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Introduction

The Mathematics Online Interview (MOI) is an online tool for assessing the mathematical understanding of students in the early years of schooling. The Interview assesses students’ knowledge, skills and strategies in relation to key ‘growth points’ in the strands of Number and Algebra, Measurement and Geometry. Enhancements to interview questions have been made to enrich the assessment data that the interview provides.

The MOI is targeted primarily at students from Prep to Year 2. Teachers record student responses directly into the online system, which can generate a range of profiles of student understanding, organised around the ‘growth points. These profiles provide powerful information for teachers in planning to meet student learning needs.

The assessment takes the form of a one-to-one interview, and consists of 77 questions. Students are engaged in hands-on assessment tasks where they demonstrate mathematical understanding and preferred strategies for solving increasingly complex tasks. The assessment takes approximately 30 to 45 minutes to administer.

A mapping resource to support the MOI has been aligned to the Victorian Curriculum and is found in Teacher Resources.

Evidence shows well-focused, teacher-based assessment practices enhance student learning more than any other strategy, no matter what the age level and context.

The benefits of the enhanced MOI on the Insight Platform for teachers are:

- improved access to quality assessment tools online, across a range of learning areas
- streamlined online marking and administration of assessments from a wider range of devices
- integrated assessment data reporting to help teachers tailor learning to students’ needs
- access to the Insight Assess Portal for teachers to access assessment research and practices
- student assessment data can be easily shared if students change schools.

INSIGHT ASSESSMENT PLATFORM AND THE FRAMEWORK FOR IMPROVING STUDENT OUTCOMES (FISO)

The Insight Assessment Platform supports the development of high impact evidence-based teaching strategies as identified in the Framework for Improving Student Outcomes (FISO). Assessment is an integral part of the teaching and learning cycle. FISO is designed to foster a targeted, evidence-informed focus on student outcomes, providing a common approach for our professional workforces across the system, and is intended to lift student outcomes.
The Mathematics Online Interview

BACKGROUND

The MOI was developed from the Early Numeracy Research Project (ENRP), commissioned by the Department of Education, Employment and Training (1999 – 2001). The aim of the ENRP was to challenge teachers to explore their beliefs and understandings about how children develop their understanding of mathematics. Through the ENRP, a framework of growth in numeracy learning was created to provide a means of tracking student learning.

The growth points identified through the research project provide the basis for the framework, which supports stages of mathematical growth in Number and Algebra, and Measurement and Geometry. The Interview provides appropriate hands-on assessment tasks where students can demonstrate mathematical understanding and preferred strategies for solving increasingly complex tasks.

STRUCTURE OF THE INTERVIEW

The Mathematics Online Interview is administered as a one to one interview, with the classroom teacher observing how each child engages with the tasks, noting responses to individual questions and recording strategies used and explanations of thinking. The interview takes between 30 and 45 minutes to complete and is a valuable tool to support ongoing assessment of each student’s mathematical understandings.

The Interview primarily targets students in the early years of schooling however it may also be used as an assessment tool for ‘at risk’ students in middle to upper primary levels. An ongoing record of student assessment and achievement data recorded through the online interview supports monitoring of student learning and progress over time.

Sections of the Interview are as follows:

- Section A: Counting
- Section B: Place Value
- Section C: Addition and Subtraction
- Section D: Multiplication and Division
- Section E: Time
- Section F: Length measurement
- Section G: Mass measurement
- Section H: Properties of Shape
- Section I: Visualisation
- Detour (for students in the first year of school)

A document that provides links between the Victorian Curriculum F-10 Mathematics and the interview is available from the Department’s website at:


ENHANCEMENTS TO THE MATHEMATICS ONLINE INTERVIEW IN 2017

From 2017, the MOI will include enhanced questions and new questions supported by current research. These validated tasks will provide additional opportunities to assess mathematical strategies and understanding and enrich assessment data provided by the Interview.

The enhancements to the MOI include:

- enhanced questions across sections of the interview including the Detour, Counting, Place Value, Multiplication and Division, and Visualisation,
- new questions across the sections Place Value and Multiplication and Division, and
- new resources to accompany the enhancements.
Administering the MOI

BECOMING FAMILIAR WITH THE MOI

The Mathematics Online Interview assesses the strategies and mathematical understanding of students in the early years of schooling. Schools are encouraged to use the Mathematics Online Interview to collect baseline data for students on entry to school to track, review and monitor progress for students.

All teachers should make sure they are familiar with the questions, reports and downloadable resources before commencing assessments. With the addition of the enhanced and new questions in the MOI in 2017, teachers will also need to familiarise themselves with these questions and the resources required.

The MOI can be reviewed in the Insight Assessment Platform Practice Space. This Practice Space has been set up to give teachers the opportunity to become familiar with Insight's functionality and navigation. The Practice Space cannot be used to conduct assessments with students. There is a user guide for using the Practice Space available at http://www.insight.vic.edu.au/insight-platform/using-the-practice-space

The Insight Assessment Platform Practice Space can be accessed at: https://training.linkitau.com

Log in: demoteacher02
Password: Demo1234

CHECKING THE CLASS SET UP AND STUDENT DETAILS

In the Insight Assessment Platform, the class and students should be automatically assigned to the teacher via CASES21.

Teachers will be able to assign assessments to the students in their home groups (assigned class on CASES21). All student details, including assigned home room group, will be taken from CASES21 record. More information about student details and assigned classes can be accessed from the Insight Technology Guidelines for Schools: http://www.insight.vic.edu.au/Pages/support_school_IT.aspx

ASSESSING STUDENTS

In the new Insight Assessment Platform, assessment of the Mathematics Online Interview can be conducted for all students enrolled in that school. Where a student is enrolled at two schools (e.g. if a student spends part of the week at a special school and part of the week at a mainstream school) both schools will be able to assess the student and hold the data gathered on that particular child. All assessment records and reports for the relevant student conducted at each school will be recorded and available for the school to view.

The one-to-one nature of the Mathematics Online Interview allows teachers to consider the needs of individual students. This includes English as an Additional Language (EAL) students and students with disabilities and additional learning needs.

PREPARING THE SPACE AND THE RESOURCES

Conduct the MOI in a quiet comfortable space and ensure (as much as possible) that there are no interruptions whilst interviewing.

The appropriate materials (from the MOI kits as distributed by the School Assessment Administrator) should be made available prior to interviewing. To print new resources:

1. Click Learning Library tab in Insight and search for the Mathematics resources.
2. Print One (1) copy of the enhanced questions equipment for each MOI kit in the school.
3. Check that all of the appropriate resources are available by using the Equipment Checklist.
LOGGING IN
1. Insight Assessment Platform: http://det.linkitau.com/
2. Privacy: click I agree
3. Sector – select school sector e.g. DET
Additional support, including MOI Tip sheets is available from http://www.insight.vic.edu.au/insight-platform/insight-platform-support

PREPARING THE INSTRUCTIONS AND SCRIPT
The instructions to teachers and the script for teachers to use with students appear on left page of the screen. The following icons assist teachers to identify the different elements of the information provided.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>📝</td>
<td>Instructions to teachers</td>
</tr>
<tr>
<td>📝</td>
<td>Script for teachers</td>
</tr>
<tr>
<td>🤔</td>
<td>If the student is unsuccessful in a question follow the prompt indicated next to this icon</td>
</tr>
</tbody>
</table>

SCORING IN THE INTERVIEW
Student responses to each question or task are recorded directly in the system and can be accessed at any time. In addition to individual responses to questions, teacher observations are a critical element in understanding the thinking and strategies used by each student and can provide additional information to inform the teaching and learning program.

When assessments are completed and submitted, scoring within the Interview includes the following processes:

- the scores for the individual questions are aggregated
- an algorithm is applied to assign the appropriate growth point
- growth points are recorded in the system.

When interviewing a student who has a current interview record, teachers should start at a task that is suitable to the student’s developmental level, based on previously achieved growth points. Subsequent interviews should begin with a task on which the student has previously experienced success. See also Starting points resource

Note: Questions from a range of strands may contribute to the growth points achieved by a student.

PAUSING THE INTERVIEW
Teachers can pause the interview by clicking on the Pause button at the top of the assessment screen.

To start testing your student again, you will need the test code that was generated when you assigned the assessment. If you are not sure what the code was, go to Online Testing > Test Review and Manual Grading > Review Test Assignments and you will see a list of all of the assessments you have assigned.

Closing the assessment window will pause the assessment to the last save point. You will not be able to view the student’s data in the data analytics and reporting area until the assessment is submitted.
SUBMITTING THE INTERVIEW

It is important that when undertaking the MOI, the teacher clicks submit at the conclusion of the assessment OR when the student cannot proceed further.

Submitting the assessment will capture the latest data will update the diagnostic view of the MOI assessment for that student. This is important for maintaining an up to date record for the next MOI assessment session.
Reports

A range of reports for the Mathematics Online Interview can be generated from the Insight Assessment Platform. Reports can only be generated for students whose assessment/s have been completed and submitted.

Reports can be generated and customised to view student data for an individual student or a whole class. School Assessment Administrators can access and generate reports for any class as well as for the whole school.

Available reports include:

1. MOI Summary – provides a class snapshot of student achievement across the sections of the interview
2. Class Profile – shows the growth points achieved by each student in the class
3. Student Profile – shows growth points achieved in each section for an individual student, including date of assessment
4. Student History – shows a summary of growth points achieved for each section of the interview
5. Assignment Review - Individual Student – provides access to individual student responses to questions, including comments.

Note: On the Insight Assessment Platform only, the Strands of Mathematics Victorian Curriculum are referred to as Dimensions.

REPORTS

1. MOI Summary

How to access: Reporting HTML > Teacher Dashboard > Class Dashboard (Click and drag the blue box labelled Mathematics Online Interview into the space below it.)

What it shows: Percentage of student achievement across the growth points within each section of the interview

Note: The prefix for the growth points is the section of the interview followed by the growth point number e.g. Section A (Counting) Growth Point 0 is A-0.
2. Class Profile

How to access:
Reporting HTML > Teacher Dashboard > Class Dashboard > Class Profile icon

What it shows:
The growth points achieved by the whole class of students and growth points achieved by backfilling

Note: Using the mouse to hover over the column header will reveal the growth point description. The prefix for the growth points is the section of the interview followed by the growth point number e.g. Section A (Counting) Growth Point 0 is A-0.

Backfilling
Growth points contributing to the growth points marked as achieved will appear as backfilled, regardless of whether or not all previous questions have been answered.
### 3. Student Profile

**How to access:**
Reporting HTML > Teacher Dashboard > Class Dashboard > Class Profile icon > Student Profiles > Click on the student’s name from the panel on the left.

**What it shows:**
The growth points achieved for each section of the MOI
There is also an option to choose 'Show History' to reveal the date of the achievement

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Growth Point</th>
<th>Current Status</th>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thompson, Ryan</td>
<td>A-6 Counting - Not apparent. Not yet able to state the sequence of number names to 20.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-1 Counting - Rote counting. Rote counts the number sequence to at least 20, but is not yet able to reliably count a collection of that size.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-3 Counting - Counting by 1's (frontwards/backwards including variable starting points/answer). Counts forwards and backwards from various starting points between 1 and 100.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-4 Counting - Counting from 9 by 2s, 5s and 10s. Can count from 9 by 2s, 5s and 10s to a given target.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-5 Counting - Counting from x (where x &gt; 0) by 2s, 5s and 10s. Given a non-zero starting point can count by 2s, 5s and 10s to a given target.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-6 Counting - Extending and applying counting skills. Can count from a non-zero starting point by any single digit number and can apply counting skills in practical tasks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-6 Place Value - Not apparent. Not yet able to read write interpret and order single-digit numbers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-1 Place Value - Reading writing interpreting and ordering single digit numbers. Can read write interpret and order single digit numbers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-2 Place Value - Reading writing interpreting and ordering two-digit numbers. Can read write interpret and order two-digit numbers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-3 Place Value - Reading writing interpreting and ordering three-digit numbers. Can read write interpret and order three-digit numbers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-4 Place Value - Reading writing interpreting and ordering numbers beyond 1000. Can read write interpret and order numbers beyond 1000.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-5 Place Value - Interpreting and applying place value knowledge. Can extend and apply knowledge of place value in solving problems.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. **Student History**

**How to access:** Reporting HTML > Student History > Choose the class from the panel on the left > Choose the student from the panel on the left.

**What it shows:**
- A summary of growth points achieved for each section of the MOI and a record of all previous assessments
- There is also an option to filter the data

![Image of the Student History dashboard](image-url)
5. Assignment Review – Individual Students

**How to access:**

**What it shows:**
Individual student responses to questions, can be filtered by questions (e.g. view all questions relating to Section A: Counting and teacher comments)
Help and Support

TECHNICAL ASSISTANCE

What to do in the first instance when experiencing technical difficulties

Teachers need to contact their School Assessment Administrator if they have any technical difficulties with administering the MOI. Teachers should escalate any issues if the system is not working as expected, error messages appear on the screen, there are missing students from the class, or a user cannot access the MOI assessment. If there are any issues with using the system the School Assessment Administrator in the first instance, should refer to the Support documentation on the Insight Assessment Platform: http://www.insight.vic.edu.au/insight-platform/insight-2017. A simple resolution may be found in these guides.

If the issues cannot be resolved in-house, the School Assessment Administrator should contact the service desk and report the issue(s). Teachers are not required to report any problems individually. The School Assessment Administrator can contact the service desk on the teacher’s behalf.

Contacting the DET Service Desk

Technical assistance is available for schools using the MOI. Technical enquiries may include issues such as:

- the system is not working as expected
- error messages on screen are preventing the user from proceeding
- students are not appearing in the MOI, or student details in the MOI don’t match the details in CASES21
- a user cannot access the MOI.

The School Assessment Administrator should contact the Service Desk on behalf of the staff in the school to report any issues with the system. When contacting the Service Desk, users should provide as much information about the issue as possible including their name, school and campus number. Screen shots displaying error messages should also be provided where possible.

The Service Desk contact details are as follows:

- Website: Service Gateway (secure site) – log a service call
- Email: servicedesk@edumail.vic.gov.au
- Phone: 1800 641 943

FURTHER SUPPORT

Additional resources to support the Mathematics Online Interview are available from the Department’s website.

Contacting Central Office

For MOI policy-related enquiries, schools can contact central office. Policy-related enquiries may include:

- resources to support the interview
- queries relating to how the MOI can be used to plan for teaching and learning.

Central office contact details are as follows:

- email: studentlearning@edumail.vic.gov.au – Emails should include ‘Mathematics Online Interview’ and your school name in the subject line.