OCMT
ONTARIO COLLEGES MATH TEST

UPDATE ON THE IMPLEMENTATION PROJECT

37th OCMA ANNUAL CONFERENCE
MAY 24, 2017

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HUMBER

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Vretta

WE ARE HUMBER

AGENDA

- **IMPLEMENTATION AT HUMBER**
- **PILOT AT TCDSB**
- **FEATURES**
- **DEMO**
- **NEXT STEPS**
- **QUESTIONS**

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IMPLEMENTATION
AT HUMBER

PLACEMENT TEST

Post-admission

- ➢ Students complete the test in a proctored environment, both face-to-face and online.
- ➢ Results determine which first semester math course they will be required to take.
- ➢ Test takes no longer than 60 minutes and includes questions from all 9 foundational topics.

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BENCHMARKING

Winter, Summer & Fall 2016

IMPLEMENTATION

Winter 2017

416
STUDENTS

BUSINESS

508
STUDENTS

TECHNOLOGY

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SCORES

BUSINESS

$21 \leq$ SCORE

$16 \leq$ SCORE < 21

SCORE < 16

TECHNOLOGY

$22 \leq$ SCORE

$16 \leq$ SCORE < 22

SCORE < 16

STUDENT ACHIEVEMENT

FIRST SEMESTER MATH

W16: Business   57%   Technology   68%

W17: Business   61.7%   Technology   70%

ACADEMIC UPGRADING

Apprenticeship Support

➢ Students complete the test in a proctored environment.

➢ Results are then used to determine which remedial modules students should complete to support their continued success in mathematics.

➢ Test takes ~ 60 minutes.

SCORES

ACADEMIC UPGRADING

$$\text{SCORE} \leq 3$$

$$3 < \text{SCORE} < 10$$

$$10 \leq \text{SCORE} \leq 15$$

274 STUDENTS

Jan to Dec 2016

COMPLETED THE OCMT AS PART OF THEIR ADMISSION TO THE PROGRAM

- ✓ Students are given access to the remedial modules to support their continued success in mathematics.
- ✓ In the Apprenticeship programs, faculty assist students with completing the remedial modules by scheduling one hour of their class time in computer labs.

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PILOT AT TCDSB

ADDRESSING THE NUMERACY GAP

Grade 9 Applied Mathematics

Ontario Centres of Excellence

AdvancingEducation **Program**

- ✓ Diagnostic, Remediation, and Post-Test
- ✓ Use in class and at home
- ✓ Correlation of OCMT to student achievement data
- ✓ Correlation of OCMT to EQAO data

HUMBER

Toronto Catholic District School Board

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PROJECT

TCDSB

PHASE I

- ❑ Target - Pilot in 3 schools
- ❑ Currently in 5 schools, 14 classes
- ❑ 214 students
- ❑ Ethics approval to begin research study

PHASE II

- ❑ Expand pilot to an additional 10 schools
- ❑ September to December 2017

PHASE III

- ❑ Implement OCMT in all (32) schools
- ❑ January to June 2018

FEATURES
OCMT APP

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IDENTIFY SKILLS THAT REQUIRE MASTERY

ACHIEVE MASTERY

ASSESS LEVEL OF MASTERY

OCMT HIGH-SCHOOL EDITION

642

Jessica withdrew $700.00 in $20 bills to spend on gifts for her family. She buys gifts that cost $25.08, $42.65, $25.48, $33.56, and $39.65. How many $20 bills does she have left?

[ ] bills

| 1 | 2 | 3 | 4 | 5 | – | ⌫ |
| 6 | 7 | 8 | 9 | 0 | . | Clear |

Previous 2/36 Next

Rate

Section 2

[ ] : [ ] : [ ]

$3000 $4000 $1000

What is the ratio of Jim's investment to Pam's investment to Michael's investment? Enter your answer as a rati

| 1 | 2 | 3 | 4 | 5 | . | ⌫ |
| 6 | 7 | 8 | 9 | 0 | . | enter |

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OCMT HIGH-SCHOOL EDITION

642

Calculate.
Express the result as a mixed number in lowest terms.

$4 \frac{1}{2} \times 5 \frac{1}{2} = $ [ ] [ ]

| 1 | 2 | 3 | 4 | 5 | – | ⌫ |
| 6 | 7 | 8 | 9 | 0 | . | Clear |

Previous 2/36 Next

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1 DIAGNOSTIC ASSESSMENT

IDENTIFY SKILLS THAT REQUIRE MASTERY

OCMT HIGH-SCHOOL EDITION   642

Jessica withdrew $700.00 in $20 bills to spend on gifts for her family. She buys gifts that cost $25.08, $42.65, $25.48, $33.56, and $39.65. How many $20 bills does she have left?

[|] bills

| 1 | 2 | 3 | 4 | 5 | − | ⌫ |
| 6 | 7 | 8 | 9 | 0 | . | Clear |

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o **Assessment Framework**
   - ✓ Content topics: whole numbers, arithmetic, integers, decimals, fractions, ratios and proportions, percents, basic algebra, and measurement.
   - ✓ Performance expectation corresponding to the broader goals of mathematics teaching and learning: (A) Knowing, (B) Applying, and (C) Reasoning.

o **Assessment Items**
   - ✓ Constructed (written) and selected (multiple-choice) response types.
   - ✓ English and French languages
   - ✓ Field tested and psychometrically validated.

o **Test Design**
   - ✓ Unique for every test taker.
   - ✓ Equally representative of both content and performance expectation dimensions.
   - ✓ Long enough (i.e., sufficient number of test items) to enable reliable estimates of test takers' abilities but short enough to complete in a reasonable length of time.

STUDENT DASHBOARDS

Tablet 1:
You have one or more areas where we can recommend some way to fill your gaps

- Arithmetic — **86%**
- Integers — **57%**
- Decimals — **50%**
- Fractions — **75%**
- Ratio — **60%**
- Percent — **80%**
- Algebra — **17%**
- Measurement — **100%**

START REMEDIATION

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Tablet 2:
🔒 SUMMATIVE TEST

- Signed Numbers
- Exponents
- Order of Operations
- Averages
- Common Factors

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2 REMEDIAL MODULES

ACHIEVE MASTERY

o **Mastery-based Learning**
  - ✓ Topics are broken down to micro-steps for students to visualize, conceptualize and engage with mathematics.
  - ✓ Various types of interactive practice scenarios with feedback mechanisms help students master concepts.

o **Individualized Learning**
  - ✓ Students can progress through the modules and master concepts at their own pace.

o **Differentiated Learning**
  - ✓ Provides teachers with the ability to use the modules in class, or assign them as homework, to enrich the learning experience.

③ POST-ASSESSMENT

ASSESS
LEVEL OF MASTERY

- o **Assessment Framework**
  - ✓ Developed using the same assessment framework that was used to develop the diagnostic assessment, thereby ensuring that the same topics are covered and that the same performance expectations are reflected.
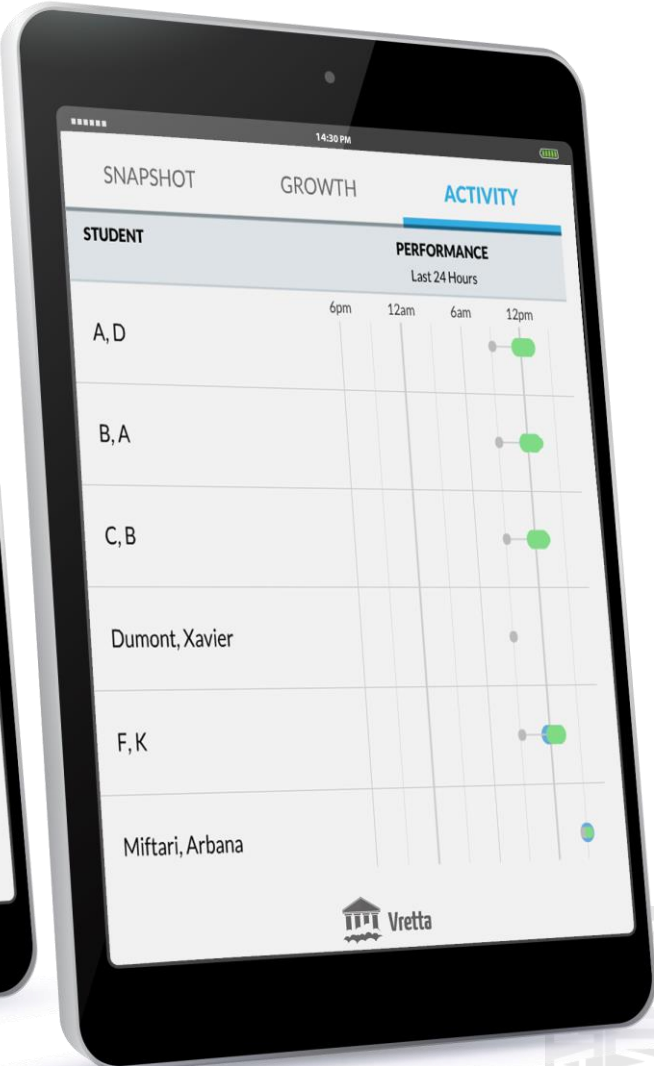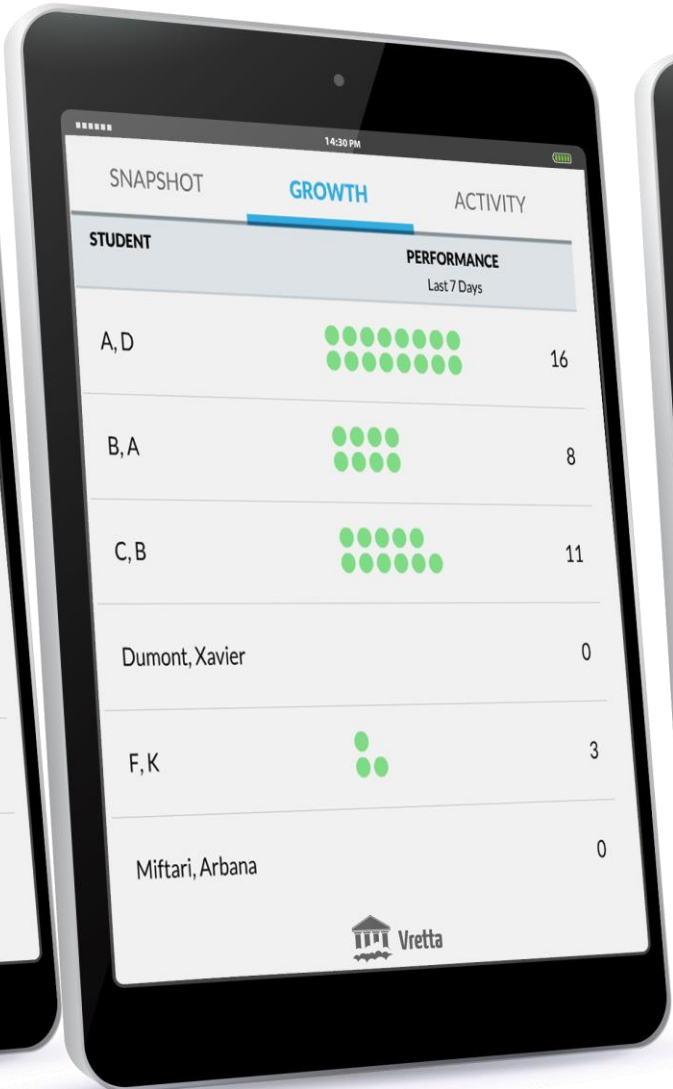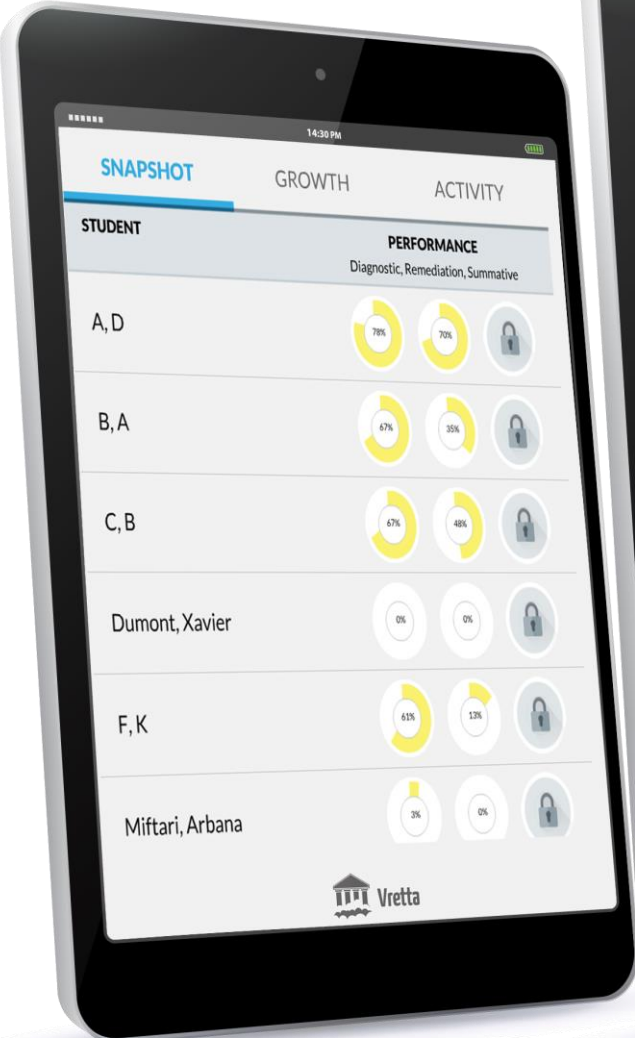- o **Assessment Items**
  - ✓ Drawn from the same assessment item database and include constructed and selected response types, thereby ensuring the consistency of the student experience and the validity of the assessment.
- o **Test Design**
  - ✓ Assessments are unique for every test taker .
  - ✓ Assessments can be as long as 72 items or as short as 36 items and still maintain their reliability.

MONITORING PROGRESS & PERFORMANCE OF STUDENTS

DEMO
OCMT APP

NEXT STEPS
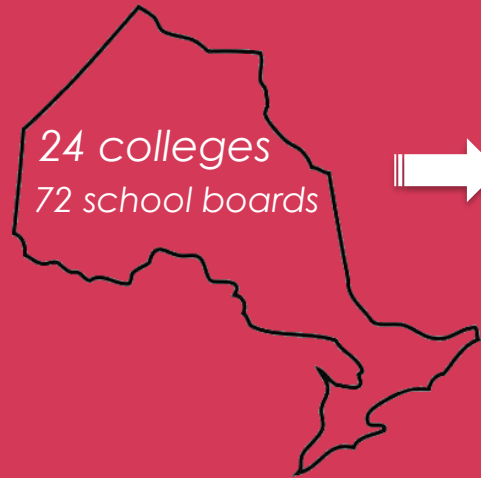
EXPAND ASSESSMENT ITEMS AND REMEDIATION MODULES DATABASE

CONTINUE TO IMPROVE QUALITY OF ITEMS THROUGH DATA ANALYSIS

EXPAND USE BEYOND POST-SECONDARY TESTING

FOR EVERY LEARNER

Website

ocmt.mathsuccess.ca

Quarterly Newsletter

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Demo and Training

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