

Quantitative Prep for MFin Students

Cambridge Judge Business School Case Study



MATHS REQS. FOR INCOMING MFIN STUDENTS

The Cambridge Judge Business School Masters of Finance programme ranks #5 in the world¹. Quantitative skills are needed on the programme for corporate finance, financial economics, econometrics, and derivatives courses. Most students have quantitative degrees, but a minority do not. As a result, **quantitative preparation is essential**, and CJBS has previously used a paper diagnostic test, taken over the summer, followed by a maths boot camp in the week preceding term.

INTRODUCING A DIGITAL LEARNING PROGRAMME

CJBS engaged Summatic to **replace the paper diagnostic with an online test**, converting it from a diagnostic into a learning experience.



*Using Summatic has been a game-changer. Our students had a great experience with Summatic and are **much better prepared for the start of the programme.***

Ruth Allwood, CJBS MFin Staff



This assessment was composed of 17 questions covering algebra, calculus, and statistics. Questions were linked to relevant learning materials and the platform automatically marked student answers giving students instant step-by-step feedback on their attempts. Questions were designed to be authentic, covering financial applications where possible.

Students were also given access to a digital textbook of relevant maths and stats materials: interactive graphical explanations and additional questions.

ANALYTICS

The MFin team used the live markbook to check that students were on track. The previous 2-week marking process was removed, and staff received a report detailing which students might need extra support, and the areas of strength and weakness, by topic area (algebra, calculus, statistics).



*Feedback from the students has pointed to Summatic being a value-enhancing learning tool for quantitative courses. It **significantly decreased anxiety in class** and allowed for a much more dynamic customised experience.*

Dr. Juliana Kozak Rogo, CJBS MFin Maths Instructor



Cambridge Judge Business School

Master of Finance (MFin)



92

Students supported



391

Attempts per student

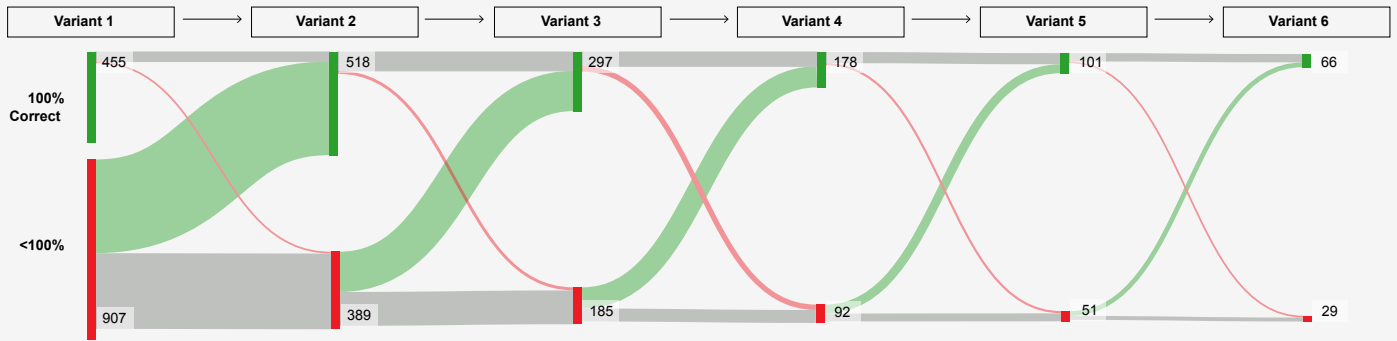


2 weeks

from proposal to launch

62% → **81%**
 score improvement from 1st to 2nd variant

Randomized Variants: An Effective Learning Path



If students do not get a question completely right, they can do another randomized variant. This graph shows **very strong learning**: the upwards diagonals represent students who failed to get a method right but were able to pick it up with the next variant. Many students told us that they appreciated the ability to do randomized variants and that it was an effective learning method.

Engagement

Student engagement with the diagnostic test was very high: students attempted, on average, 16.7 questions out of 17. Students made an average of 145 attempts at the test, attempting multiple variants, correcting answers, and perfecting their skills at each question.

Students also made heavy use of the bank of resources given to them, making on average, 247 attempts at questions outside of the official test. This shows a **very high level of self-motivated engagement**.

FUTURE WORK



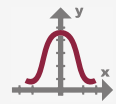
Students were very appreciative of having the platform, and we feel confident to expand it to additional courses next year.



Marwa Hammam, MFin Executive Director

We look forward to continuing to work with CJBS to support MFin students with quantitative preparation, and in future years with core financial courses.

Summatic's learning platform focuses on



Graphical learning resources for step by step understanding.



Reliable automated assessment of student answers and steps of working.



An efficient learning loop, giving students immediate access to relevant resources and new variants.

¹ QS World University Rankings: Business Masters Rankings 2022