. Moreover, they are not flexible enough to be adapted, and can only be used in combination with particular books. Such commercial solutions do not typically facilitate open sharing of content among multiple institutions or revision of the content by lecturers or students, based on the licenses offered, which are very costly, not only for universities, but also for their students. With this in mind, there is a clear ambition to explore alternative solutions.

A critical success factor of the project which was identified as a risk factor in the project initiation phase was the co-operation and collaboration among an engaged and active community of math lecturers in different institutions.

Project

The main goal for the Open Up Math project was to **support** the 4TU math teaching community in **developing, sharing, reusing and revising (open) educational resources** available at the participating institutions and beyond, to **increase quality, flexibility and efficiency** in first year Math education.

In the end, although curricula are different for each educational program and institution, the basics in mathematics are very similar. When mathematics teachers know how and where to find each other, and know what resources have been created, for which purpose and in which context, and where they are available (through their peers), one could take advantage of it. This would prevent the situation where four mathematics teachers (one in each institution) put amount of time into creating more or less the same resources, and instead could enable teachers to building on top of each other's work, increasing the quality and efficiency rather than reinventing the wheel.

Connection to existing projects

Before the Open Up Math project was started, a [4TU project](#) was already being implemented focussing on generating basic mathematics modules which would be usable by all Dutch technical universities. The Open Up Math project was intended to add on to this existing project, in terms of:

- **Applying open components** in the process of sharing and reusing educational resources (to contents, management of contents, sharing, etc., specified in the individual work packages).
- **Development of an active community** around the exchange of educational resources.
- **Strengthening the outreach to other universities**, preparing conditions for a broader uptake of sharing and reusing educational resources in Dutch Higher Education (the [Open Coalition](#)) and potentially beyond.

Intended Project Outcomes

The outcomes of the project included the following:

- Gain an understanding of the challenges and opportunities of the community building process.
- Co-creation and collaboration and the conditions for finding, sharing, (re)using and revising content through adoption of a repository (Equella).
- Inventory of best practices in community building and connections to existing projects with similar ambitions.
- Dissemination and knowledge sharing throughout the duration of the project about the learnings, embracing a broader stakeholder community than those in project scope (see attached Dissemination Plan).