



SINGAPORE EDUCATORS DESIGN BLENDED LEARNING TOGETHER

Look inside our Blended Learning
Community of Practice (COP)



Agenda

- Why are we doing this?
- How did we work together?
- What best practices emerged ?
- Microsoft T & L Apps enriching Blended Learning
- What's ahead...

HEATHER
STAKER
READY TO
BLEND

Blended Learning Sharing Session with Microsoft

Steps to Set Up Flexible Classrooms



0:00

BLENDING LEARNING PD CONTENT FOR TEACHERS

A framework to start building your own blended learning lesson plans

10 blended learning competencies taught by subject matter expert and your training partner

Module 1

Mastering Design Principles

Module 2

Understanding Blended Learning Arcs

Module 3

Designing Individual Work

Module 4

Designing Collaborative Work

Module 5

Designing Launches & Closes

Module 6

Designing 1-on-1 Check-ins with Students

Module 7

Designing Your Blended Schedule

Module 8

Onboarding Students Based on Individual Needs

Module 9

Engaging Parents

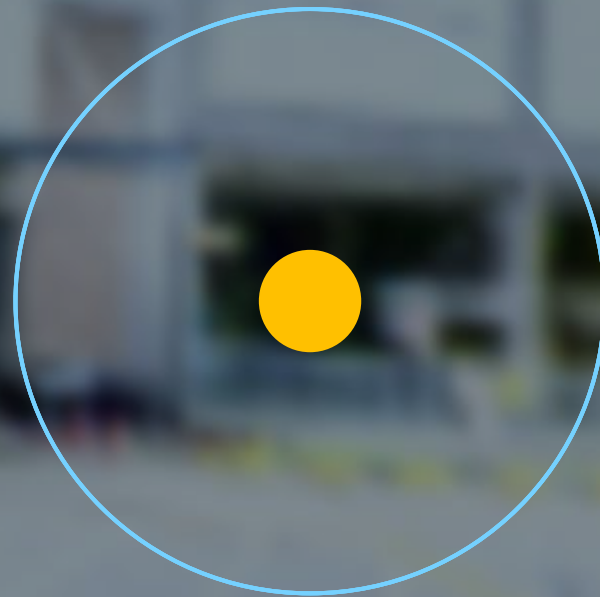
Module 10

Building Relationships with Students

Presenter

- Ms Siyun Chen
- **Head of ICT – Fairfield Methodist Primary School**
 - Ms Chen is currently teaching Maths and Science at Fairfield Methodist Primary School.
 - She had been teaching in Secondary School for 5 years and
 - Next move is on to a stint in MOE's Education Technologies Division

FMS(P)



Fairfield Methodist School (Primary)



Train up a child
in the way he should go:
and when he is old,
he will not depart from it.
PROVERBS 22:6

School Mission

To provide a holistic education in a Christian environment so as to nurture leaders of good character, equipped to serve God, nation, community and school.

School Vision

Leaders of the future pursuing excellence, upholding strong Christian moral values and having a heart to serve.

- **Co-ed school for Primary 1 (7 years old) to Primary 6 (12 years old)**

Every Fairsian, a Future-Ready Leader who

Masters Self

Has a spirit of excellence
Thinks critically and creatively
An ethical digital user



Relates Well to Others

Appreciates differences
Communicates skilfully
An empathetic individual

Serves God & the Community

Reflects actively
Collaborates inclusively
A proactive contributor



“ We will launch National Digital Literacy Programme so that at different stages of their education journey, students will be able to acquire digital skills across four components in the “Find, Think, Apply, Create” framework.”

—MOE PRESS RELEASE, MARCH 2020

INTRODUCTION

3 YEAR ROADMAP

FMSP Digital Literacy Programme

Planning:

Building of Virtual Campus: Identify technology platforms to support the Programme

Selection of Microsoft O365 platform (Teams)

Alignment of Digital Programme to Fairsians outcomes

PD for e-pedagogies

2020

Full rollout of FMSP Digital Literacy Programme

2022

2021

Implementation:

Microsoft O365 accounts and Microsoft Teams

Stage 1 of ICT programmes



COVID-19



Solution



Fast forward the implementation of our existing technology roadmap

Forward planning of our technology structure enables us to have an existing solution to the challenges we faced.

Rollout of Microsoft O365 accounts and Microsoft Teams to the whole school

Our innovation journey to FMSP Virtual Campus



Problem



Implementation



Outcome

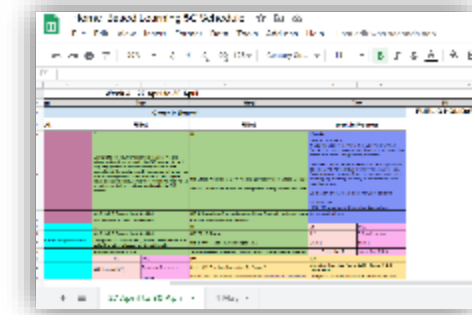


Problem

Challenges identified

Students:

- Had to navigate between a few learning platforms – SLS, Ezhishi, Koobits, video-conferencing links, online folder to access lesson resources, school website for HBL timetable.



- The experience might have taken a toll on students' emotional well-being



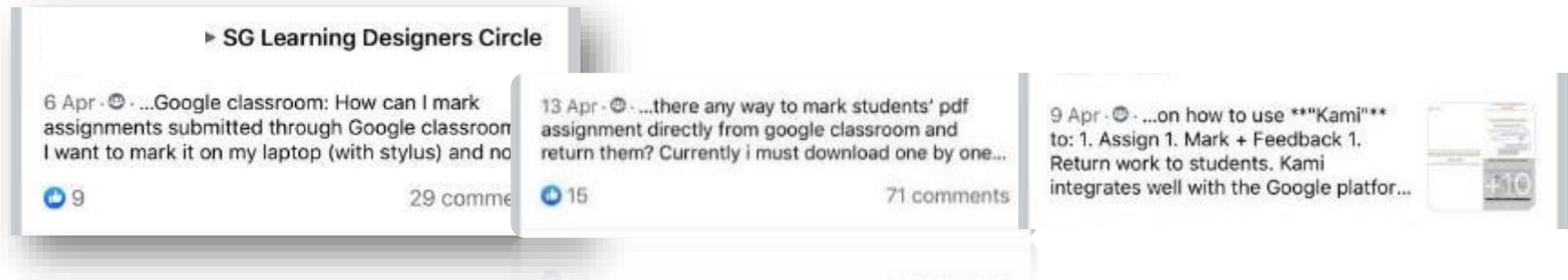


Problem

Challenges identified

Teachers:

- Formative assignments for Offline work. There is no existing solution that allows for quick submission and quick feedback from teachers without multiple steps.



- Staff needed to be supported in online collaboration and communication. Staff was juggling many online tools to work from home



Our innovation journey to FMSP Virtual Campus



Problem

Challenges
identified

Time constraint:

Solution was to be implemented in less than a week

- It had to be friendly and easy for staff and students to use.
- Platform should be compatible across ICT devices (i.e. laptop/PC, tablets, and mobile phones)





Problem

Start of Full HBL:
The preparation

Students:

Adapted to new ways of learning online

Picked-up ICT tools quickly at home

Had to learn independently at home, away from teachers and classmates

Teachers:

Learnt to teach using this new mode of learning

Experienced paradigm shift in the way they work, communicate and collaborate with each other

Creating a virtual campus for staff and students with Microsoft Teams

- A one-stop online platform to access various features
- Structure and support for students
- Students could still “attend school” every morning
- An avenue to communicate with classmates and teachers
- Staff had an online space to collaborate with each other







FMSP Virtual Campus


The screenshot shows the Microsoft Teams interface for the 'Fairfield Methodist School' (FMSP) virtual campus. The 'Teams' section is active, displaying a grid of team cards. A search bar is visible at the top, and a sidebar on the left contains navigation icons for Activity, Chat, Teams, Assignments, Calendar, Calls, Files, and Apps. A 'Join or create team' button is located in the top right corner of the Teams section.

The teams displayed are:

- Committee Teams** (highlighted in red): Steering Committee
- All Staff Teams...** (highlighted in red): FMSP all staff
- Department Teams** (highlighted in red): FMSP Science Teachers
- Class Team** (highlighted in red): CLASS_2020_5H
- Other teams: CLASS_2020_6H, CLASS_2020_5B, CLASS_2020_3A, and 2020_CLASS_5H_SCI_REMEDIAL

FMSP Virtual Campus

General Posts Files Class Notebook **Assignments** Grades 6 more    Meet 

Upcoming 

> Drafts

✓ Assigned (3)

[View more past due](#)

Debates Motion's reasons
Due June 28, 2020 11:59 PM

Debates - Evidence for Reasons
Due July 26, 2020 11:59 PM

My Debates Speech
Due August 1, 2020 11:59 PM


> Graded

























Create

[Back](#) [Edit assignment](#) [Student view](#) [Export to Excel](#) [Return](#)

Maths Workbook pg 145 to 146

Due April 16, 2020 11:59 PM

To grade (1) **Graded (38)** 

<input type="checkbox"/>	Name ▾	Status ▾	Feedback
<input type="checkbox"/>	 A	 Returned	 
<input type="checkbox"/>	 B	 Returned	 
<input type="checkbox"/>	 CW	 Returned	 
<input type="checkbox"/>	 CJ	 Returned	 
<input type="checkbox"/>	 CC	 Returned	 
<input type="checkbox"/>	 CI	 Returned	 

FMSP Virtual Campus

Example of a Class TEAM site. Every student is added to at least 1 Class TEAM site and CCA TEAM site

(1) Within the TEAM structure, there are breakout rooms where different rooms/channels with the same interface as main page can be created

(2) Chat function for messaging students and teachers – individual or group

(3) Different teams a student is added to (Class or CCA team)

(4) Any assignments the student is assigned to

(5) Call function to make video calls on Teams

(6) To access all files by student or shared with

(7) To see all postings on social wall for that channel

(8) Access all files for the channel

(9) Class Notebook (OneNote) for the TEAM site

(10) Assignments for the TEAM site

(11) Social wall for postings by teachers and students in the form of announcements, questions and any comments. There is a Social wall in each channel.

FMSP Virtual Campus

The screenshot shows a Microsoft Teams chat window for a group named "FMSP_我爱阅读". The interface includes a search bar at the top, a left-hand navigation pane with icons for Activity, Chat, Teams, Signments, Calendar, Calls, Files, and Apps, and a main chat area. The chat area displays a "General" channel with a header "FMSP_我爱阅读" and a list of sub-channels: "2021年校园超级阅读明星比赛", "2022年校园超级阅读明星比赛", "一、二年级", "三、四年级", "五、六年级", and "亲子阅读". The main chat area shows a "Let's get the conversation started" prompt with the text "Try @mentioning a student or teacher to begin sharing ideas." Below this, a message from a user with the initials "EY" says "hi" and has 36 replies. A blue callout box with the text "Interest Groups" is overlaid on the chat area. At the bottom of the chat area, there is a "New conversation" button.

Search

Fairfield Methodist Scho... SC

Activity

Chat

Teams

Signments

Calendar

Calls

Files

Apps

Help

< All teams

General

2021年校园超级阅读明星比赛

2022年校园超级阅读明星比赛

一、二年级

三、四年级

五、六年级

亲子阅读

Meet

General

Posts

Files

+

Let's get the conversation started

Try @mentioning a student or teacher to begin sharing ideas.

Last read

Dear student,once you enter here ,please go to your own level channel,for example, pri2B go to 一二年级channel.have a great time enjoying the books here!

36 replies

EY hi

Reply

New conversation

Interest Groups

Secure Platform

Microsoft is known for its **tight security** for its products

Secure communication and interaction platform with access limited to the school users.

As the news with security concerns of Zoom and Google were circulating throughout HBL period, our school was not affected and we had no disruptions in our video conferencing as we used Microsoft Teams platform.

Our innovation journey to FMSP Virtual Campus



Problem



Implementation



Outcomes

Professional Development (PD) for Teachers



Support for staff

Tier 1: PD for baseline skills planned. Just in time instructions during lunchtime was carried out for teachers who are keen to pick up some ICT skills on the go. A folder of tech guides was curated with recorded training sessions according to the technological affordances.

Tier 2 : During fHBL, optional weekly online Workshops for staff to explore more tools, taught by Microsoft's experts as part of MS Teams Coach program were made available.

Tier 3: Departments conducted virtual PD according to subject needs, designed online lesson packages as a level, creating their own sites with resources for PD

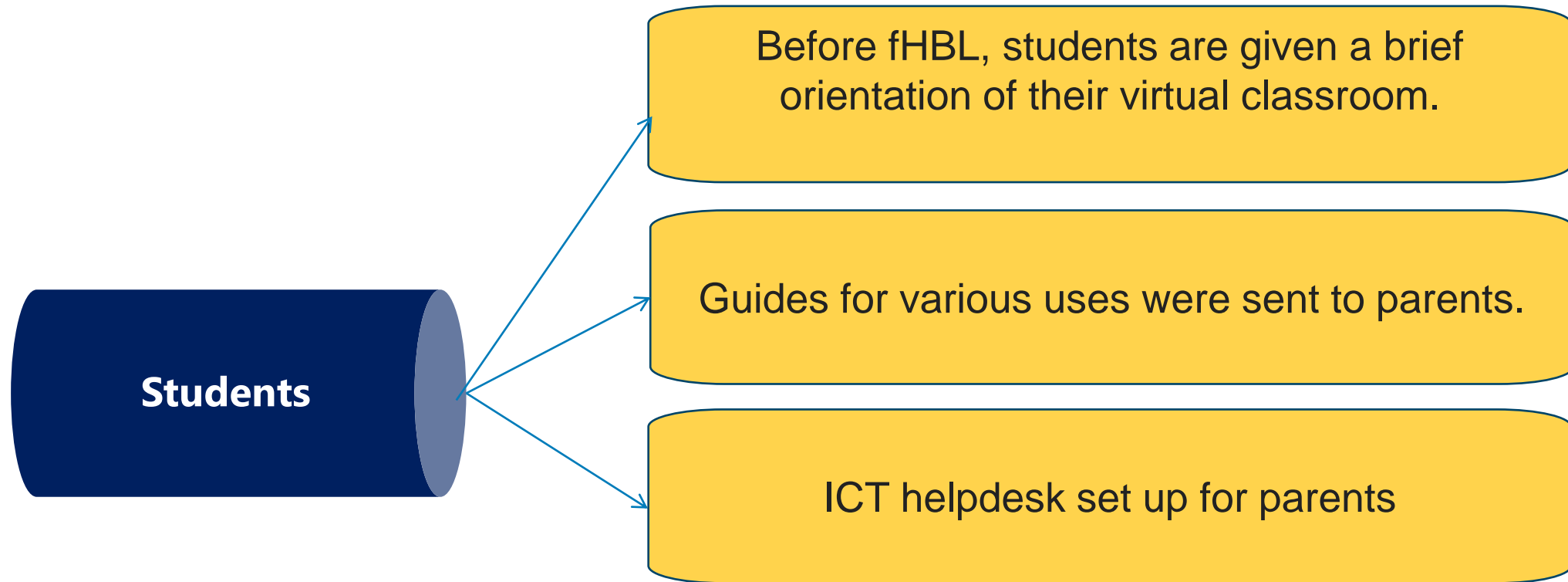
Professional Development for Teachers



Tier 4: For specialised needs/interests. ICT Team champions were identified, grouped according to subjects and specialized ICT tools. Smaller group trainings and mentoring are mounted for identified teachers who needed more help in ICT.

Tier 5: Sharing of success stories and weekly updates during virtual Contact Time and emails.

Support for Students



Our innovation journey to FMSP Virtual Campus



Problem



Implementation



Outcomes



Outcomes

Overcoming
obstacles

Professional Development of Teachers

- Teachers were enthusiastic in exploring the features of the virtual campus
- Weekly voluntary ICT sharings/workshops during HBL had almost 100% attendance from teachers
- Teachers formed small groups for additional support from ICT coaches
- ICT Champions from different departments conducted sharings during level meetings
- PD on Microsoft applications continued after fHBL, **all teachers are certified MIE (Microsoft Innovative Educator)**
- Teachers applied to **MIEE every year (Microsoft Innovative Educator expert)**
- Some teachers went on to **MCE (Microsoft Certified Educator)**



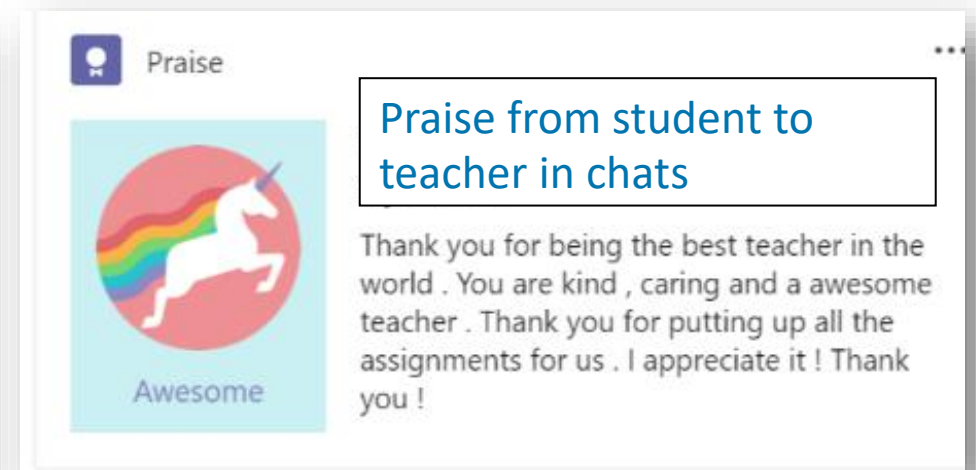
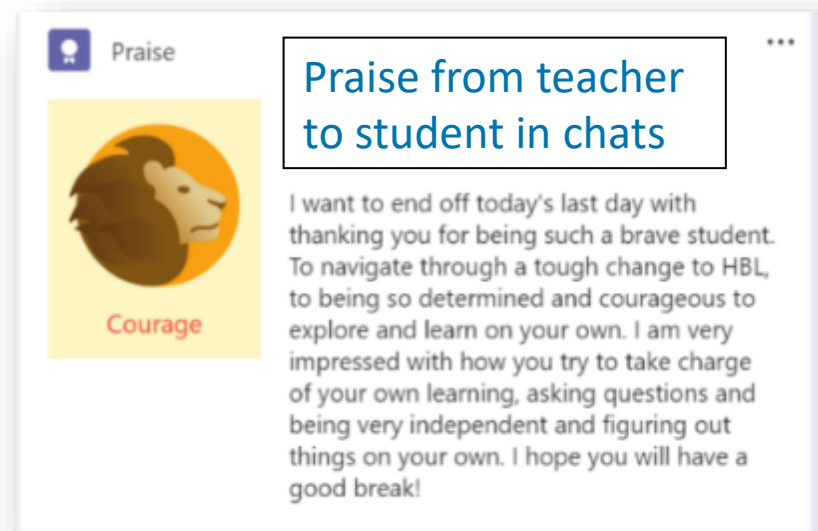
Our innovation journey to FMSP Virtual Campus

Outcomes

Teachers-
student
relationship

Emotional well being of students

- Private chat, students can reach out for help and teachers are also able to reach out to weaker students
- Avenue for students to reach out privately and safely through chat channels.
- Teachers were also able to give “praises” to students on the social wall for encouragement and students were able to do as well.

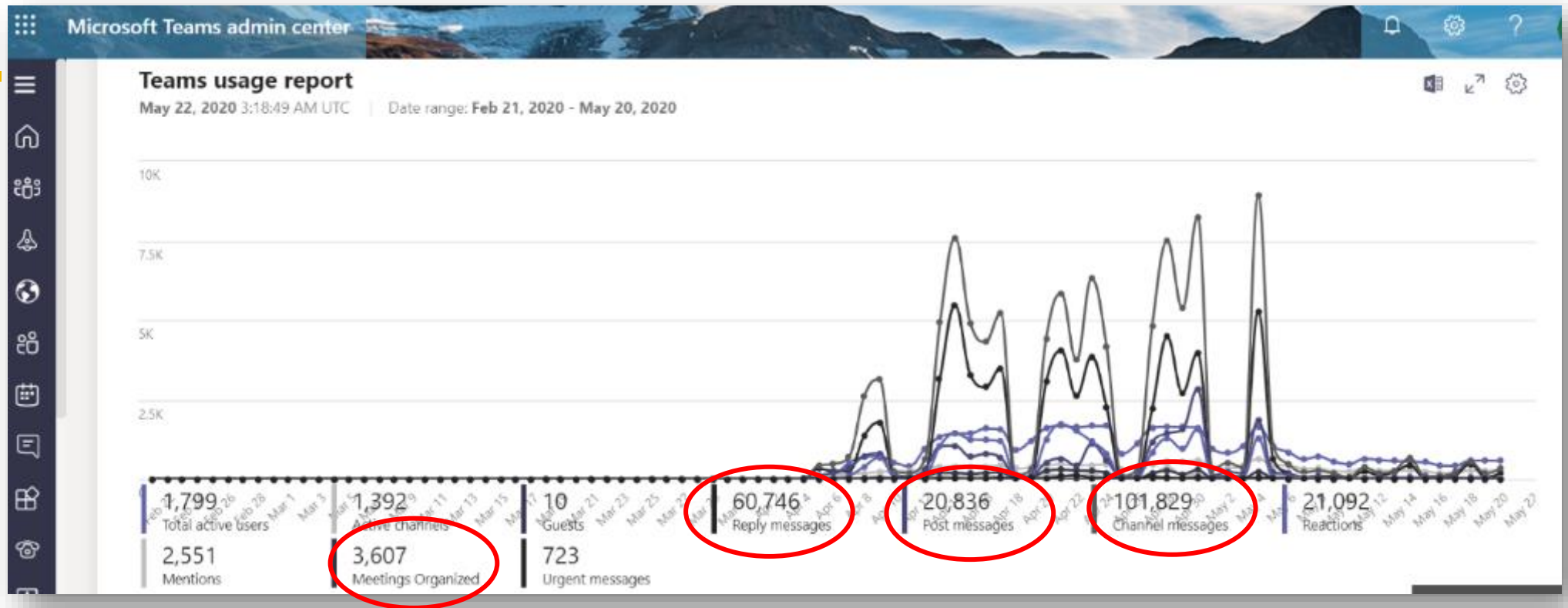




The number of messages and interactions for 1 month of full HBL

Outcomes

Teachers-
student
relationship

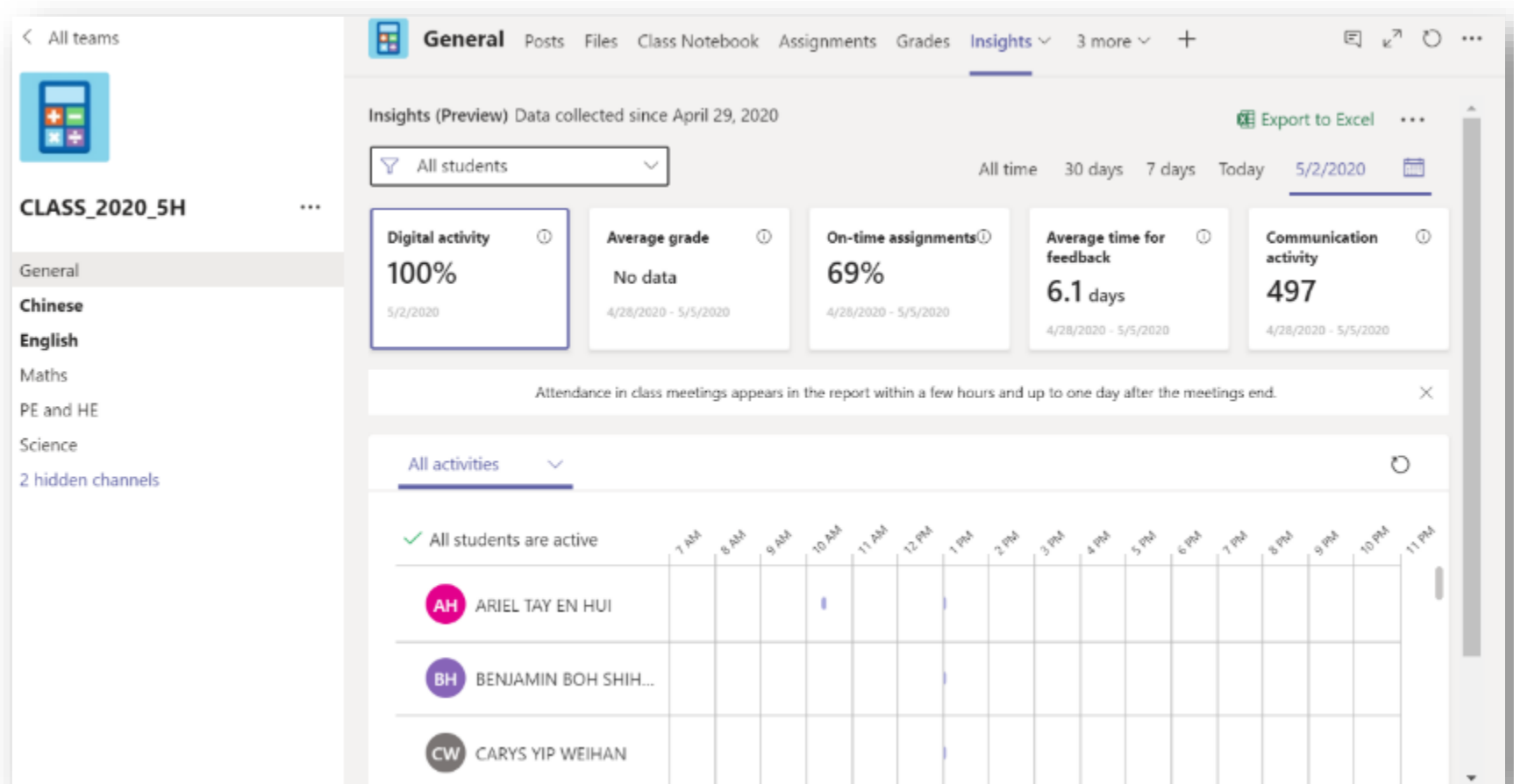




Class insights: Summary of online interactions by the students

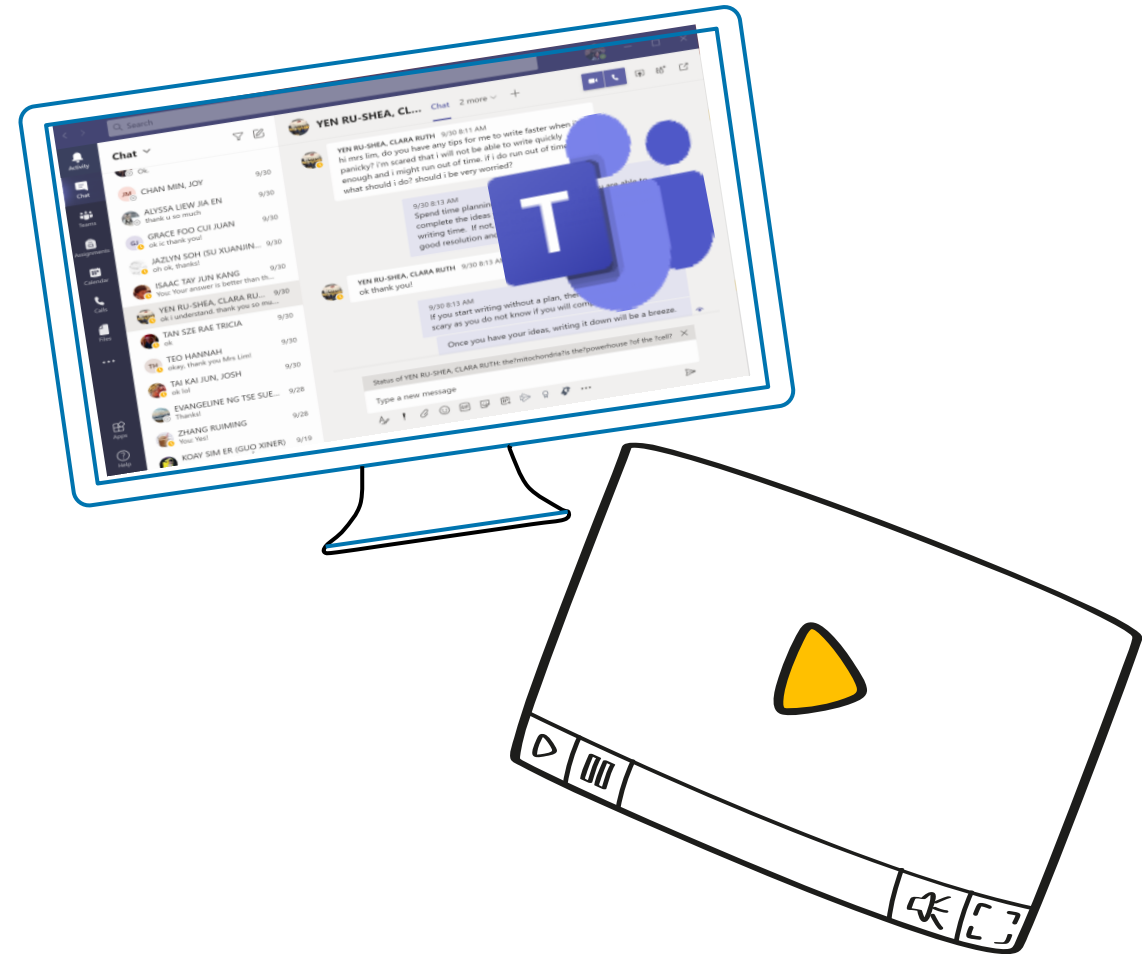
Outcomes

Teachers-
student
relationship



Digital literacy plan with Virtual Campus

- **3 year digital literacy plan** to bring about New Media Literacies, Cyber Wellness and 21st CC to students

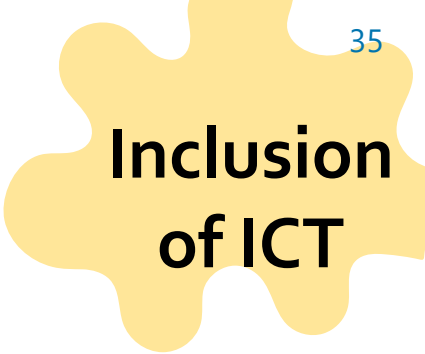


Objectives of Digital Literacy Plan



- Ensure all students acquired digital skills (New Media Literacies, Cyber Wellness) through programs
- Pervasiveness in curriculum
- Microsoft Office certification P4 and P5 organised by Crescent Girls' Secondary School
- Theme for each level for an overall cohesive view of the outcomes

FMS(P) Digital Literacy Programme



Digital
Literacy
Plan
themes

P1: Introduction to technology

P2: Accessing and sharing information with technology

P3: Using Technology to real-life problem solving/Using technology for good

P4: Effective communicator with technology

P5: Effective collaboration with technology

P6: Effective technology user

Customised Cyber Wellness (CW)

Cyber Wellness mapped out over **6 years**

- ❑ Resources from MOE
- ❑ Cyber Wellness lessons to support technology use in curriculum which complements the existing CW curriculum



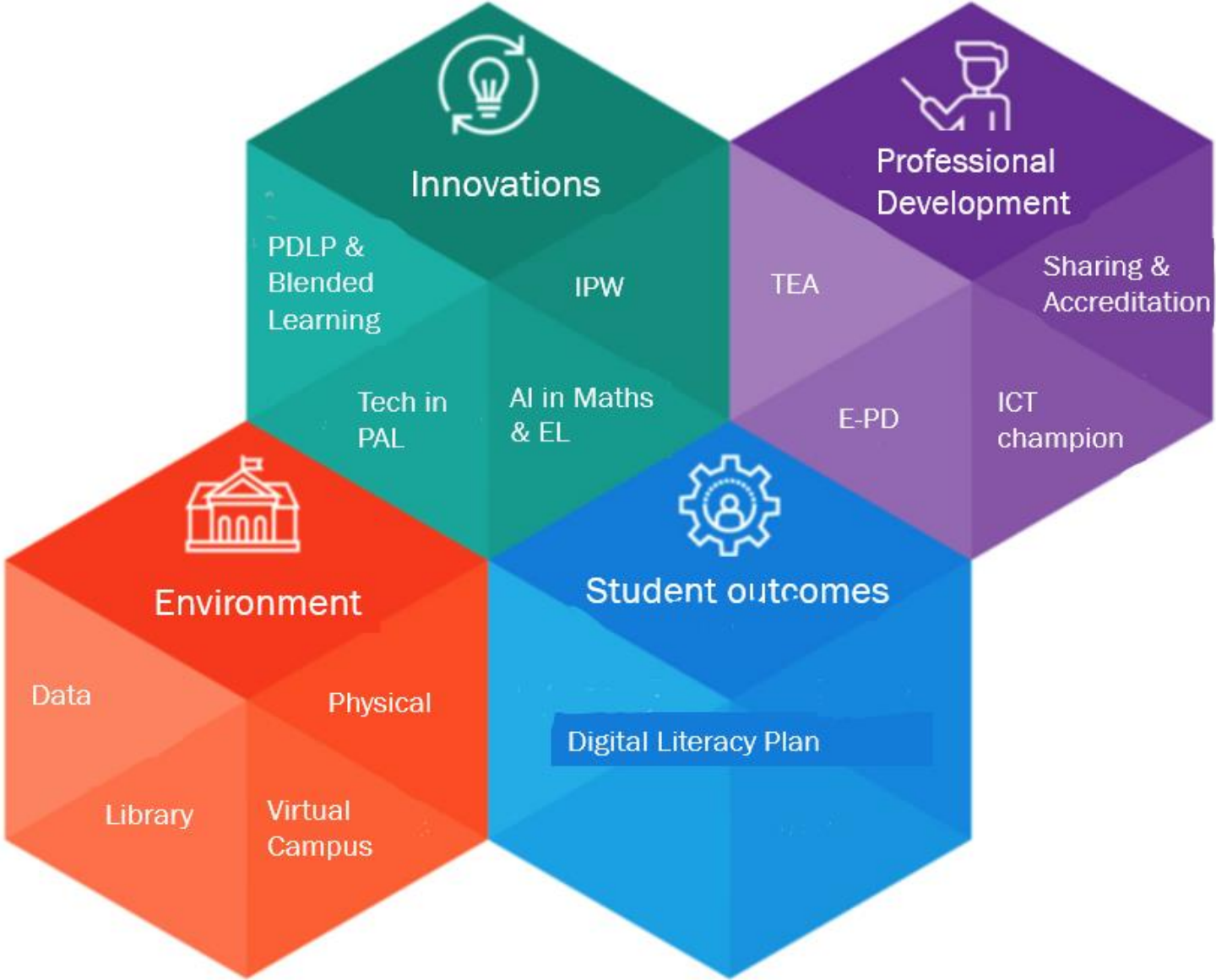
Customisation

Outcome of Virtual Campus

- **Virtual Campus (Microsoft Teams) was awarded Innovation award (Silver) from MOE**
- **School was awarded innovation funds from MOE to continue development of Virtual Campus to build AI study companion (Project is paused for now)**
- **School's tech journey was interviewed by MOE Educational Technology Division as resource for Ed tech leaders and School leaders' programme**
- **Continued integration as an important pillar of our tech plan**

What is next?

Updated Tech plan



Adapted From Microsoft Education Transformation Framework)

Updated Professional Development Structure



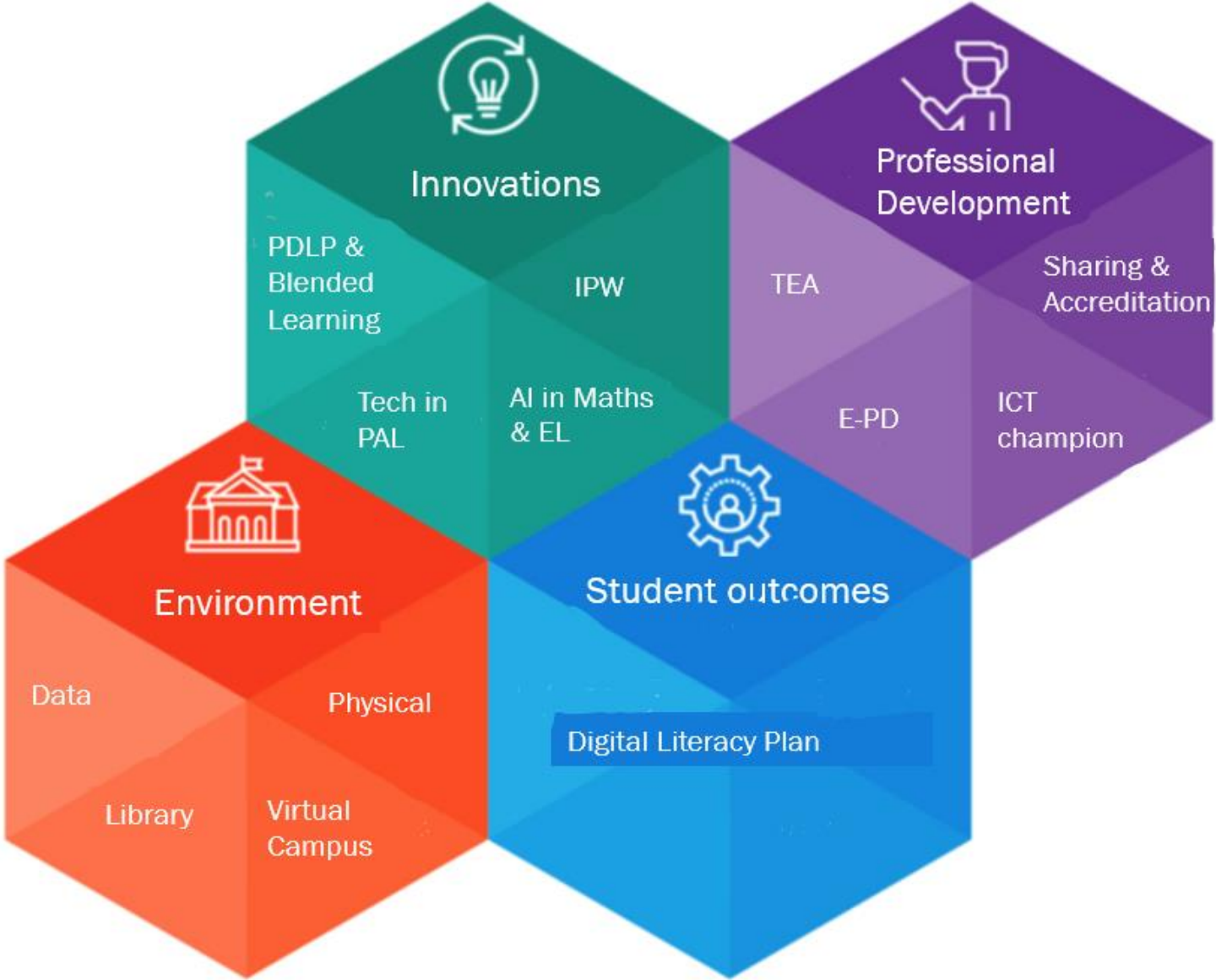
**3
considerations:
Support for
staff**

1. Team members/Influencers: Work closely with School staff developer, Lead teachers and Senior teachers who lead school on Pedagogy. Lead by example and conduct workshops for whole school. ICT champions from different subjects – every subject is represented in needs and interests

2. Bridged different readiness & Catering to interests and needs: Breakout sessions for teachers to select, Tech-Enabled Afternoon sessions to deepen their practice, explore different tech affordances. Mentor sessions and clinic sessions for additional support.

Building culture for PD: Connecting to teachers' beliefs by sharing research and intent purpose of tech research, innovative projects for teachers who are ready to explore more and excite others. Recognition and acknowledgement with school's Innofest, Conferences, workshops, Microsoft recognition programs

Updated Tech plan



Personalised Device Learning Programme (PDLP) and Blended Learning:
Personalised learning, student-directedness, blended learning

Structure and support of PDLP

- Partnership with Microsoft
- Surface Go devices, managed by Intune

PDLP Objectives

- **Key intended outcomes:**

1. Nurture self-directed and independent learners
2. Develop passionate and intrinsically motivated learners
3. Shifting and supporting teachers' practice in E-pd - PLDs harness technology for greater effectiveness in teaching and learning, enabled by teachers' use of e-Pedagogy to provide learning experiences for students

- **Secondary intended Outcomes:**

1. Strengthen learners' collaborative skills and connections to the community
2. Deepen digital literacies in learners
3. Develop learners who can apply knowledge of cyber wellness and cyber security to safeguard their online learning

Pilot objectives: Questions for future planning

- How a personalised device in classroom facilitates 21st century learning?
 - How does it supports self-directed learning in students
 - How does it support SEL of students
 - How does it support personalised learning of students
- For teachers:
 - Application of E-pd, enhance teaching and learning experiences in class
- For students
 - How does it support self-directed learning?
 - How does it add value to students' learning and engagement?
- Suitable devices

PDLP and Blended Learning: Personalised learning, student-directedness, blended learning

Outcome

- Positive review by students: increase engagement and self-directed
- Positive review by teachers
- Innovative lesson packages that was shared in Innofest and hopefully would be used in PD as examples
- Review by teachers
- PDLP + Blended Learning
- A case study with...
- Review on development...

•How a personalised device in classroom facilitates 21st century learning? ->

- Supports teachers in e-pd (lesson design, lesson implementation) for effective teaching
- Supports students use of technology for active learning and development of 21st skills
- Supports innovative lesson designs - use of AI in classroom (scribo, powerpoint coach, reading progress), FA in classroom. Pedagogical practices previously not possible without
- Blended learning enables better TSR and moves towards personalised 1-to-1 coaching

Fairfield Methodist School (Primary) leads the way with blended learning in Singapore



Fairfield Methodist School (Primary)
leads the way with blended learning
in Singapore

Ready to **BLEND**

BY HEATHER CLAYTON STAKER FEBRUARY 2022

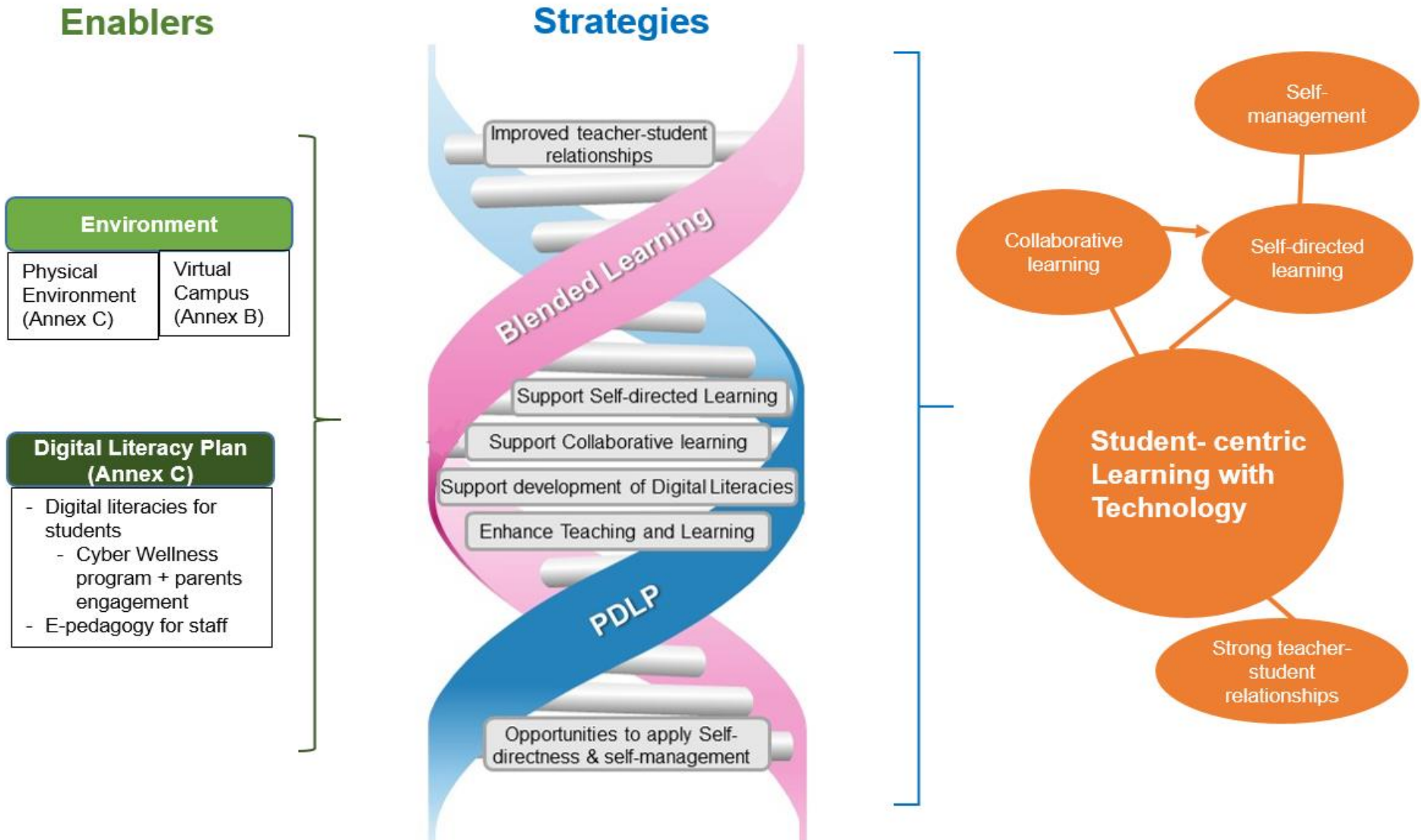
February 2022

Author(s): Heather Clayton Staker

Organization(s): Ready to Blend

Issues: Home-based learning, cyber-wellness, Microsoft Teams, Microsoft Office 365, virtual campus, teacher-student relationship, project-based learning, Blended Learning Arcs, Flex model, blended learning, competency-based learning, Singapore

[DOWNLOAD](#)



*References from "Digital Literacy in Personalised Digital Learning Programme (PDLP), MOE ETD and Blended Learning Model from Ready to Blend

What it would look like for 2022

- Rolling out PDLP to all P5 students with 200 new Windows laptops, managed by Intune
- Teachers would be supported with workshops, by ICT champions along with whole school E-pedagogy workshops

AI in education

- AI in Maths with Microsoft and Evidence B
- PPT presenter coach in PDLP pilot
- AI in Reading progress (Microsoft)

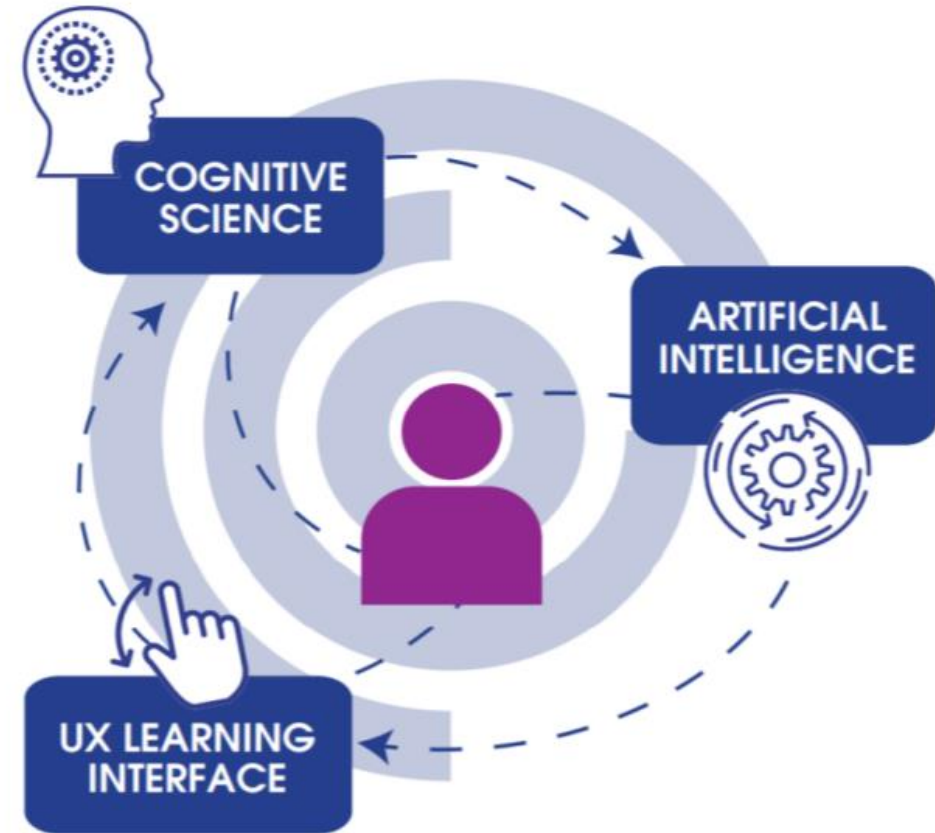
INTRODUCTION

A collaboration between



Digital innovation built on 3 pillars

1. Facilitating student engagement
2. Personalising learning pathways
3. Supporting teachers' decision-making



Using AI data to move students' learning forward


Using AI for self-directed learning to move students' learning forward

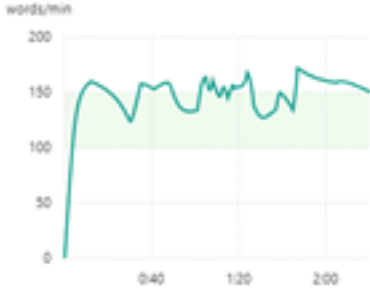
Artificial Intelligence and Personalisation

AvePoint EvidenceB
Microsoft

The diagram illustrates a feedback loop for AI personalisation. It starts with two student icons on the left. Arrows lead to a 'Profiling' box containing 'Clustering'. From there, an arrow points to a 'Personalized learning pathway' box containing 'Multi-armed bandit'. This leads to a 'Knowledge check test' box, which then leads to an 'Intelligent dashboard' box. The dashboard has arrows pointing to two circular diagrams. The top diagram shows a network of blue and yellow nodes with arrows, representing a learning path. The bottom diagram shows a network of blue and green nodes with arrows, representing an alternative learning path. Arrows from these diagrams point back to the student icons, completing the loop.

Try to avoid simply reading the slide. Here are the slides you might want to work on:


Slide 4
[Learn More](#)


words/min
200
150
100
50
0
0:40 1:20 2:00
[Learn More](#)

[Learn More](#)

Fillers
To sound more polished and confident, try to avoid using filler words. Pause or take a breath to relax. Some filler words to avoid are:
[You know](#) [basically](#)
[Learn More](#)

Search, launch, and command

Geography of the Earth

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

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

Geography of the Earth

Feedback

his assignm
(s)

Chat
Teams
Calendar
Files
Assignments
Store

41
Correct Words per Minute

83%
Accuracy Rate

5 Mispronunciations
2 Omissions
1 Self-corrections

1 Insertions
0 Repetitions

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

Geography of the Earth

Feedback

his assignm
(s)

The **physical** features of a region are nation, mountain ranges become na the U.S., major mountain ranges are Mountains, and the Appalachians.

Fresh water sources also influence w

READING PROGRESS

MICROSOFT TEAMS

An Institute of

NIE NATIONAL INSTITUTE OF EDUCATION SINGAPORE

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

RPIC

RPIC 545

Using Artificial Intelligence to Support Reading Fluency for Lower Primary Students

Monitor and Provide Feedback

How can students' learning be advanced with teachers' feedback? How can we address students' learning gaps?



Reading app graded students' oral reading fluency. Every student receives an individual report from the teacher after grading.

The screenshot displays a user interface for monitoring student progress. At the top, it shows 'Assignments' and 'Oral Passage 3 amended'. The main section features a '104 Correct words per minute' and an '88% Accuracy rate'. A list of insights includes 3 Mispronunciations, 6 Omissions, 8 Insertions, 1 Repetitions, and 0 Self-corrections. Below this, a text passage is shown with some words highlighted in green. On the right, there is a 'Feedback' section with a text input field and a 'Return' button. The student's name 'CHAN SUM LENG' is visible at the top right of the interface.

Assignments

Oral Passage 3 amended

Attempts: 2 Words: 145 Insights

104 Correct words per minute

88% Accuracy rate

- 3 Mispronunciations
- 6 Omissions
- 8 Insertions
- 1 Repetitions
- 0 Self-corrections

Auto-Detect PREVIEW

Pronunciation sensitivity Medium

“How would you like to celebrate your birthday, Ming?” Mrs Tan asked her elevenyear-old son who was studying.

Ming stopped what he was doing and smiled at his mother. “I am **have** **i** **am** contented to spend time with you and Daddy on my special day,” he replied.

Mrs Tan suggested a day out at the Marina Bay Carnival. “Oh, I have heard so much about the

CHAN SUM LENG ...

Student work
Handed in 15 October 2021 at 09:45
View history

Oral Passage 3 amended

Feedback

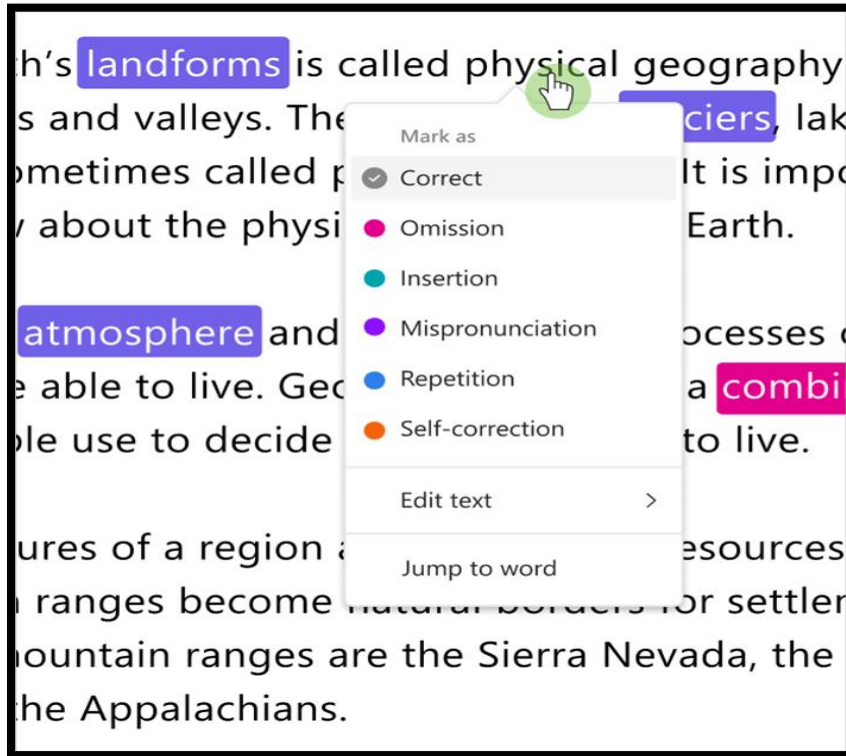
Enter feedback

Points
No points

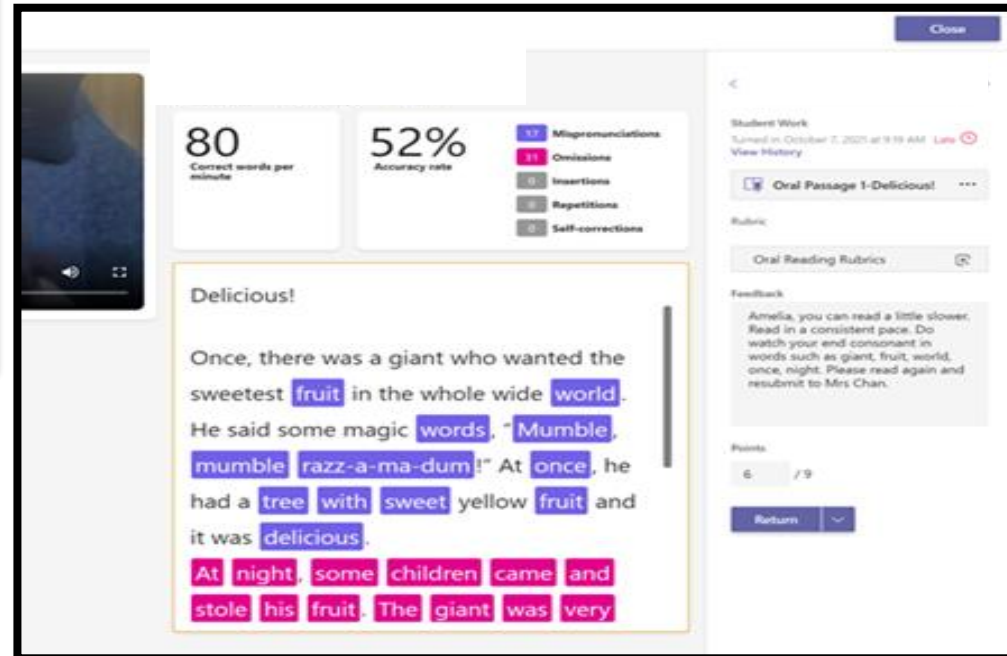
Return

Monitor and Provide Feedback

How can students' learning be advanced with teachers' feedback? How can we address students' learning gaps?



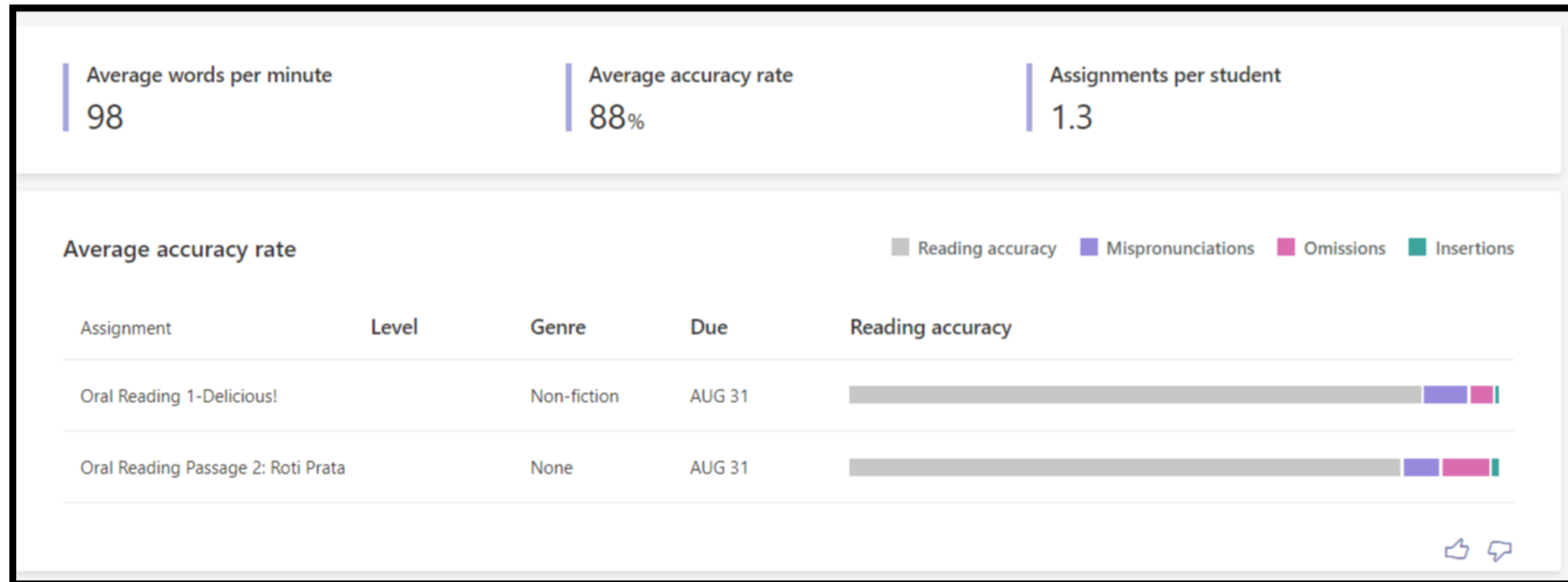
- Review and Return/Return for Revision students' work in Reading Progress
- Teacher can give feedback based on the rubrics uploaded in Reading Progress.



Monitor and Provide Feedback

How can students' learning be advanced with teachers' feedback? How can we address students' learning gaps?

Class data



Moving students' learning forward with AI data

Class

Teacher made use of the data from AI to address commonly mispronounced words and mistakes made that had affected reading fluency.

Teacher also showed exemplars of good reading from students. This motivates students to do well so they can be featured.

Individual

With data from AI, teacher conducted interventions with weaker students who did not do well on the Reading Progress app while other students went on to other pieces of work. These students tried a second attempt to submit reading passages again.

Create differentiated assignments-Teachers can assign differentiated work for their students. Targeted support helps ensure that all students' performance and progress are monitored and encouraged.

Intervention was conducted for this student in class for him to work on his reading fluency in areas highlighted as mispronunciation and omission. This was conducted one-to-one while the rest of the students were doing other pieces of English work.

Activity

0:00 / 0:42

Auto-Detect PREVIEW

Pronunciation sensitivity High

Attempts: 1 Words: 102 Insights

102 Correct words per minute

71% Accuracy rate

- Mispronunciations
- Omissions
- Insertions
- Repetitions
- Self-corrections

Student Work
Returned for revision September 26, 2021 at 3:01 PM
View History

Oral Passage 1-Delicious!

Rubric
Oral Reading Rubrics

Feedback
Cayden, you missed out reading the last paragraph. Do note the end consonant in words like sweet, night and giant. Do record again and submit this piece of reading.

Points
5 / 9

Return

P2 Reading Aloud Passage 1

Delicious!

Once, there was a giant who wanted the sweetest fruit in the whole wide world.

He said some magic words, "Mumble, mumble razz-a-ma-dum!" At once, he had a tree with sweet yellow fruit and it was delicious.

At night, some children came and stole his fruit. The giant was very angry. "What can I do?" he said

First attempt

Activity

0:50 / 0:50

Auto-Detect PREVIEW

Pronunciation sensitivity High

Attempts: 8 Words: 104 Insights

114 Correct words per minute

90% Accuracy rate

- Mispronunciations
- Omissions
- Insertions
- Repetitions
- Self-corrections

Student Work
Turned in September 26, 2021 at 3:58 PM
View History

Oral Passage 1-Delicious!

Rubric
Oral Reading Rubrics

Feedback
Cayden, you missed out reading the last paragraph. Do note the end consonant in words like sweet, night and giant. Do record again and submit this piece of reading.

Points
5 / 9

Return

P2 Reading Aloud Passage 1

Delicious!

Once, there was a giant who wanted the sweetest fruit in the whole wide world.

He said some magic words, "Mumble, mumble razz-a-ma-dum!" At once, he had a tree with sweet yellow fruit and it was delicious.

At night, some children came and stole his fruit. The giant was very angry. "What can I do?" he said

Second attempt after intervention by teacher

Using AI data to move students' learning forward

AI data to inform teachers of students' learning



- Close monitoring of students' learning
- Teachers' efforts now be shifted to planning for interventions and differentiation

Using AI data to move students' learning forward

Made available practice that wasn't easily present before



- Reading app: More reading practices without increasing teachers' workload
- Maths AI: Possibility of more time for students to be exposed and spend time big ideas in Mathematics of probability, spatial awareness (Geometry), etc.



Thank you!

New Case Study: “Singapore Teachers design Blended learning together”

Ready to **BLEND**

Singapore teachers
design blended learning together

BY HEATHER CLAYTON STAKER JUNE 2022



Microsoft Teaching and Learning Tools

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2. Reading Progress
3. Immersive Reader
4. Microsoft Math Solver
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