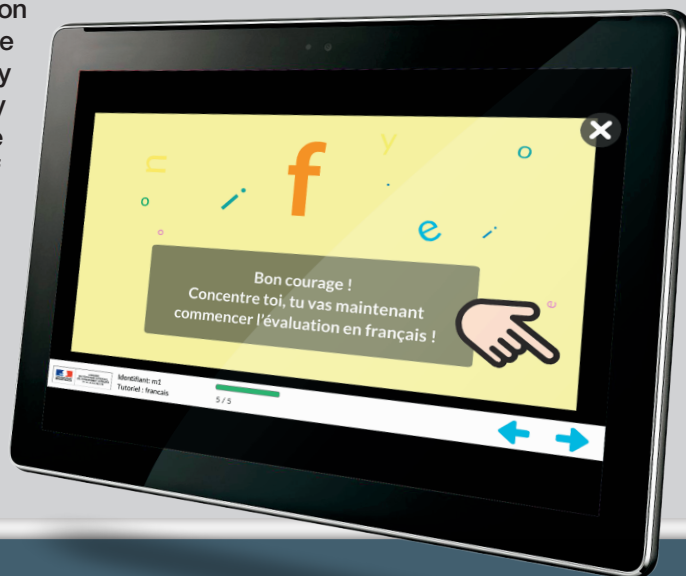# LARGE-SCALE INTERACTIVE ASSESSMENTS

IN AN OFFLINE DIGITAL ENVIRONMENT

Ministries of education, across the world, share a common belief that digitization is the future direction of large-scale student assessments. This is a vision that is also strongly shared by the leadership teams at the French Ministry of Education who run several sample-based, large-scale assessments to evaluate the literacy and numeracy of students in primary and secondary schools across France.

Since 2014, the Division of Evaluation, Planning and Performance (DEPP) at the French Ministry of Education has piloted and implemented digital assessments for their national tests conducted in secondary schools. However, as is typical in most countries, infrastructure and the availability of devices is much stronger in secondary schools than in primary schools. This led the DEPP to carefully consider the new challenges they would face when extending digital assessments into primary schools.

In September 2015, the DEPP entered into a partnership with Vretta, a global educational technology solutions provider, to collaboratively design a deployment plan and develop a technology solution to assess the performance of primary school students in France. The following table summarizes the strategy for the common challenges that were experienced:

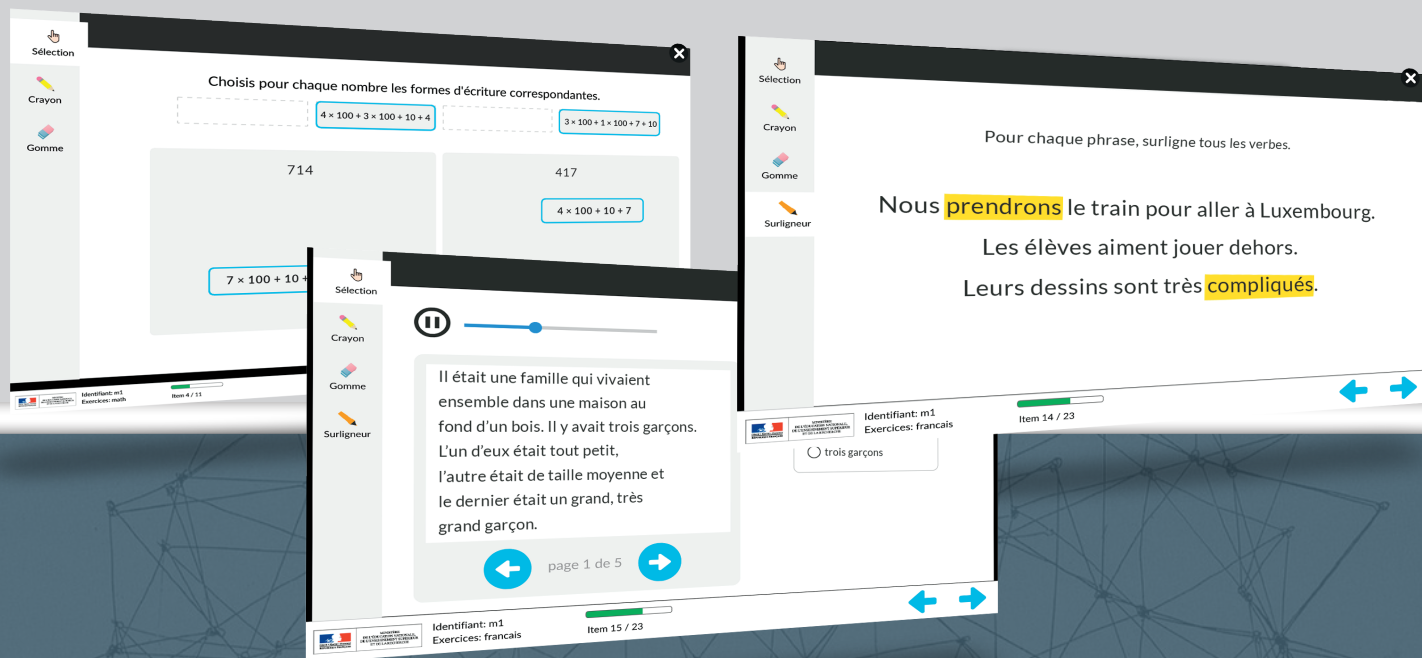| Challenge	Strategy
Limited Bandwidth The assessment division could not expect reliable internet connectivity in the schools which are conducting the online assessments.	❖ Deploy the assessment as an offline application capable of periodic synchronization.
Limited Access to Devices The assessment division could not expect one device per child, in some cases the ratio would either require a multi-day engagement from the proctors or the use of outside devices.	❖ Coordinate with school technology groups to deliver tablets to schools with the assessment app pre-loaded.
Digital Literacy and Dexterity Students, at this age, do not usually have the required experience working with a mouse and keyboard.	❖ Use touch-screen technology to simplify interaction. ❖ Create in-built tutorials for students to understand how to use the various digital tools.
Monitoring Student Performance at the National Level Large amount of student performance data needs to be captured and made available for policy analysis in a timely manner.	❖ Create data structures to collect log data offline and that supports complex response types.

After validating the strategy, a highly intuitive mobile platform, which could run in an offline environment, was designed and developed along with about 300 interactive assessment items in Mathematics and French.
Voice-enabled tutorials, custom tools, interactions, and questionnaires were also developed within the platform to engage and guide students through the assessment experience. A custom data structure was also created to allow for the offline collection of data. The teams collaboratively designed an interface that allowed administrators to receive and store the data from the tablets, making it easily accessible for analysis.

Interactive assessment items provided students with engaging interactions such as drag and drop, read through, selections, etc.

In June 2016, tablets were pre-loaded with the platform application and were successfully used by over 3 000 students at 100 schools, in partnership with l'Académie de Versailles, France. The navigation tools and tutorials guided students through the interactive assessments, and the built-in surveys demonstrated that students found the experience to be highly positive.

" This project has confirmed that large-scale interactive assessments benefit greatly when presented on mobile devices and the success of this pilot also provides great promise for digital assessments administered in an offline environment "

Dr. Thierry Rocher, Deputy Head of Office for Student Assessment, DEPP

The success of this offline interactive assessment on tablets has confirmed the strategic plan for the DEPP to generalize such large-scale digital assessments for all primary school students across France.

Vretta

www.vretta.lu | info@vretta.lu