Building digital assessment capability to advance the potential of the Cambridge learner

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In this session

- Why Digital Assessment?
- Guiding insight from students and teachers
- The Cambridge approach to digital assessment development
- Challenges … and overcoming them step by step
The role of digital in assessment

Why digital?

What is the future of assessment and what role can digital play?
Global Research with students and teachers

- 100s hours of 1:1 interviews with users
- 1000s of survey responses

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“Technology has been a blessing but also a curse. Without it, kids would have just been abandoned [during the pandemic]. We wouldn’t have been able to do anything. But necessity breeds innovation. You adapt. But technology is such a distraction, it is still limited.

Is there a role? Yes.
Is it the answer to everything? No.”

USA, Math Teacher, June 2021
What should we prioritise?

- Cambridge/ digital cannot address all of the nuanced challenges educators face. We need to understand areas where teachers and learners are underserved by current assessment options –

What important outcomes are not being met?
Single biggest desire

A shift away from only using end of year exams for results is by far the most common desire teachers have around assessment

- Coursework
- Continuous grading (US model)
- Modular exams
- Project-based work
I believe there should be an element of coursework in all subjects, as that can allow some students to achieve when they have anxiety or literacy obstacles to their performance in external exams.

*Design teacher, UK*

I would dispense with traditional exams and replace them with a series of standardized project-based assessments. The assessments would focus on the application of subject-based skills rather than assessing how well the students memorized content.

*Head of English, Malaysia.*
What should we be assessing that we do not currently?
Menti results
Under-served needs

Support development of deeper subject understanding

To assess wider skill sets/ competencies

Access to assessment data

Closely linked to the process of teaching and learning

critical thinking
communication
collaboration
digital research
Two routes to Digital Assessment

Using current curricula and existing technology

Migrated assessments

Going digital with new curricula and emerging technology

Born digital assessments
User research

Adding value for our customers

Evidencing effective on-screen assessment

Stronger digital capability foundations

18,000 Pilot tests run in more than 60 countries

7k+ candidates

on-screen Cambridge Mocks taken, marked & results returned

3,500
## Starting points: Subjects and capabilities

<table>
<thead>
<tr>
<th>Subject-led</th>
<th>Capability-led</th>
</tr>
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<tbody>
<tr>
<td>Computer Science</td>
<td>Analysing data</td>
</tr>
<tr>
<td>Media Studies</td>
<td>MCQs</td>
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<tr>
<td>Modern Foreign Languages</td>
<td>Long form answers</td>
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</table>

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Cambridge Digital Mocks Service

- **Pre-made Digital Mocks exams**
  with questions in the same style and standard as the final exam

- **Marked by Cambridge examiners**
  for accuracy and reassurance with results returned within 14 days

- **Results data**
  provided on student performance and to help identify gaps in learning

- **Supports teachers and students**
  to identify where to focus interventions and revision
Using the Mocks Service to support wider development

- Trialling item types
- Integration with operational systems
- Customer engagement with digital assessments
  - High stakes format, low stakes setting
- Customer preparedness for high stakes assessments

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(iv) On Fig. 5.1, complete the isobar for 1016mb.

(i) The cross section shown in Fig. 1.2 is incomplete. Using information from the map extract, draw a line on Fig. 1.2 to complete the cross section.
Digital Mocks Service: Subject roadmap

**JAN-MAR '23**
- GCSE Computer Science
- IGCSE English First Language
- IGCSE English as a Second Language
- AS History

**JUL-AUG '23**
- IGCSE & A Level Biology MCQs
- IGCSE & A Level Physics MCQs
- IGCSE & A Level Chemistry MCQs

**DEC '23 - MAR '24**
- GCSE Computer Science
- IGCSE English First Language
- IGCSE English as a Second Language
- IGCSE & A Level Physics
- IGCSE & A Level Chemistry
- IGCSE & A Level Biology
- AS English General Paper

**FUTURE**
- Business Studies
- Geography
- Economics
- Languages
- English Literature
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Digital Mocks Service: Jan – Mar’ 23 Insight

"I expect future exams to have more typing instead of writing." (Learner, Indonesia)

92% CI learners preferred **TYPING** their responses

58% CI learners found **WORD COUNT** useful

40% OCR learners reported **FASTER EXAM COMPLETION**

Learners found on-screen **TIMER** useful

58% CI learners requested **HIGHLIGHTER/ANNOTATION TOOLS**

50% CI learners requested **A DRAFTING AREA**

“The typed format was very nice, I must say. Readability for examiners is a big issue.” (Examiner)

100% Examiners preferred **TYPED RESPONSES**

 Examiner requested marking interface **improvements**

Cambridge Assessment International Education
“Doing an exam on screen is faster and easier for the learners to correct their mistakes and count the words” (Teacher, Indonesia)

“Having someone from the exam board doing the marking was like it had been moderated or your marks being moderated and ratified ... so that was good.” (Teacher, UK)

Teachers valued examiner marked Mocks HIGHLY

60% centres were SATISFIED WITH SUPPORT MATERIAL OFFERED

100% teachers requested INDIVIDUAL STUDENT REPORTS

57% teachers requested LOCKDOWN MODE
“Mocks are to be taken seriously because we need the **evidence** to support teaching and learning”

“Because it’s externally marked, it’s a trustworthy piece of data with **no bias** in there at all”

“Using the on-screen service was **quick and easy** to use. Digital assessments are inevitable and the way of the future”

“Enormously useful... **saved time** from having to prepare the papers, scanning them in and sending them off.”
Two routes to Digital Assessment

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Our “born digital” assessments

Subject-driven and/or competency-based, building in **variability** in our assessment capability.

**Computer Science**
- Computational thinking assessment
- Practical programming project

**Historical Research**
- Source analysis and Interpretation
- Digital research project

**Data Literacy**
- Authentic data enquiry
- Geographic Information System data

**Digital Coursework**
- Data sets

**Digital research. Critical Thinking. Collaboration.**
Data Literacy assessment development

Credit: Nicola Twitchett, Ross Robertson
Planned releases – Syllabus launch and assessments

2023
- Digital Mocks Service Launch
  - GCSE CompSci
  - IGCSE English First Lang
  - IGCSE English Second Lang
  - IGCSE & A Level Physics MCQ
  - IGCSE & A Level Biology MCQ

2024
- PLS Computing First Assess

2025
- IGCSE CompSci First Teach
- Science MCQ Components First Assess

2026
- AL Media Studies First Teach
- AS Data Literacy First Teach
- AS English General Paper First Assess
- MCQ Components
  - Subject additions tbc

2027
- IGCSE CompSci First Assess
- AS History First Teach

2028
- AL Media Studies First Assess
- AS Data Literacy First Assess

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Research and evidence underpins every area of our work in developing Digital Assessment and Evaluation products and services.

Our research considers:

- User requirements
- Assessment requirements
- Reporting Requirements

We also consider:
- Accessibility in Digital Assessments
- School readiness
- Link to use in teaching and learning
Accessibility Considerations

Assessment Content
- ‘All assessment content should be accessible’

Test Design
- ‘The overall test design should not create unnecessary barriers to learners’

User Interaction
- ‘Interactive elements must be designed to be intuitive and function as required for all users’

Assistive technology
- ‘Tests need to be designed to incorporate assistive technologies and tools, including types of equipment or devices, that help learners compensate for a disability.’

Accessibility Tools
- ‘Platform embedded or web based accessibility tools should be employed in digital assessments as required’

Those relevant to all learners (Universal Design) – need to be considered at all stages of product discovery

Those relevant to a sub-set of learners – product development

WCAG Guidelines, Checklists, Internal Resource, Platform Guidance, Web plug-ins
Digital High Stakes - capability development

- Digital candidate entries
- Digital assessment content
- On-screen testing platform
- Examiner PLUS automarking and moderation
- Digital results delivery and certification
Digital High Stakes - capability development

01 Digital candidate entries
02 Digital assessment content
03 On-screen testing platform
04 Examiner PLUS automarking and moderation
05 Digital results delivery and certification
Our capability development programme is designed as a series of steps from low to high stakes to develop, test and prove technical and operational capability at every stage to reduce risk of unforeseen technical problems during a high stakes examination.
Steps to Digital Adoption

- Centers will acquire digital in steps
  - Requires hybrid approach
  - *Not* all assessments will be taken digitally
  - Only those that it makes sense or improves efficiency
Digital Assessment Readiness

**Digital assessment readiness:**
‘*The ability to successfully host, deliver and run any form of digital assessment, whether in class or as an exam series, within the school setting.*’

**Regional Readiness Criteria need to be considered**

**Group 1** - Schools that have **very good** IT infrastructure (including hardware, resources, and strong internet connectivity)

**Group 2** – Schools that have **adequate** IT Infrastructure and good connectivity,

**Group 3** – Schools that have **some** IT infrastructure and intermittent connectivity,

**Group 4** - Schools that have **very limited or no** IT infrastructure and weaker connectivity.
How can Cambridge support schools?

We need to learn from you!

Our successes so far have been from working very closely with schools.

• What sort of support would you require?

• What are your expectations from Cambridge at a:
  - School level
  - Classroom level
  - Learner level
What digital assessment means for Cambridge Schools

Prepared for future workplace
Developing wider skill sets
Reporting/data improvements
Reduction in print, shipping costs and carbon footprint
Improved accessibility
Supporting schools’ digital readiness

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Any questions?
Your feedback

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