



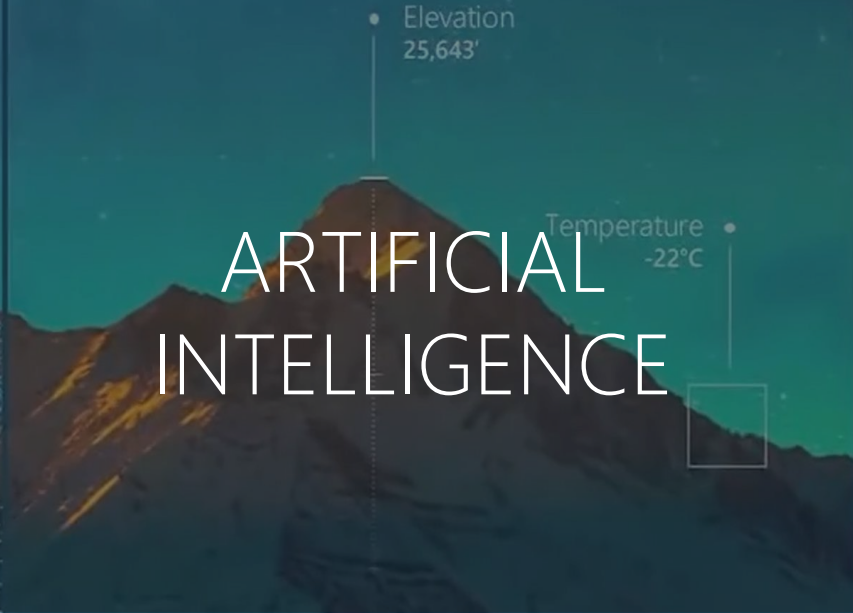
Education Futures

Travis Smith
K12 Industry Lead
Microsoft Australia





MIXED
REALITY



ARTIFICIAL
INTELLIGENCE

Elevation
25,643'

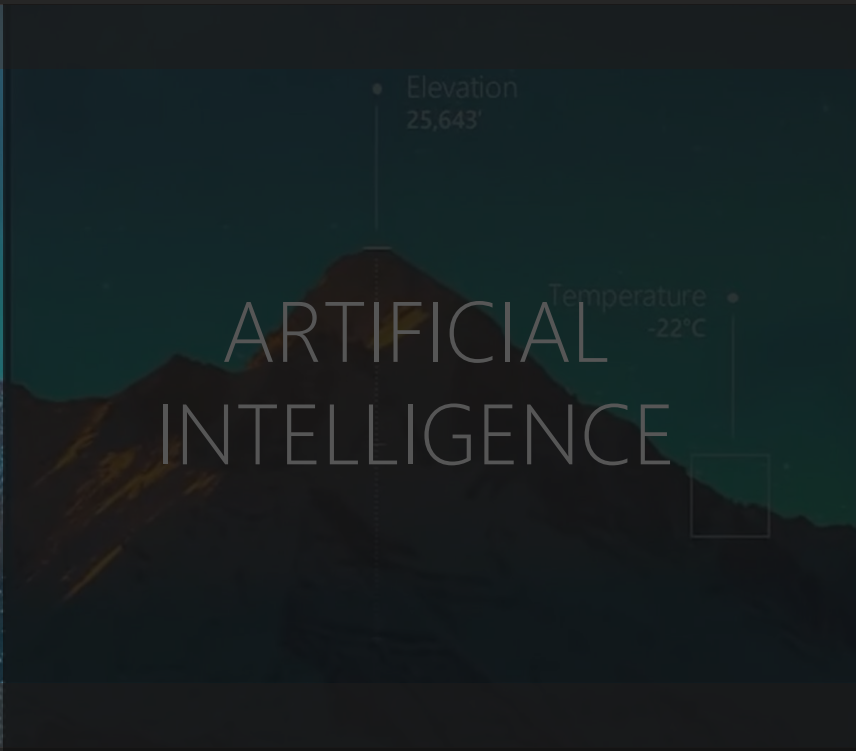
Temperature
-22°C



CONNECTED
SYSTEMS



MIXED
REALITY



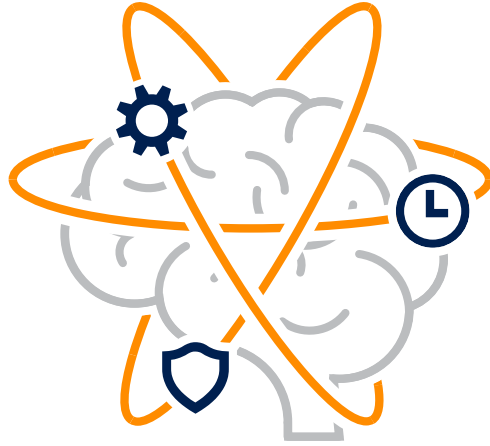
ARTIFICIAL
INTELLIGENCE

- Elevation
25,643'
- Temperature
-22°C



CONNECTED
SYSTEMS

AR, VR, MR – BS?



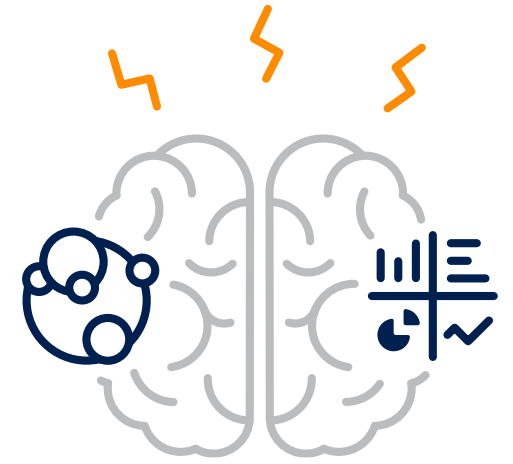
Better knowledge retention

Comparing VR to traditional education methods 2wk retention can be seen to improve by 30%



Increased academic outcomes

Test scores have seen to be increased by 22%



Reduced cognitive load

By observing brain activity, scientist can observe that the use of MR reduced cognitive load in learners over 2D instruction



CASE WESTERN RESERVE
UNIVERSITY
COLLEGE OF ARTS AND SCIENCES

MIXED REALITY CHANGING HOW WE LEARN



HoloLens

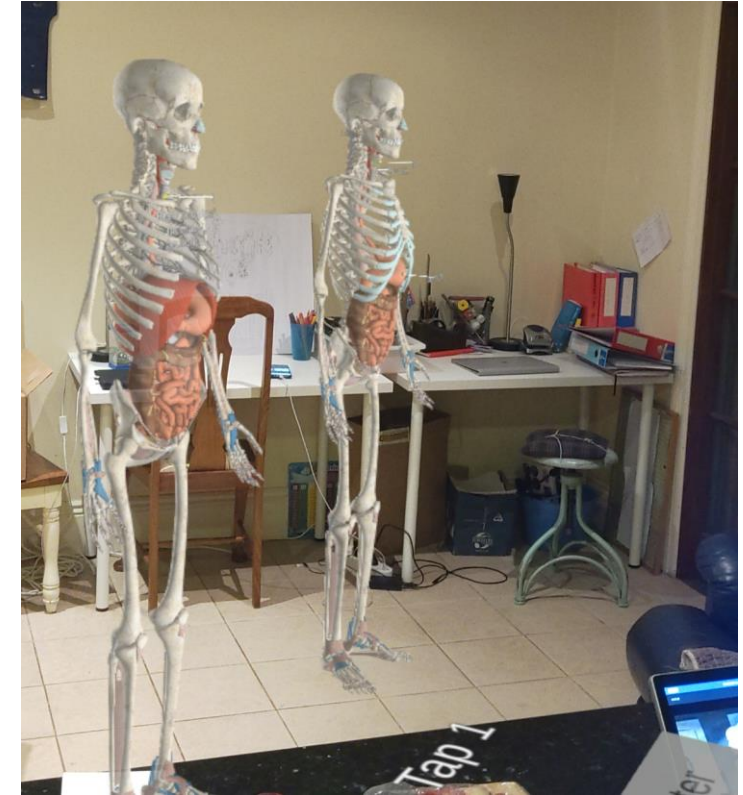
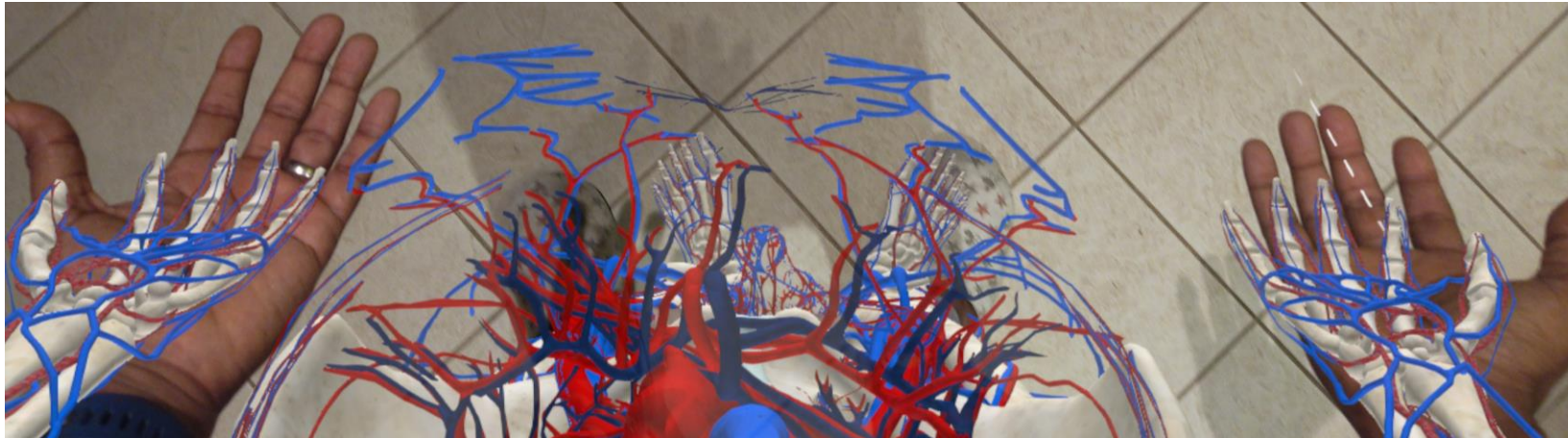




TEACHING ANATOMY VIA HOLOGRAM

Case Western University - Anatomy Class

- 185 Hololens shipped to 1st year students
- Professor Sue Wish-Baratz taught online using HoloAnatomy



HoloAnatomy - Results

- Reduction in time to learn anatomy didactics without sacrificing exam scores (4.5h Hololens vs 7.3h cadaver)

<https://www.tandfonline.com/doi/abs/10.1080/0142159X.2020.1762032?journalCode=imte20&>

- Student who supplemented traditional cadaver learning with Hololens achieved 80% improvement in retention
- Only Hololens (no cadaver) improved by 50%
- Huge cost saving potential or reallocation of cadaver lab time in the university

Students *won't* get a job out of having
experienced AR, VR and MR....

Create the Future...don't consume it



TRANSFORM YOUR WORLD

EDUCATION AND TRAINING APPLICATIONS



Mixed Reality Education



After Action Review for Live Instrumentation

OPERATIONAL ENVIRONMENT VISUALISATION



Operational Environment Visualisation

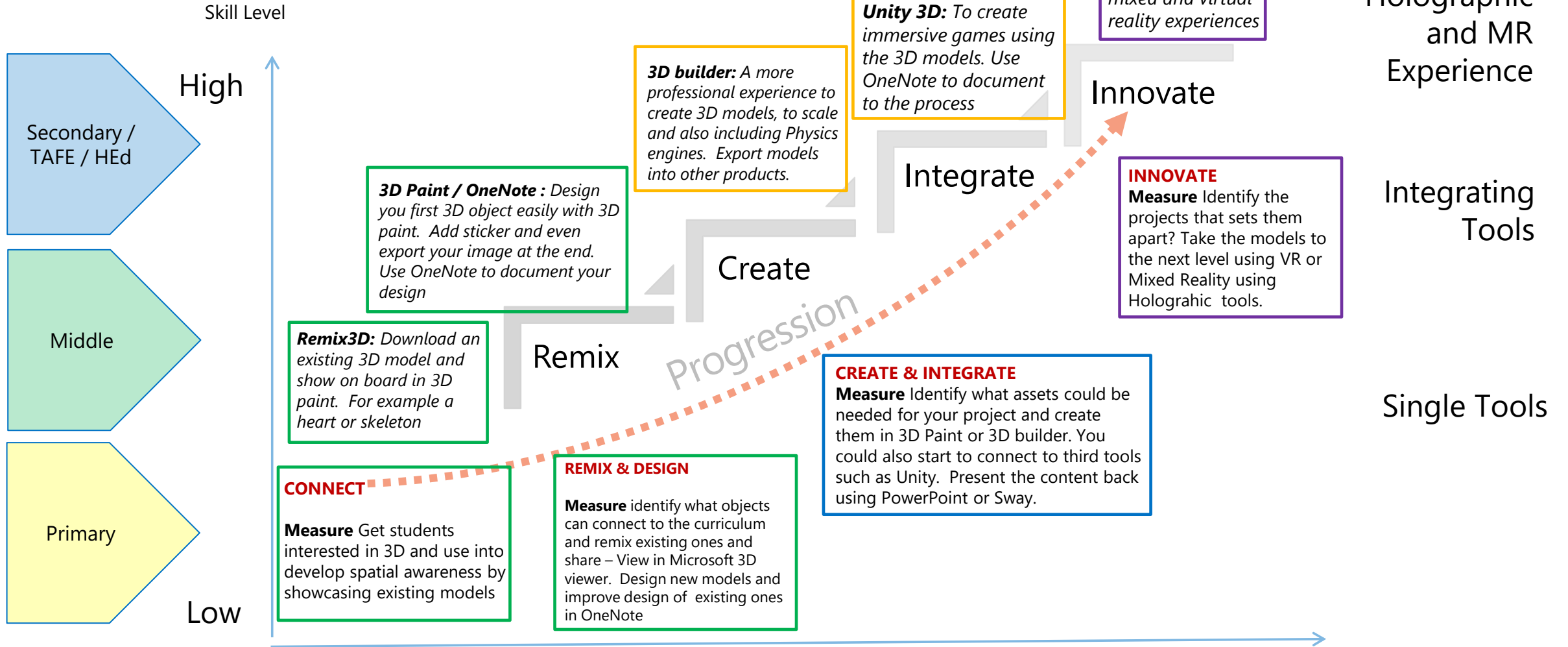


Mixed Reality Collaboration



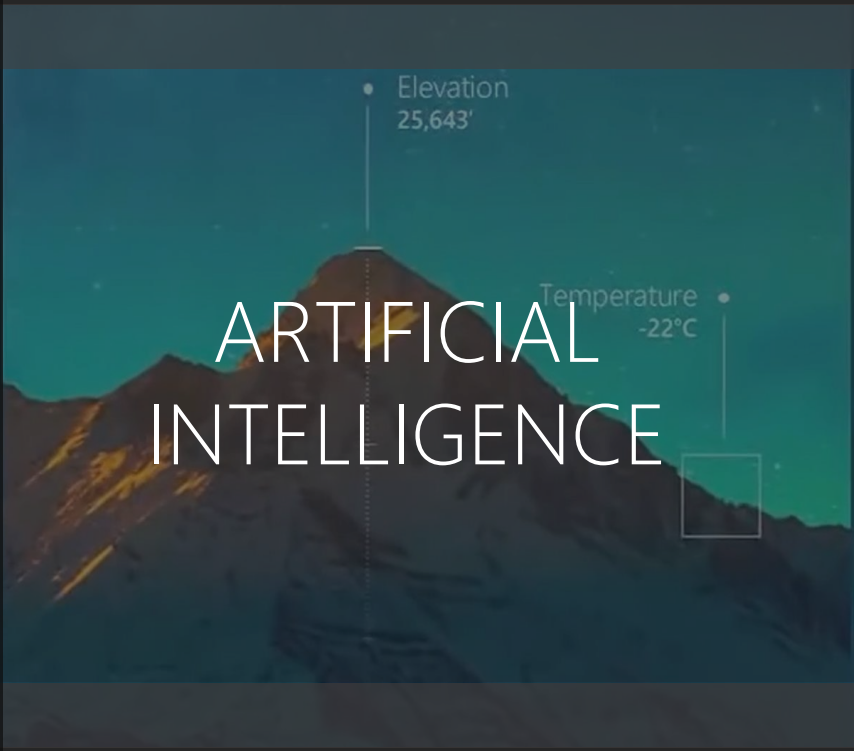
3D to Holographic

Progression is Important





MIXED
REALITY



ARTIFICIAL
INTELLIGENCE

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25,643'

Temperature
-22°C



CONNECTED
SYSTEMS

Personalised Learning Community - UNSW



Dr. David Kellerman
(UNSW Sydney)

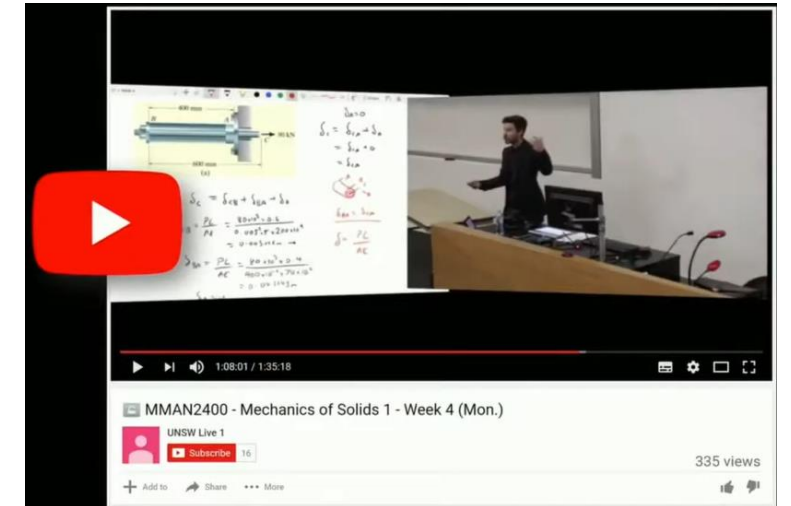
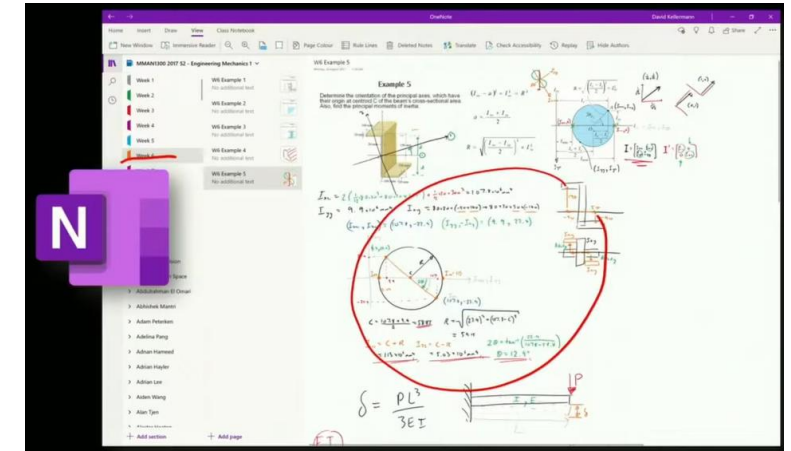
What if a ***larger class size*** =
more personalised learning?



<https://www.youtube.com/watch?v=uVQIK7vd1Cs>



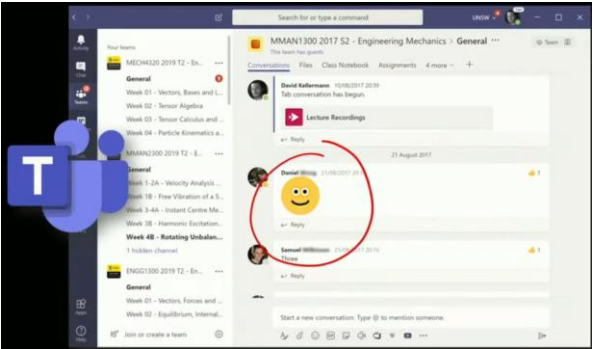
Dr. David Kellerman
(UNSW Sydney)



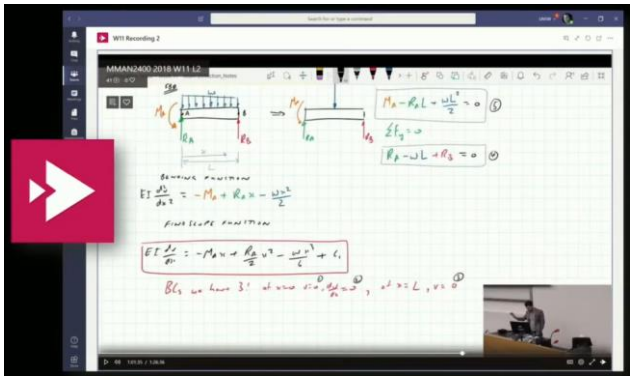
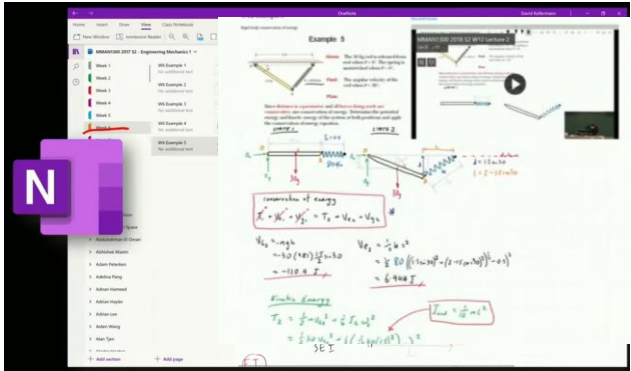


Dr. David Kellerman
(UNSW Sydney)

2017 – Teams



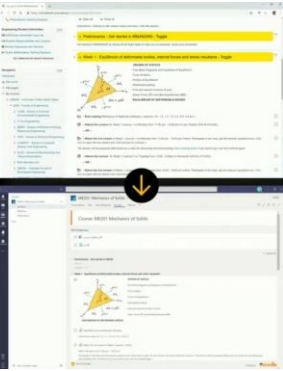
900% increase in collaboration

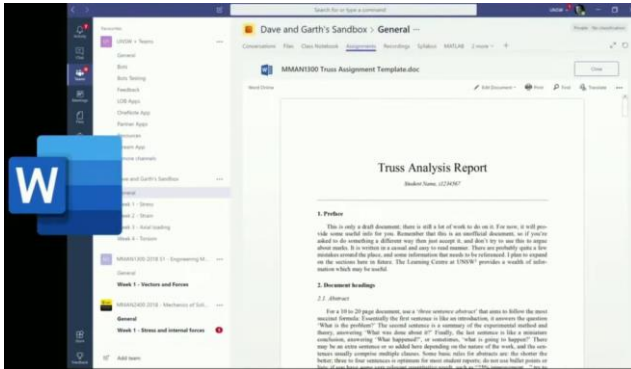


Stream gave analytics and data ownership

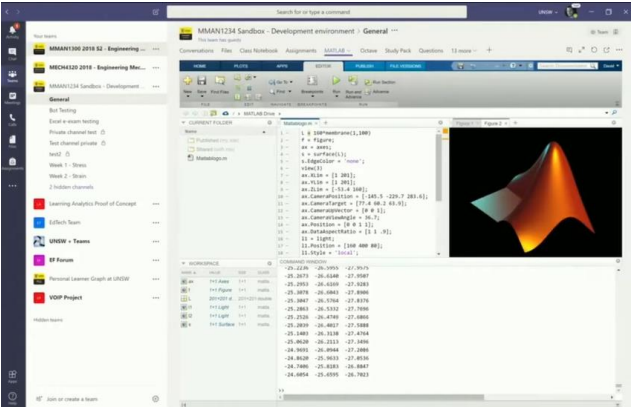


I was able to integrate our Learning Management System into Teams using their API



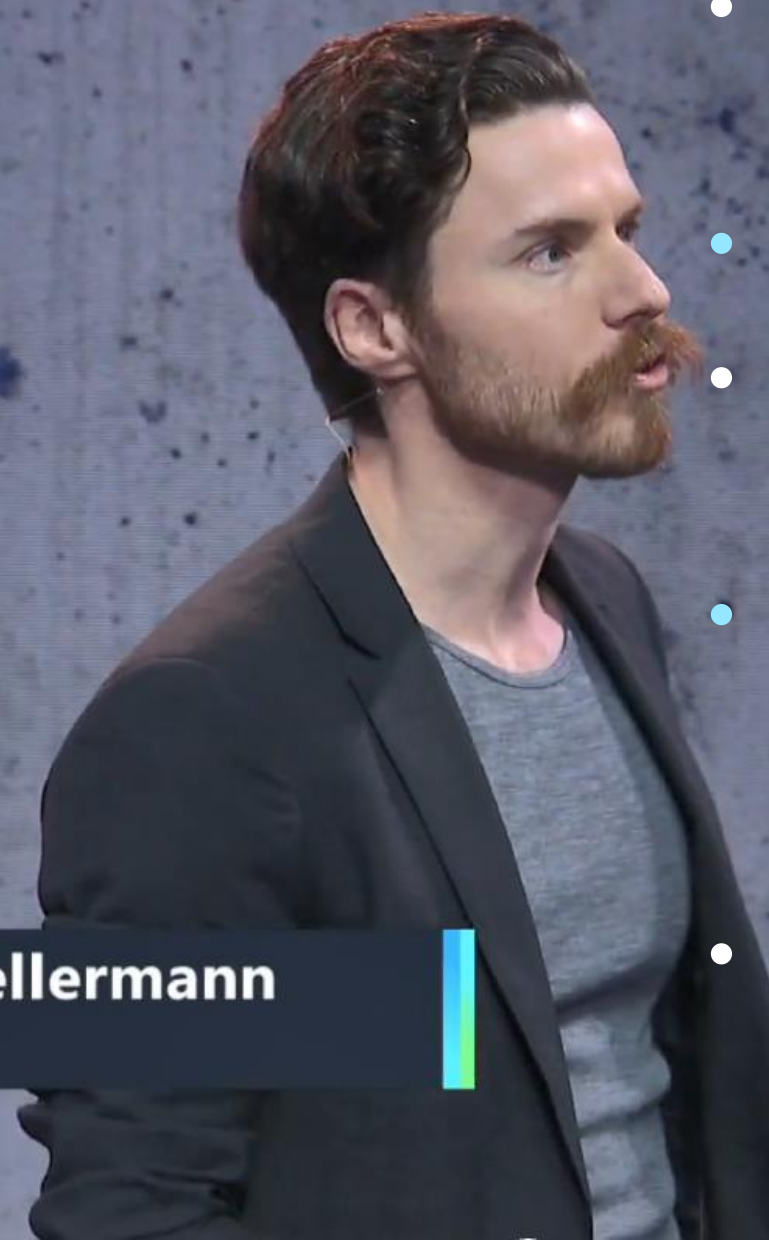


Node	U (mm)	V (mm)	W (mm)	U (mm)	V (mm)	W (mm)
1	-24.224	-26.395	-27.891	11	24.224	26.395
2	-24.224	-26.395	-27.891	12	24.224	26.395
3	-24.224	-26.395	-27.891	13	24.224	26.395
4	-24.224	-26.395	-27.891	14	24.224	26.395
5	-24.224	-26.395	-27.891	15	24.224	26.395
6	-24.224	-26.395	-27.891	16	24.224	26.395
7	-24.224	-26.395	-27.891	17	24.224	26.395
8	-24.224	-26.395	-27.891	18	24.224	26.395
9	-24.224	-26.395	-27.891	19	24.224	26.395
10	-24.224	-26.395	-27.891	20	24.224	26.395



Created a data schema



A man with dark, wavy hair and a full beard, wearing a dark blazer over a grey t-shirt, is shown in profile from the chest up, looking towards the right. He is standing in front of a dark, textured background.

Dr. David Kellermann

UNSW Sydney

- Increase student engagement, foster learning community
- 800% increase in engagement.
- Exam pass rate increase from 65% to 85%
- 100% of students agreed that they “felt part of the learning community”
- International students engaged more on average vs previous teams

Reading Progress

Support and track reading fluency in your class

Search, launch, and command

Activity Chat Teams Calendar Files Assignments Store

Geography of the Earth

Close

Krystal McKinney

Attempts: 2 Level: B Words: 207 Insights

41 Correct Words per Minute

83% Accuracy Rate

5 Mispronunciations 1 Insertions
2 Omissions 0 Repetitions
1 Self-corrections

Auto-Detect Pronunciation sensitivity Low

The study of Earth's **landforms** is called physical geography. Landforms can be mountains and valleys. They can also be **glaciers**, lakes, or rivers. Landforms are sometimes called physical features. It is important for students to know about the physical geography of Earth.

The seasons, the **atmosphere** and all **the** natural processes of Earth affect where people are able to live. G... ne of a **combination** of factors that people use to decid... want to live.

The **physical** features of a regio... h in resources. Within a nation, mountain ranges becom... ders for settlement areas. In the U.S., major mountain range... a Nevada, the Rocky Mountains, and the Appalachia...

Fresh water sources also influence where people settle. People need water

Student work
Turned in Oct 14th at 9:51pm View history

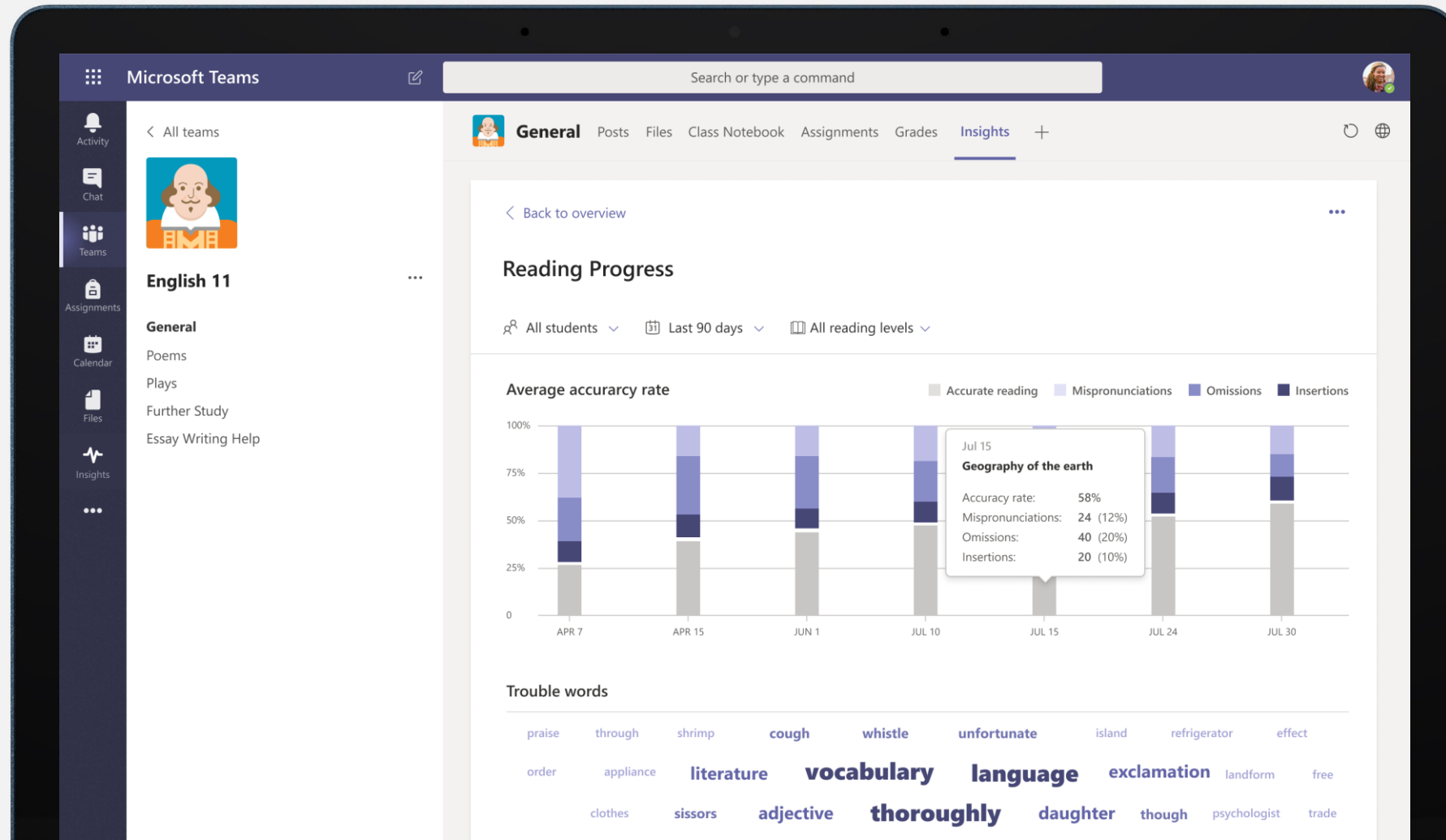
Geography of the Earth

Feedback
Enter feedback for this assignment (max. 1000 characters)

Return

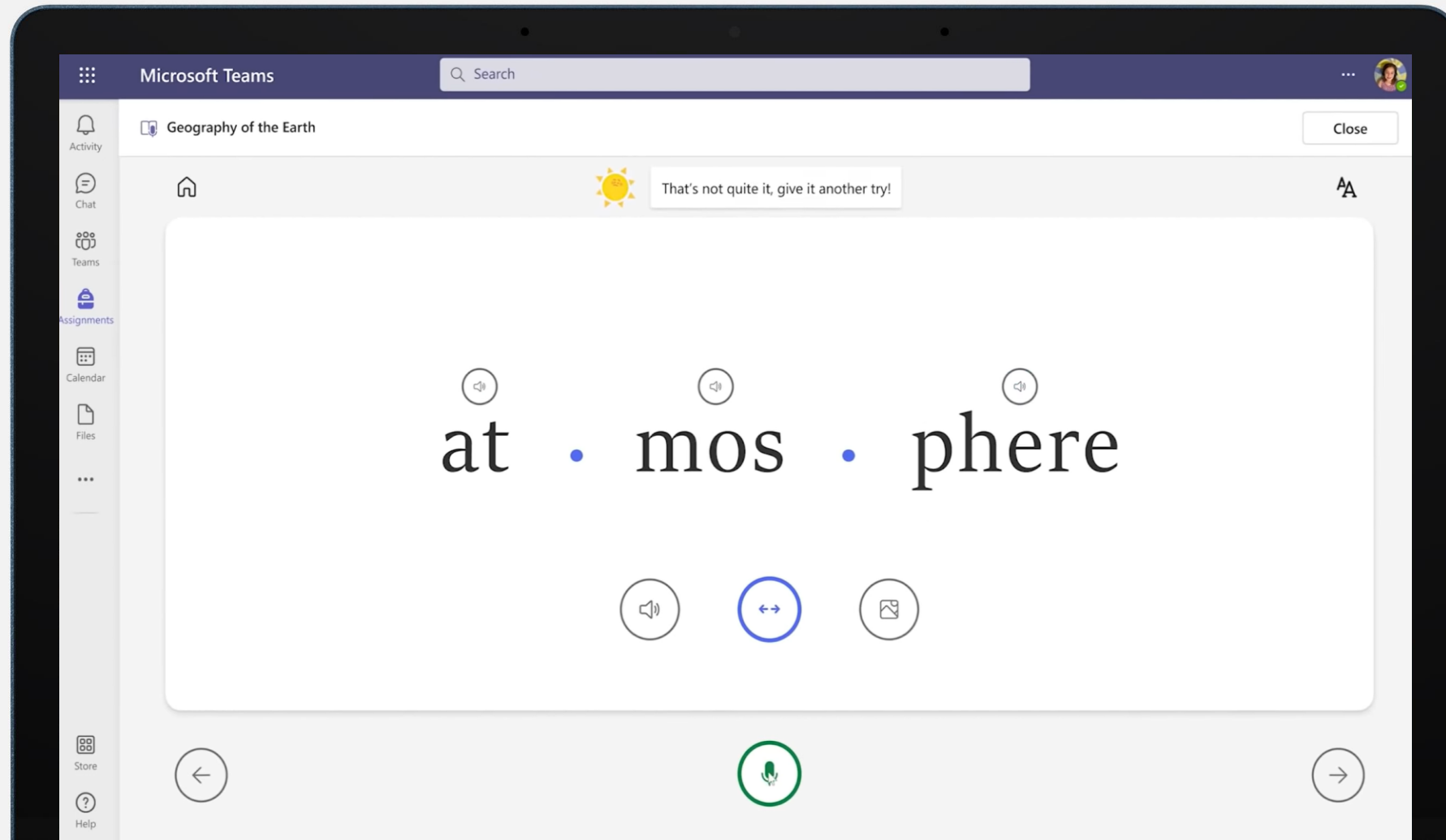
Reading Progress

Support and track reading fluency in your class

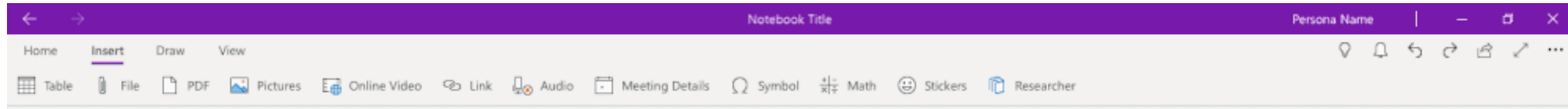


Reading Coach

Provide differentiated reading support



Think In Ink – Generate Practice Problems



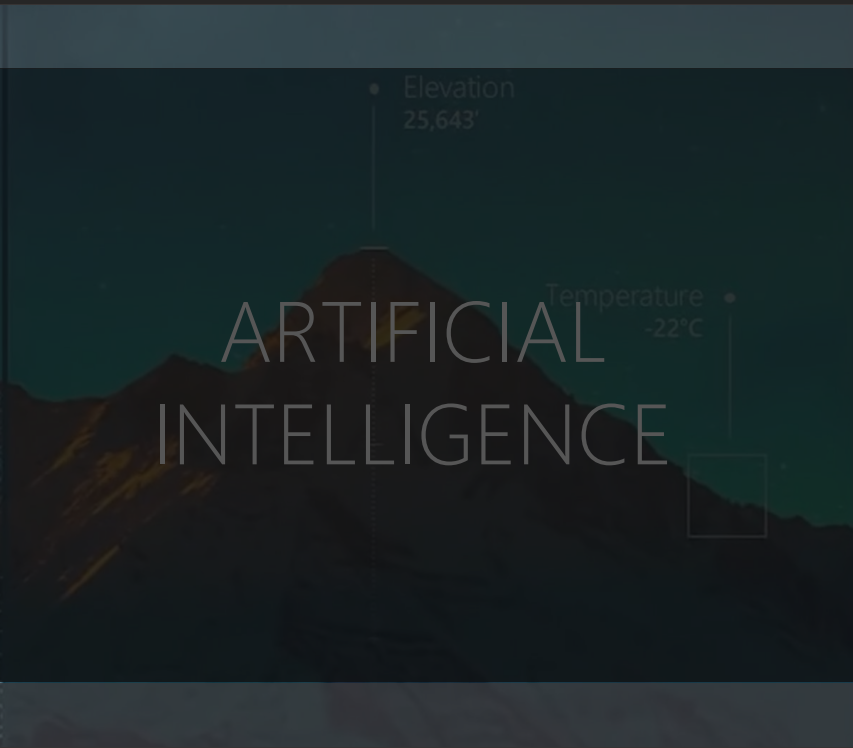
$$X^2 + 3X + 2 = 0$$

Covert paper tests into online Forms

The image displays a side-by-side comparison of a paper test and its digital form conversion. The left panel shows a paper document titled 'World History' with a 'Multiple Choice' section containing 10 questions about the Industrial Revolution. The right panel shows the same content converted into an online form titled 'Content Assessment Globalization: Industrial Revolution'. The form has a teal header with 'Forms' and 'Saved' status. It includes a 'Preview' button, a 'Theme' icon, and a 'Collect responses' button. The form is divided into 'Questions' and 'Responses' tabs. The 'Questions' tab is active, showing the first three questions from the paper test. The 'Responses' tab is empty. On the right side of the form, there is a 'Review Quiz' section with a close button. It contains a message: 'This quiz is converted from "/>



MIXED
REALITY

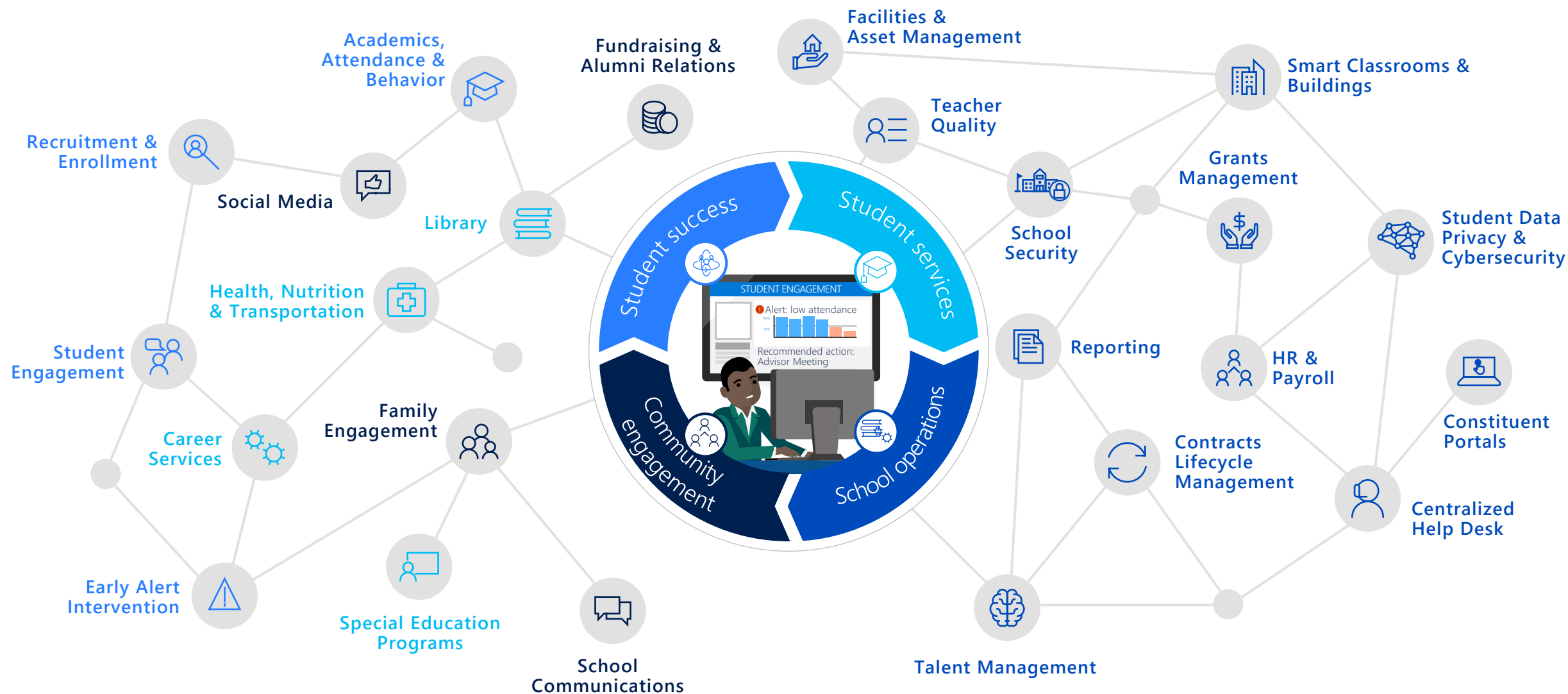


ARTIFICIAL
INTELLIGENCE



CONNECTED
SYSTEMS

Connected Systems – Greater Insights





Dashboard



My Stats



Assessments



Resources



Social



Beyond



Calendar

March 2021

S	M	T	W	T	F	S
29	30	31	01	02	03	04
05	06	07	08	09	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	01

Notifications

[View all](#)

Mr Jones has just released the marks for your Economics assignment

[View results](#)

Ms Fernando has released supporting documents for this afternoon's History class



Your appointment with the school's dentist is coming up on Friday

[Confirm](#)

You have successfully signed up for next season's soccer team

[View info](#)

My Goals for Term 2



Improve my English marks by 10%



Submit my assignments on time



Read at least 4 books

My Timetable

MON TUE WED THU FRI

Computer Science

08:15am - 9:00am

Cherise James



Period 1

Mathematics

09:00am - 09:45am

Rivka Steadman



Period 2

English

09:45am - 10:30am

Marta Magana



Period 3

Lunch Break

10:30am - 11:00am



Deadlines

To Do

35

DAYS LEFT

Your English assignment is due on Monday, 20 March

41

DAYS LEFT

Your end of Term Physics report is coming up on Friday, 26 March

Upcoming

35

DAYS LEFT

Your English assignment is due on Monday, 20 March

41

DAYS LEFT

Your end of Term Physics report is coming up on Friday, 26 March

How are you today?



Awful



Bad



Okay



Good



Great

[Submit](#)

Attendance Overview

March 2021

Me

Peer Group

[View more](#)

What's going on right now?





Currently viewing:

HSC

Tertiary Education

Year: 2021

Predicted ATAR

*Based on data collected from previous marks

[Click to view predicted ATAR](#)

Predicted weighted marks

Percentile

80%

English Advanced

75%

Information Processes
and Technology

89%

Music Extension

80%

Business Studies

79%

Economics

60%

Korean Beginners

Your School in Context

2020

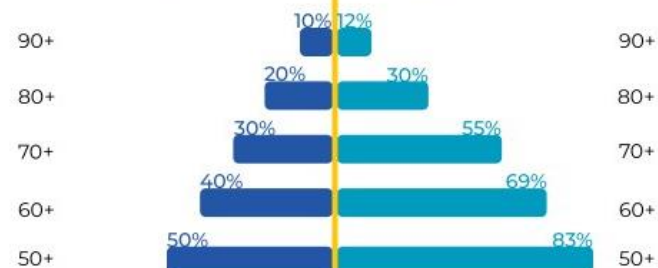
Median ATAR Score

70%

State Average

73%

Your School Average



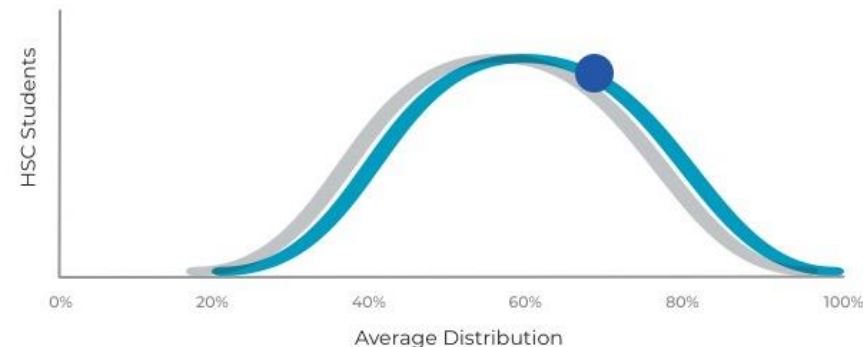
Suggested course-fields based on your skill strengths

Arts Communication
Psychology Business
Commerce Economics

Your Rank in Context

2020

You Your school National



Your selected courses of interest

[Browse courses](#)

Course

Bachelor of Psychology

Major skills suggested:

Literacy
Communication

Skill Match

74%

Required ATAR

Select Universities

Bachelor of Psychology

Major skills suggested:

Literacy

74%

Select Universities

[illegible]



Jonathan Smith

Classroom: Full Group
Teacher: Mr. Smith

Year level: 5
Enrolment: 15 May 2024 7:15 AM
Attendance: Excellent

Emergency Contact
Celia Smith (Phone)
0412 345 678
[View all contact details](#)

Learning Profile



Body Kinesthetic
Student learns best through physical experience and movement, touch and feel.

- Drawing helps student conceptualise and process skills, solidifies abstract concepts and demonstrates understanding in a more tangible way.
- Engaging role-play scenarios help students gain confidence and engage.
- Ability to discuss and reflect upon concepts of animal welfare and conservation.

Literacy
G

Numeracy
VG

Today's notes

Students learned the importance of animal safety through a hands-on role-play scenario. Students demonstrated understanding of animal safety protocols and the importance of reporting any concerns to the appropriate authorities.

Mr. Smith
15 May

Students engaged in a group discussion about the importance of animal safety and the role of the teacher in ensuring a safe learning environment.

Ms. Johnson
15 May

The class discussed the importance of animal safety and the role of the teacher in ensuring a safe learning environment.

Ms. Johnson
15 May

Student Learning Plan

Long-term goal
Students learn to identify and describe various animal safety protocols and the importance of reporting any concerns to the appropriate authorities.

Short-term goals	Achieved by
1. Class spent each morning, reflecting on progress per student needs.	Mar 2024
2. Students discuss and reflect upon concepts of animal safety and conservation.	Apr 2024
3. Set of support and peer support mechanisms.	May 2024

[View Student Plan](#)

Challenges

Medical diagnostic: Dyslexia
Student has been identified as having dyslexia, which may impact their ability to read and write. This may impact their ability to learn and understand the concepts of animal safety and conservation.

Consult with school principal and discuss the importance of animal safety and conservation.

Additional observations

- Students engaged in a group discussion about the importance of animal safety and the role of the teacher in ensuring a safe learning environment.
- Students demonstrated understanding of animal safety protocols and the importance of reporting any concerns to the appropriate authorities.
- Students engaged in a group discussion about the importance of animal safety and the role of the teacher in ensuring a safe learning environment.

Extracurricular activities

Sports and Recreation

- Swimming Club

Special Interest

- Reading a Book (Animal Safety)

[illegible]



Outlook

+ New message Mark all as read Undo

john@contoso.com

Inbox

Focused Other Filter

Report - call back ASAP
Kelvin Amin – (*father) 5:07 AM

You Missed a Phone Call

Alice Bot
Thu 5/9/2019 5:07 AM
John Perkins

Phone Message: 2022

Kelvin Amin – Aamon Amin's Father

<Mr. Perkins, Please call me regarding Aamon's report>

End of message

Call back via Teams

Kelvin Amin
Father

Communication History
<Full history>

Aamon Amin

Behavior History
<Full history>

Academic Reports
<latest report>
<previous reports>

Attendance History
3 absent this term
<full history>

Outstanding work
1 Mathematics
English 2A
<history>

Student Timetable
<term 1>

Azure

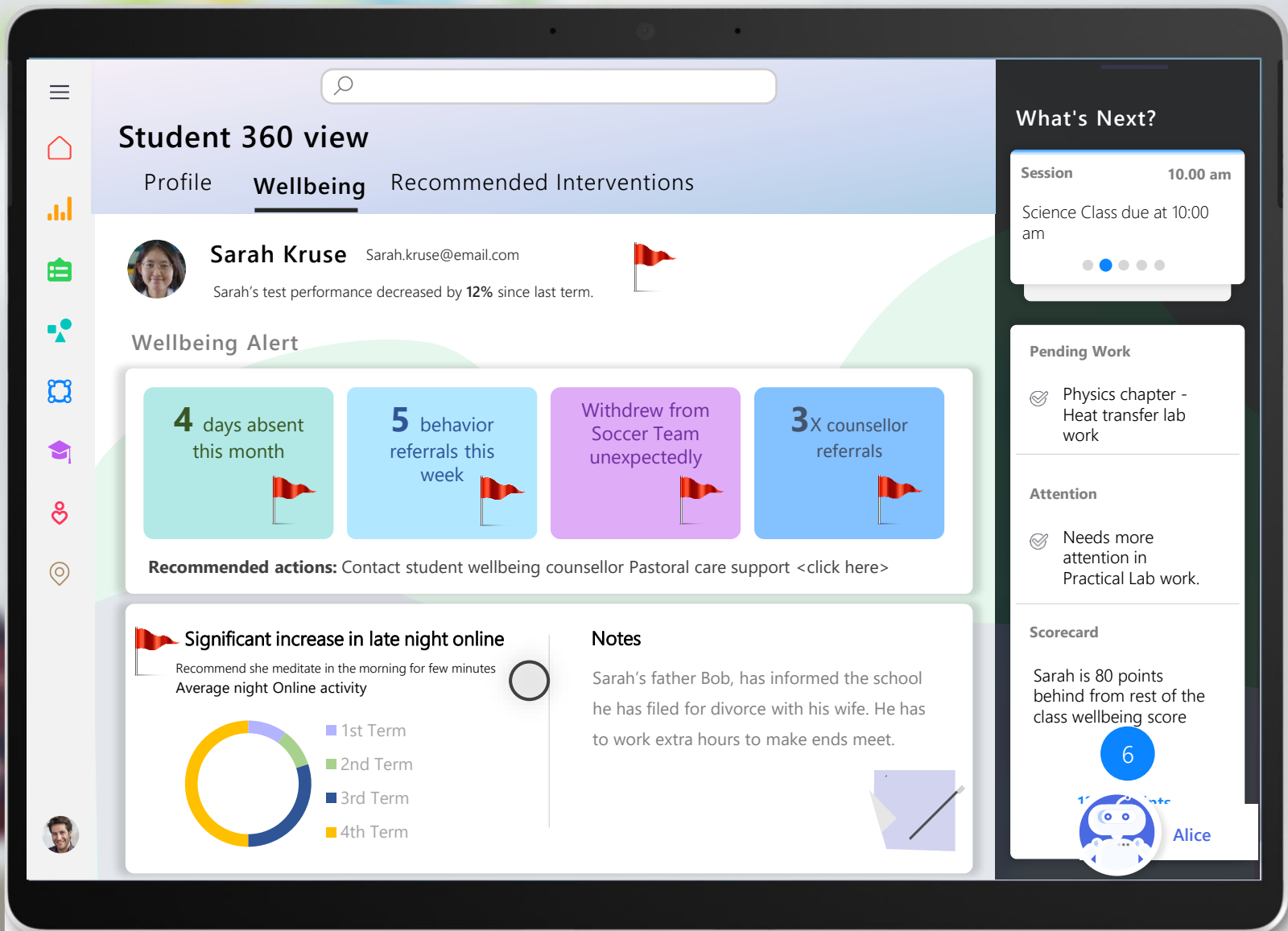
Topic Google News May 9, 2019 CNET Goog...

10/20/21 11:11 AM



John Perkins
Teacher

To support the call, and ensure Mr Perkins is prepared, Alice displays the email, alongside a snapshot of Aamon's profile, performance and alerts – all automatically.

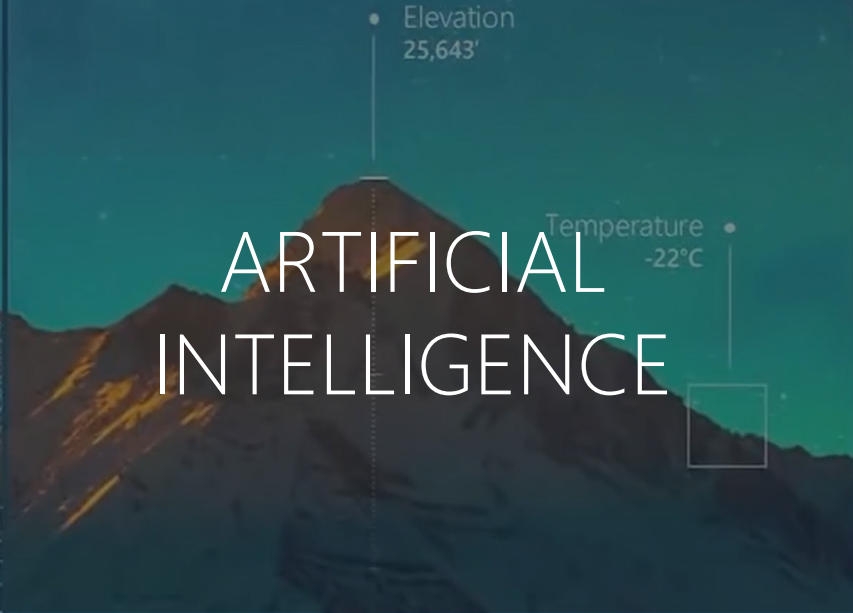


John Perkins
Teacher

Upon reflection, John had noticed some change in Sarah's behavior. But now he has the complete picture, and instead of referring her for discipline when she isn't behaving, he knows exactly how to support her.



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ARTIFICIAL
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CONNECTED
SYSTEMS



Thank you