

France's DEPP Moves to Computer-Based Testing and Halves Cost-per-Student



BACKGROUND

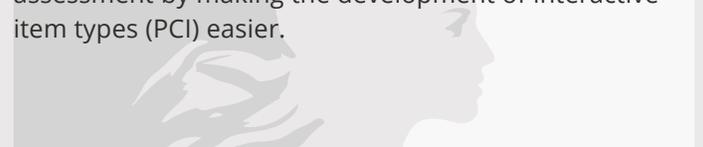
The DEPP is the section of the French Ministry of Education responsible for assessment and statistical analysis in all areas of academic and vocational training. They provide stakeholders with objective information regarding students' knowledge and skills, as well as students' cognitive development in areas such as motivation, social life, and self-esteem.

The DEPP is responsible for sample-based assessments of 12 million students in over 65,000 elementary and secondary schools. The sample sizes typically range between 8 to 12,000 students, with a total of 8 to 10 programs per year.

In recent years, DEPP has directed the move from paper-based testing to computer-based testing (CBT).

The decision to move to CBT testing was triggered by a call from the Ministry of Education to amass increased in-depth information for each school district (a total of about 30 in France), which would require substantial upscaling of the existing testing program. Whereas paper testing is limited to 10 to 20,000 students, CBT can manage up to 160,000, or conceivably even the entire student body of 12 million.

Besides the advantages of upscaling, the Ministry thought that CBT would also improve the quality of assessment by making the development of interactive item types (PCI) easier.



CHALLENGE

For its current CBT efforts, the DEPP selected the SOCLE test, which assesses a set of required basic competencies for Grade 6 students in French, Math and Science. The goals for the CBT included increasing the testing population from 20,000 (paper-based testing) to a minimum of 160,000, as well as developing innovative and engaging item types for an upcoming assessment of 10,000 students in Grade 9, expected to take place in May 2016. This SOCLE test is the biggest standardized test to have taken place online in Europe.

Previous in-house (legacy) approaches to CBT were originally developed for electronic reading assessments, but had significant restrictions in that they were not designed for large scale applications, had limited item types, and were difficult to implement in an adaptive manner.

Therefore, in continuing to develop CBT, DEPP had four key requirements:

1. An open source mandate (a national recommendation)
2. The scalability to support 160,000 students
3. QTI standard compliance for interoperability
4. Cost effectiveness.

SOLUTION

Why TAO

After careful evaluation, DEPP chose TAO because it met all the requirements above:

1. TAO is Open Source, which makes it ideal for developing innovative test items as it facilitates efficient communication among all players.
2. TAO is the first to have achieved QTI compliance in all four certification categories: authoring/editing systems, delivery systems, item/test bank systems, and the QTI content itself.
3. TAO has repeatedly demonstrated and proven its scalability in large deployments worldwide.
4. Open Source means TAO requires zero licensing or test delivery fees, enabling the program to work within budget.

RESULTS

Implementing the TAO Open Source Solution

The field test for the SOCLE assessment was DEPP's first TAO-based, large scale implementation of a CBT. It involved one to two sixth grade classes each at 100 schools, reaching a total of 3,000 students.

Following a successful field study, the test was subsequently deployed in over half of the 7,500 lower secondary schools, reaching a total of 160,000 students – in other words, one in every five sixth grade students in France.

The CBT, run on TAO, was a great success. The implementation of the project was national but decentralized. There were over 4,000 schools to support, adding up to 30 districts. Each school had someone responsible for all IT-related issues, but could escalate to the district hotline for additional assistance. In turn, each district had its own dedicated support team readily available to address all of the challenges the member schools had, and DEPP managed the support teams overall.

Last but not least, the use of a TAO-based test cost just under 5 EUR per student, as compared to 10 EUR for paper-based testing – a minimum of 50% cost savings per student.

With the success of SOCLE, the first TAO-based large-scale CBT, DEPP's long-term plans now include extending to assessments in additional subject areas and grades, first with 1,000 to 20,000 students and eventually reaching 800,000, the entire sixth grade population in France. Longer-term plans include multi-stage adaptive testing, development of more interactive PCI items, and the development of alternate assessments with accessibility support for students with disabilities.

“On all fronts, from ease of implementation to adaptability, reliability, and cost savings, TAO proved to be an excellent choice for our program,” Says Thierry Rocher. “That said, the fact that the OAT team provided excellent support was a deciding factor in that equation. Extending the TAO-based assessments to serve a larger student population will present issues such as unguided local uses of test results. Indubitably, we see challenges ahead. But with TAO and the OAT team, from a purely technical point of view, we are ready.”

“For the next deployment in May 2016 for SOCLE Grade 9,” says Thierry Rocher, Deputy Head of the Office for Student Assessments in DEPP, “we will leverage new TAO features and develop new PCIs such as spreadsheet or scientific calculator. Additionally, students with disabilities will be able to enjoy functionalities like Zoom In-and-Out and Color Contrast, which will make the items easier to understand. We are excited about the innovation TAO brings, and how it empowers us to create attractive and engaging items that make these assessments more effective.”