

The Use of Gamification in Accounting Education (SMU Challenge App)

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Introduction

- New generation of digital-native students
- Students are requesting for additional learning materials but not in paper-format
- Provide a mobile learning platform, enhance learning outside the classroom
- Engage students through mobile gaming, play and learn on the go

Straits Times 15th April 2013



Dr Lee with her family (from left) husband Gary Tan, daughter Kaydon and sons Sheldon and Alton. The head of the new Early Childhood Development Agency said she learnt of her children's interests through spending time with them, and encourages parent-child bonding. ST PHOTO: DESMOND FOO

'Kids learn best when they are having fun'

Childhood development agency head believes learning can be child's play, with right tack

By PRISCILLA GOY

WHILE Dr Lee Tung Jean is not trained in early childhood education, the mother of three is no stranger to parents such as

who turns five this year. Her daughter goes to Marymount Kindergarten, which she and her sons also attended.

None of the children, including Sheldon who is at Raffles Institution, had tuition

ing time with them that you can understand what their interests and passions are."

Asked about his mother's parenting style, Sheldon said: "She's not that fierce. We play board games and computer games together."

Dr Lee has also worked with other children. While doing her master's in economics at Yale University, she volunteered to

Overview of SMU Challenge App

- Formerly known as Accounting Challenge (ACE)
 - New platform for SMU
 - Available in iOS and Android version
 - Search for “SMU Challenge”
- Download statistics as of 31 Mar 2023
 - Total number of download: 42,017
 - Total number of countries of download: 90
 - Top 3 countries: USA, Singapore and Philippines

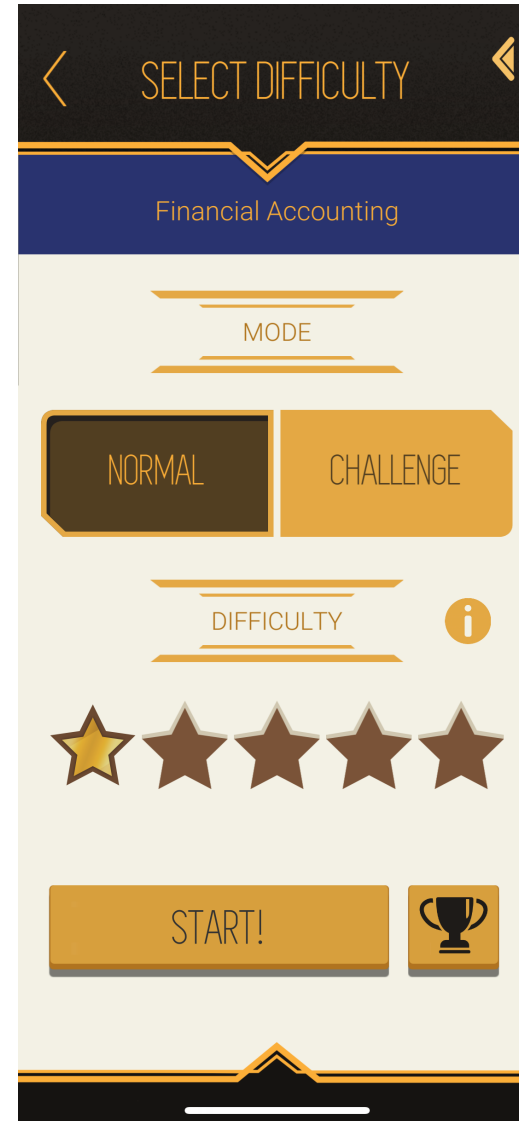
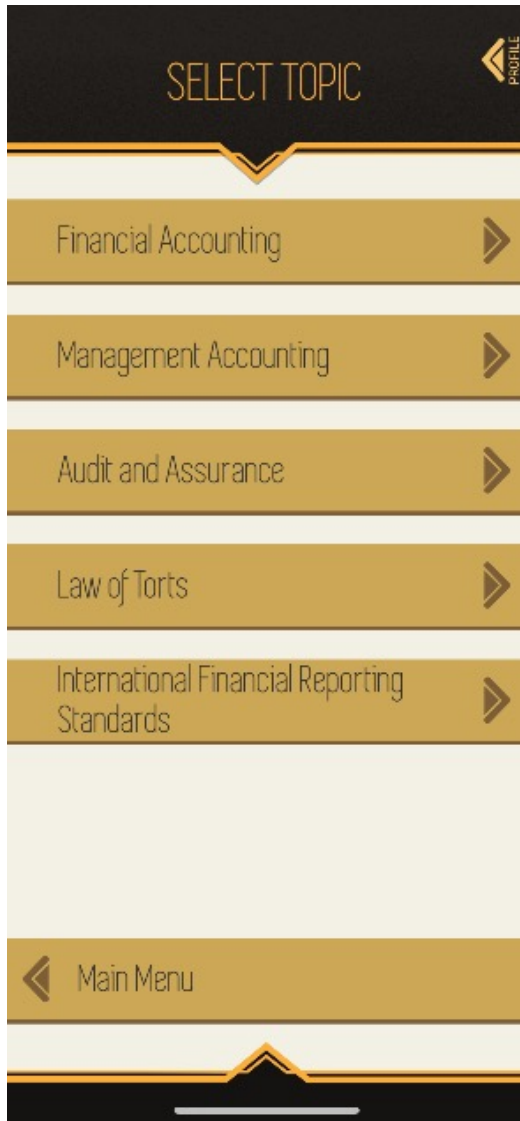
Awards

- 2019 Canadian Academic Accounting Association Howard Teall Award for Innovation in Accounting Education (Runner Up)
- 2017 American Accounting Association Jim Bulloch Award for Innovations in Management Accounting Education
- 2015 American Accounting Association Innovation in Accounting Education Award
- 2014 Wharton-QS Stars Reimagine Education Award (Shortlisted finalist)
- 2014 Bea Sanders/American Institute of CPAs Teaching Innovation Award (Honorable Mention)
- 2013 CEEMAN Champion Award for Innovative Pedagogy

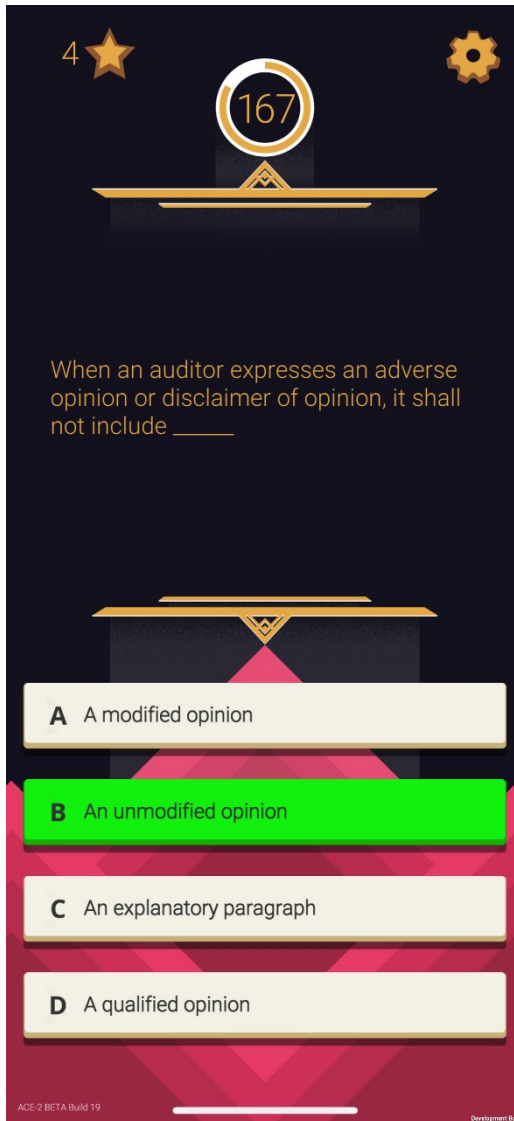
Screenshots of SMU Challenge





Screenshots of SMU Challenge



Screenshots of SMU Challenge



4 ★  

When an auditor expresses an adverse opinion or disclaimer of opinion, it shall not include _____

A A modified opinion

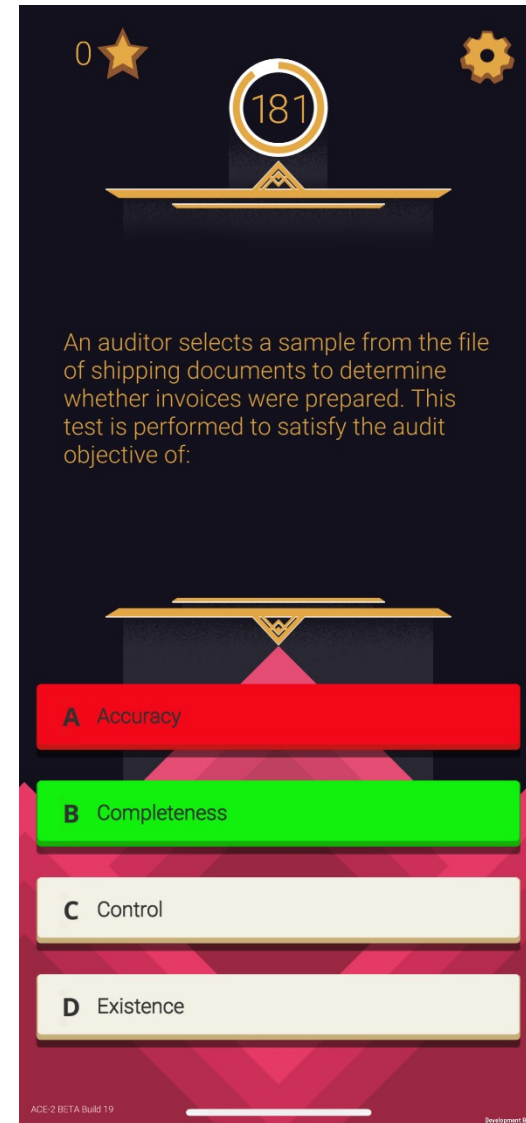
B An unmodified opinion



C An explanatory paragraph

D A qualified opinion

ACE 2 BETA Build 19 Development Build

Detailed description: This screenshot shows a question in the SMU Challenge. At the top, there is a score of 4 stars and a gear icon. Below that is a circular progress indicator showing a score of 167. The question text asks what is not included in an adverse opinion or disclaimer of opinion. Four options are listed: A (A modified opinion), B (An unmodified opinion), C (An explanatory paragraph), and D (A qualified opinion). Option B is highlighted in green, indicating it is the correct answer.



0 ★  

An auditor selects a sample from the file of shipping documents to determine whether invoices were prepared. This test is performed to satisfy the audit objective of:

A Accuracy

B Completeness

C Control

D Existence

ACE 2 BETA Build 19 Development Build

Detailed description: This screenshot shows a question in the SMU Challenge. At the top, there is a score of 0 stars and a gear icon. Below that is a circular progress indicator showing a score of 181. The question text describes a sample selection process for shipping documents to determine if invoices were prepared. Four audit objectives are listed: A (Accuracy), B (Completeness), C (Control), and D (Existence). Option B is highlighted in green, indicating it is the correct answer.

Screenshots of SMU Challenge

Options

BONUS

The audit client's physical inventory count has been lower than what was shown on the books at the time of the count. Contributing to the inventory discrepancies could be deficiencies in internal control that lead to failure to record some:

Purchases returned to vendors.

Sales discounts allowed.

Sales returns received.

Cash purchases.

ACE 2 BETA Build 19

Slots

BONUS

Transferred 2,000 completed units from Process A to Process B

Materials inventory

WIP: Process A

WIP: Process B

FG: Process B

COGS: Process A

DR

CR

Confirm

ACE 2 BETA Build 19

Combination

BONUS

Before accepting an audit engagement, a successor auditor should make specific inquiries of the predecessor auditor regarding

Dispute between predecessor and client on audit procedure or accounting principle

The predecessor's evaluation of matters of continuing accounting significance

The predecessor's understanding as to the reasons for the change of auditors

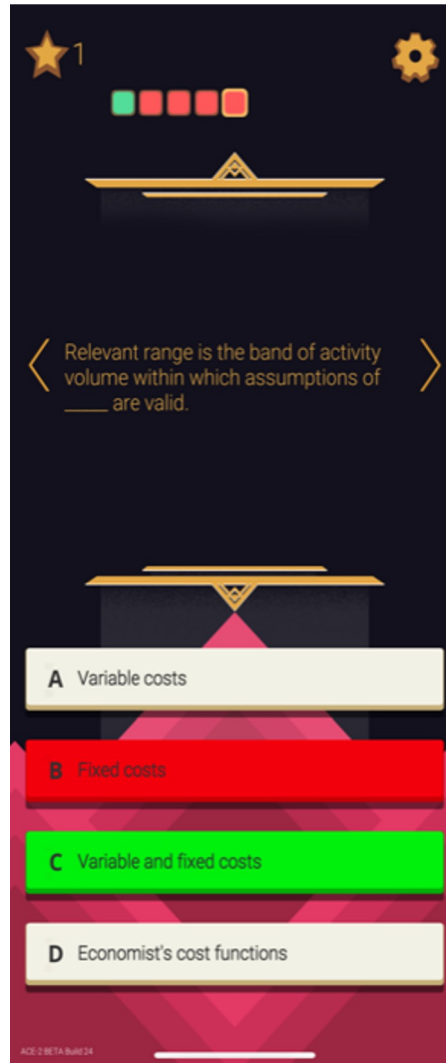
The predecessor's assessments of inherent risk and judgments about materiality

Confirm

ACE 2 BETA Build 19

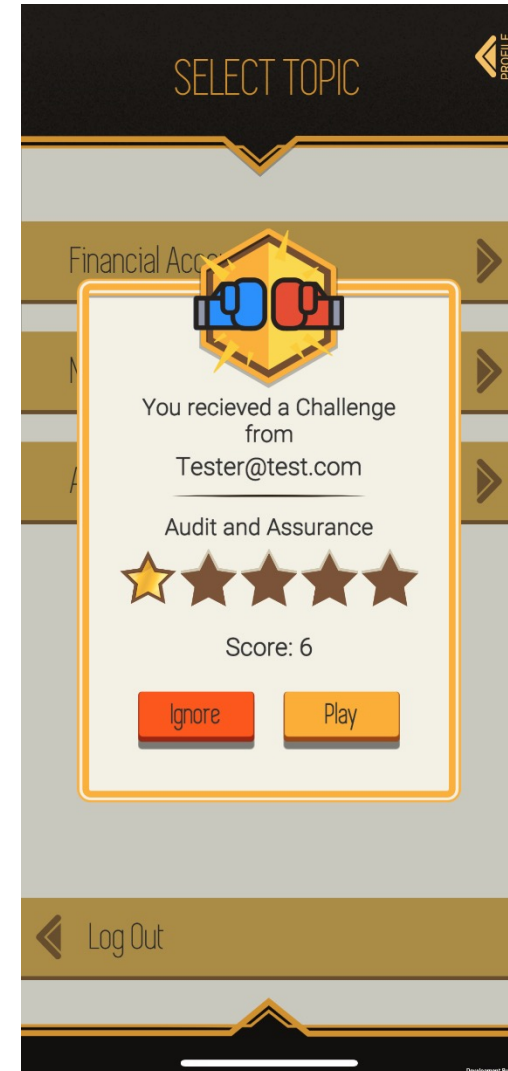
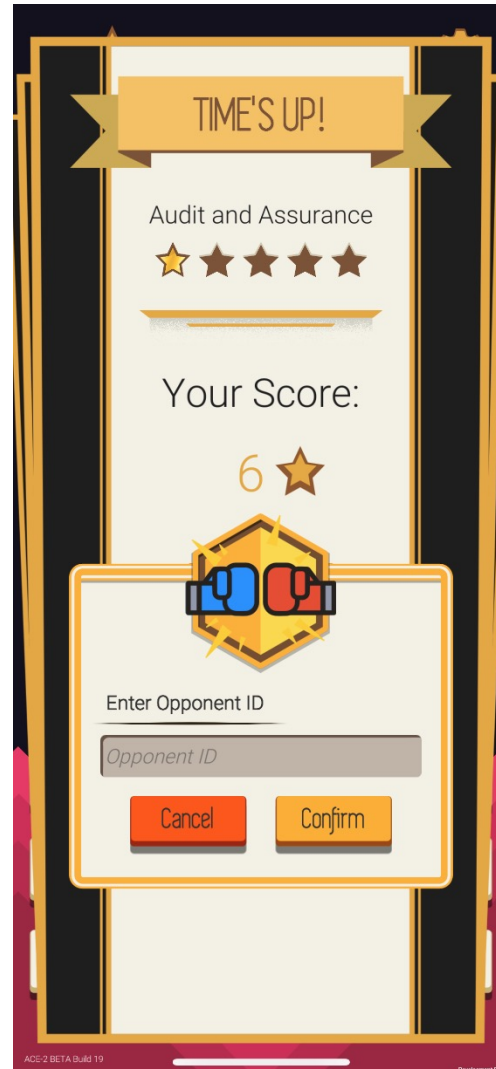
Screenshots of SMU Challenge

Review after the game

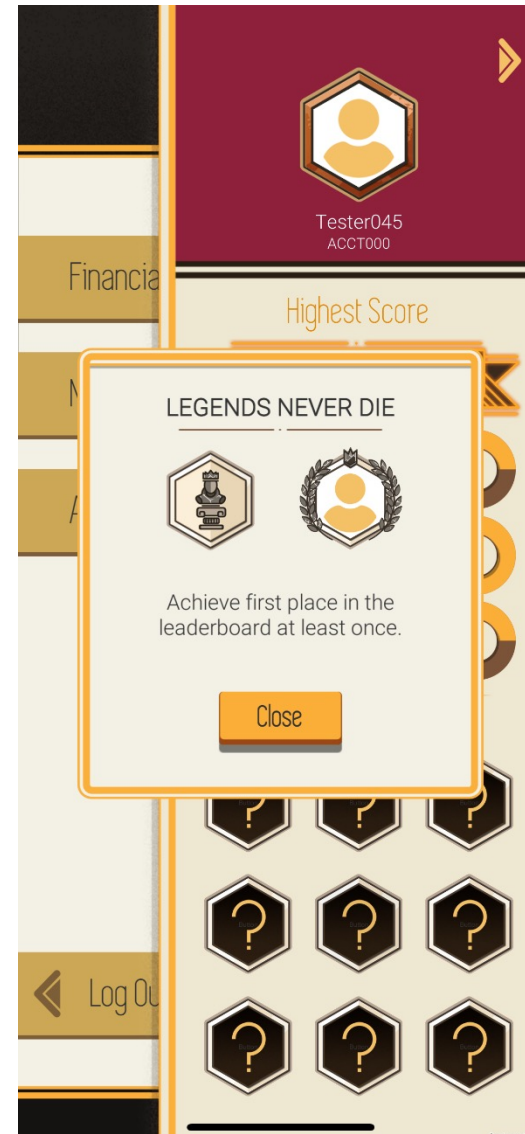
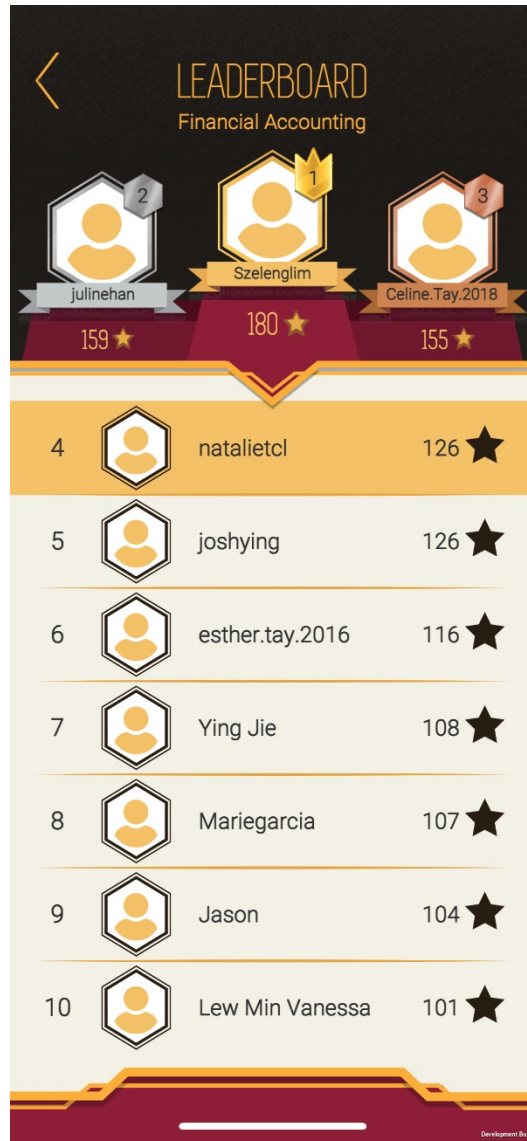


Screenshots of SMU Challenge

Multiplayer Challenges



Screenshots of SMU Challenge



Content Management System

The screenshot displays the 'SMU Challenge Admin Questions Database' interface. At the top right, there is a 'Log Out' link. Below the header, a 'Manage Topics' button is centered. The main content area is organized into four sections, each with a title and three action buttons: 'Main Trivia Questions', 'Bonus - Options', 'Bonus - Slots', and 'Bonus - Combinations'. Each section contains 'Search', 'Create', and 'Import' buttons.

SMU Challenge Admin Questions Database [Log Out](#)

[Go to User Management](#)

[Manage Topics](#)

Main Trivia Questions

[Search](#) [Create](#) [Import](#)

Bonus - Options

[Search](#) [Create](#) [Import](#)

Bonus - Slots

[Search](#) [Create](#) [Import](#)

Bonus - Combinations

[Search](#) [Create](#) [Import](#)

Content Management System

SMU Challenge Main Trivia Questions

[Log Out](#)

[< Go Back](#)

Topic Rank

Text Search

Search

ID	Topic	Question	Answer 1	Answer 2	Answer 3	Answer 4	Correct Answer	Rank	Case ID
2738	3	The Singapore Standards on Auditing (SSA) is set by:	International Federation of Accountants (IFAC)	Institute of Singapore Chartered Accountants (ISCA)	International Auditing and Assurance Standards Board (IAASB)	International Accounting Standards Board (IASB)	2	1	0
2739	3	The risk associated with a company's survival and profitability is referred to as:	Control Risk	Business Risk	Detection Risk	Information Risk	2	1	0
2740	3	The risk that a company will not be able to meet its obligations when they become due is an aspect of	Inherent risk	Relative risk	Information risk	Business risk	4	1	0
2741	3	Which of the following is not a type of auditors' opinion?	Adverse	Unmodified	Ordinary	Qualified	3	1	0
2742	3	An attitude that includes a questioning mind, being alert to conditions that may indicate possible misstatements, and a critical assessment of audit evidence is referred to as:	Reasonable assurance	Auditing mindset	Audit neutralism	Professional skepticism	4	1	0
			Both management and auditors	Management must provide the auditors	Auditors should have unrestricted	The auditor may obtain			

Students' Feedback

- 242 survey respondents

	Questions (1 = strongly disagree to 7 = strongly agree)	Mean	Std. Dev.
1	The design of ACE was appealing and highly motivating to use.	5.85	0.95
2	ACE was engaging.	6.05	0.86
3	ACE challenged me intellectually.	6.05	0.84
4	ACE helped me learn accounting.	5.76	1.02
5	I would recommend ACE to my peers.	6.01	0.84
6	Overall, I am satisfied with ACE.	6.00	0.84

“What do you like about the app?”

- Fun and convenient way to revise accounting on the go
- Makes me feel like I’m making better use of my time on my way to school rather than staring out of the window
- Interactive interface that keeps me engaged. Helps me retain the knowledge better as compared to textbook
- Time limit challenges me to think quickly
- Leaderboard encourages people to do well

Challenges of App Development

- Management support and funding
 - Technology-enhanced learning grant under SMU Centre for Teaching Excellence
- Developing the concept of the game
 - Target audience
 - Relevance to learning objectives of the course
 - Ease of maintenance
 - Scalability
 - Time and costs

Challenges of App Development

- Technical issues:
 - Technical compatibility of upgrades
 - Server hosting and security issues
- Content creation
- Attracting students to play

Thank You

Do check out <http://smu.sg/ace>
or search for
“SMU Challenge”
in the App Store or Google Play.