

# Transitioning an Item Bank from Paper to Digital

The Finnish Matriculation Examination Board (MEB) Created an Online Item Bank Using TAO.



Ylioppilastutkinto

## BACKGROUND

### MEB Developed an Item Bank for Online Computer-Based Testing.

The **Finnish Matriculation Examination** is the exam taken at the end of Secondary Education to qualify for entry into university.

In 2013, the Finnish Matriculation Examination Board (MEB) sought to develop a crowdsourcing system for potential exam questions via Google Drive, and use these questions to create an item bank for online testing. This system would serve as an official platform to facilitate the presentation and discussion of exam question ideas between teachers and other interested parties.

## CHALLENGE

### Finding a Platform That Would Function as an Item Editor as Well as an Item Bank.

As more and more items were added to the discussion, MEB realized that they needed an item editor, but couldn't find a suitable front-end solution. Having

established a crowd-sourced idea bank, MEB considered developing their own editor, but felt that was too large an undertaking, especially given their time constraints.

This prompted their search for an item editor that could be easily integrated into their existing system.

**SOLUTION**

**Why TAO**

Since the initial creation of the item bank, MEB had envisioned using QTI as the format for the digital exam files as well as the items. That's why they liked TAO's QTI-compliance and Open Source license. Conjointly, TAO's modular software design gave MEB the flexibility to integrate only the components they needed, therefore reducing implementation time and budget.

**RESULTS**

**Implementing the TAO Open Source Solution**

Because TAO is both Open Source and QTI compliant, MEB was able to integrate it with Drupal. Ansible provisioning and configuration management helped synchronize environments across development and production servers. This kept lower-level system configuration, security aspects, and other database elements in sync.

MEB's project lead and developer, Janne Cederberg, and an experienced Drupal developer, Juho Viitasalo, joined forces and successfully completed the implementation over a six-month period. Together, they created the overall system architecture and the TAO-Drupal integration. They also developed a custom TAO extension and contributed minor modifications to the TAO core files.

“We found the TAO staff to be very professional and helpful. They were flexible and accommodating to our immediate and changing needs,” says Janne Cederberg. “TAO's Open Source and flexibility to customize provided MEB with a lot of useful functionality out-of-the-box. We were able to run our Item Editing and Item Bank immediately, thanks to TAO's QTI compliance and modularity. This was immensely helpful for expanding our test taker and subject numbers. We could not have asked for a more knowledgeable and effective partner to guide our shift to digital testing.”