

Flexible Work Arrangements

Perspectives on Cloud Solutions and Emerging Technologies for Education

Leander Yong

Public Sector Team - Education Amazon Web Services (AWS) Singapore

leanyong@amazon.com +65 9771 4727

Agenda

- IT Considerations in Enabling FWA
- How are things done right now?
- Upcoming Trends and Transitions
- Emerging Technologies
- Closing Remarks

IT Considerations in Enabling FWA

HOW SHOULD TECHNOLOGY SUPPORT FLEXIBLE WORK ARRANGEMENTS?

1. <u>Provide Flexibility</u>

> Equipment (laptops/desktops), ITSM, school platforms and individual resources

2. <u>Maintain/Enhance User Experience</u>

Performance & capabilities (hardware/software), daily platform usage for different roles in the institute i.e. student/teacher/admin

3. Cost Effectiveness

Upfront vs On-demand / Fixed vs variable

4. <u>Adhere to Security and Compliance regulations</u>*

> Data security, privacy, secure connectivity, etc.

How are things done right now?

WHAT EXISTING TECHNOLOGIES SUPPORT FLEXIBLE WORK ARRANGEMENTS?

- **1. Virtual Desktop Infrastructure**
- 2. Asynchronous Learning and School Admin Capabilities
 - Modern LMS and suite of productivity tools (e.g. video conferencing, shared drives, collaboration tools, etc.)
 - Comprehensive ERP platforms supporting self-service capabilities

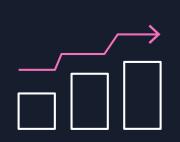
3. Virtual Call Centers

E.g. ITSM and tools assistance for staff, technical support for students taking examinations online

EXISTING TECHNOLOGIES ALLOW TEACHERS AND STAFF TO HANDLE FWA SIMILAR TO HOW THEY WOULD USUALLY MANAGE IN OFFICE

Upcoming Trends and Transitions

WHAT MIGHT "GOOD" LOOK LIKE RIGHT NOW, AND IN THE FUTURE?



Enrich the Learning Experience

Personalized and Adaptive Learning with AI

Staff Productivity/Task Automation

Wellbeing and Holistic Development



Modernize and Secure the Academy

Future-proofing Mission Critical Systems

Smart Campus



Turn Data into Wisdom Modern Data and Analytics Solutions Corporate AI Assistant Smart Contact Center



aws

© 2024, Amazon Web Services, Inc. or its affiliates. All rights reserved.

ARTIFICIAL INTELLIGENCE - PRACTICAL APPLICATIONS

	b. Additi valit Advances and a meta a functional provide a functional and and a functional and a functional and a function	1066.
The excommunication of the king in 1209 deprived him of some of his $3/3/2023$, 110	 The state of the s	😳 Q: When was the magna carta first issued?
ablest administrators.		The magna carta was originally issued in 1215.
3/3/2023, 11:20 AM		C: What does its essential virtue lie in according to some sources?
Where is Canterbury?	< 1of1 >	
3/3/2023, 11:		Its essential virtue lies not in any individual clause but in its comprehensive nature, and the fact that memorable phrases from it have been invoked repeatedly over centuries.
I found this answer from outside of the curated knowledge base. Please		: Q: How has the magna carta had an effect on constitutional
note that the system may occasionally generate incorrect or misleading information and produce offensive or biased content.		development? A: B $I \equiv a c^2 = c^2 = c^2 = c^2$
3/3/2023, 11:20 AM		
Canterbury is a city located in Kent, England. It is the home of the		Return to Knowledge Base Save Knowledge to Knowledge Base
Archbishop of Canterbury and seat of the Church of England.		NING ASSISTANTS
	Get support fo	or queries anytime and anywhere

ARTIFICIAL INTELLIGENCE - PRACTICAL APPLICATIONS

You are an AI assistant designed to help school administrators create optimal school timetables. Your task is to generate a weekly timetable that schedules all required classes, assigns teachers and rooms appropriately, and balances student and teacher workloads. Create a timetable framework that has 50 minute periods and accounts for a 1 hour lunch break. The school offers courses in Math, Science, English, History, Art, Music, and PE. There are average 25 students per class. The class starts at 8AM and ends at 6PM. The timetable must include period start/end times, class name, teacher name, classroom number, and student roster for each scheduled class period. Could you provide a sample timetable for this hypothetical school based on these parameters? Please format it as a table with columns for period, time, class, teacher, room, and students. Let me know if you need any clarification or additional information.

TEACHING ASSISTANTS

Save time on admin tasks to value add elsewhere

(

Ð

Send >>

You are a primary school English teacher in Singapore skilled in assessing student work. Create a rubric grading for English class. Your students will be doing a Language Use and Comprehension exercise based on the document "PSLE-English-Language.pdf" in preparation for the final exam. Format the rubric as a chart and include a rating scale of 1-5.

Sure, I can help you with that. Here's a sample timetable for your hypothetical school:

Period	Time	Class	Teacher
1	8:00 AM - 8:50 AM	Math	Mr. Smith
2	8:50 AM - 9:40 AM	Science	Mrs. Johnson
3	9:40 AM - 10:30 AM	English	Mr. Davis
4	10:30 AM - 11:20 AM	History	Mrs. Lee
5	11:20 AM - 12:10 PM	Art	Ms. Brown
6	12:10 PM - 1:00 PM	Music	Mr. Lee
7	1:00 PM - 1:50 PM	Lunch Break	N/A

Send a message

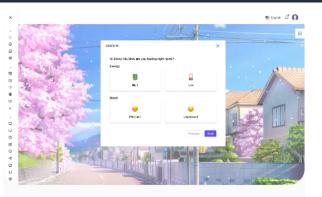
Sure, here's a possible rubric for grading the Language Use and Comprehension exercise based on the document "PSLE-English-Language.pdf":

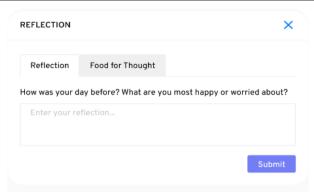
Criteria	1 (Weak)	2 (Fair)	3 (Good)	4 (Excellent)	5 (Outstanding)
Vocabulary	Limited vocabulary used	Some vocabulary used	Good vocabulary used	Excellent vocabulary used	Outstanding vocabulary used
Grammar	Major errors in grammar	Some errors in grammar	Few errors in grammar	No errors in grammar	No errors in grammar and excellent usage
Comprehension	Limited understanding of text	Some understanding of text	Good understanding of text	Excellent understanding of text	Outstanding understanding of text
Organization	Disorganized and unclear	Somewhat organized and clear	Well-organized and clear	Very well-organized and clear	Excellent organization and clarity
Coherence	Lacks coherence	Some coherence	Good coherence	Excellent coherence	Outstanding coherence
Language Use	Inappropriate language use	Some appropriate language use	Good language use	Excellent language use	Outstanding language use

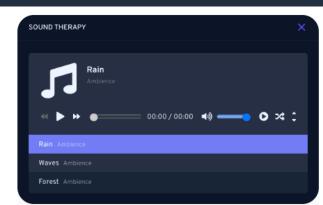
Note: This rubric assesses the students' language use and comprehension skills based on the given document. The ratings are based on the level of proficiency demonstrated in each criterion.



WELLBEING AND HOLISTIC DEVELOPMENT









Well-being Check-in

Empower your teachers to recognize any "silent-sufferers" by conducting quick, researchbacked check-ins that can be done within 1-min. Weekly summary reports are sent to teachers to highlight any atrisk students.

Self-Reflection

Our smart platform utilizes machine learning to analyze students' self-reflections, employing sentiment analysis on keywords. This assists educators in obtaining valuable insights, enabling timely intervention.

Sound Therapy

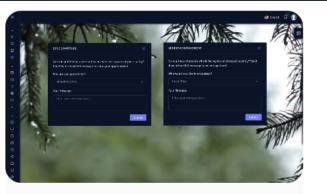
Soothing tones, nature sounds provide a transformative auditory journey for students to relieve exam stress and promote tranquility.

Deep Breathing

Deep breathing exercise aids in stress management, anxiety and fosters relaxation and clarity amid the academic hustle.

WELLBEING AND HOLISTIC DEVELOPMENT

SEEK HELP



Are you facing any problems or issues? Leave a private message to your form teachers and school counsellor. Your message will be kept strictly between your teachers and school counsellor.

Enter your message here...

Submit

X

My Wall-being Description 2013 O NUME TRANSPORT SIZE A SLAVEST Image: Control of the State of the State

Student Dashboard

Motivate students to improve their emotional self-regulation and overall wellness by monitoring their emotions, identifying patterns in realtime through interactive dashboards.



Teacher Dashboard

Enable teachers to effortlessly grasp their students' wellbeing using straightforward traffic light indicators, facilitating the identification of potential at-risk students.

Send Gratitudes & Encouragements

Encourage your students to share appreciation and gratitude messages, fostering kindness and positivity in the classroom.

Seek Help

Provide a safe space for students to seek assistance and support for any academic and mental health concerns with their school or teacher counsellor(s).

© 2024, Amazon Web Services, Inc. or its affiliates. All rights reserved.

ARTIFICIAL INTELLIGENCE - PRACTICAL APPLICATIONS



aws

ARTIFICIAL INTELLIGENCE - PRACTICAL APPLICATIONS



000

Trusted answers generated from organizational data



Source references for fact-checking



Conversation history

In-context

conversations



Save time on administrative queries and workflows

ADMINISTRATIVE AI ASSISTANT

Utilize enterprise data sources to enhance productivity

Zones that are physically separated within an AWS Region . 1 2 The source also states that S3 is resilient to AZ failures and stores data across multiple AZs, resulting in high data durability . 3 Additionally, the Resilience Hub assessment shows that S3 does well in terms of resiliency, with the S3 bucket being resilient to AZ failures . 3

տ

Sources ~



Tell me more about availability zones

Availability Zones are distinct locations within an AWS Region that are engineered to be isolated from failures in other Availability Zones. 1 2 Each Availability Zone provides inexpensive, low-latency network connectivity to other Availability Zones in the same AWS Region. 1 2 By launching instances in separate Availability Zones, you can protect your applications from the failure of a single location. 1 2 AWS maintains multiple Availability Zones in each Region, and these Availability Zones are physically isolated from each other but united by private, low-latency, high-throughput, and highly redundant network connections. 3 4 This enables AWS to provide very high levels of availability and redundancy, while also minimizing latency. 3 4

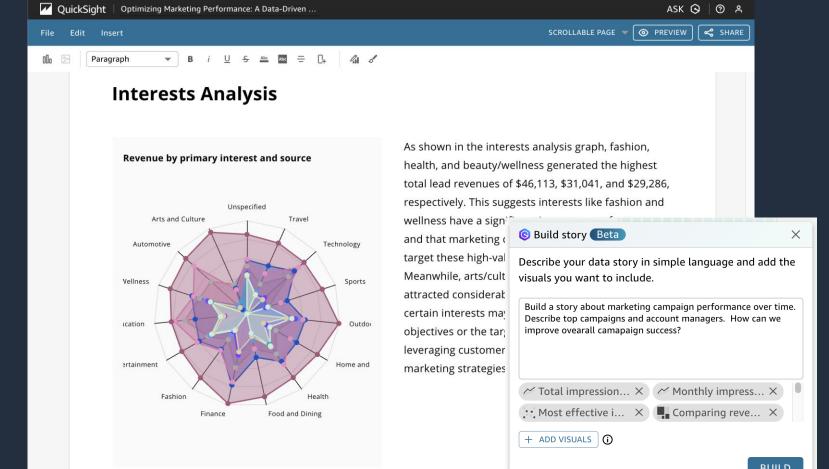


Amazon Q Business uses generative AI. You may need to verify responses for accuracy. AWS Responsible AI Policy 🗹

ARTIFICIAL INTELLIGENCE - PRACTICAL APPLICATIONS

AI-DATA STORYTELLING

Quickly generate insights to improve teaching and learning



Interpret data for others

Help others derive meaning from data and reach conclusions to drive decisions

Generate stories using AI

Produce cohesive, powerful, and insightful narratives by analyzing only a few words of data

Create refined content

Control AI verbosity, customize narrative text, and apply stunning visual themes to bring content to life

Share up-to-date governed data Quickly update and disseminate data at any time

SECURITY AND COMPLIANCE

SOLUTION CONSIDERATIONS



Use pre-built guardrails for data and content access



Restrict responses to enterprise content only



Specify blocked words or phrases that never appear in responses



Define special topics and configure guardrails for such topics

INFRASTRUCTURE CONSIDERATIONS



Easy Integration with VPN systems for quick and secure access



Integrates with <u>identity</u> <u>management tools</u> for easier management, auditing and control



Full <u>logging capabilities</u> to ensure traceability and accountability



Compliance with required security frameworks and certifications

Closing Remarks

HOW SHOULD EMERGING TECHNOLOGIES SUPPORT FWA IN EDUCATION?

- 1. Promote self-directed and personalized learning
- 2. Manage relationships between stakeholders
- 3. Promote wellbeing and holistic development
- 4. Reduce menial tasks and promote value-adding work
- 5. Capitalize on data and experiences to generate insights*
- 6. Be security and compliant to regulatory guidelines*

EMERGING TECHNOLOGIES SHOULD ENHANCE AND SIMPLIFY THE FWA EXPERIENCE TO UPLOAD WORKPLACE HARMONY, COMPETITIVENESS AND PRODUCTIVITY



Thank you!

Leander Yong

Public Sector Team - Education Amazon Web Services (AWS) Singapore

leanyong@amazon.com +65 9771 4727