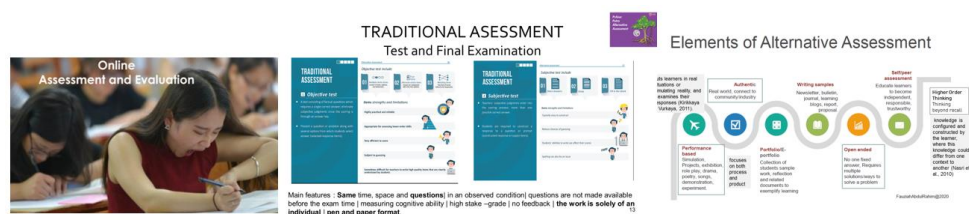


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Background

EXAMINATION – Issues and Challenges in the online environment



- Online examination cheating in an absence of proctoring tools
- The need to preserve integrity in an online examination
- This invention originated from selecting several strategies from the listed fourteen strategies to reduce cheating on online examination (<https://www.facultyfocus.com/articles/educational-assessment/fourteen-simple-strategies-to-reduce-cheating-on-online/>), and combining it with authentic examination questions crafted through adoption of several variables for designing authentic tasks and projects (<http://www.ascd.org/professional-development/webinars/authentic-tasks-and-projects-webinar.aspx>)
- This combined process is named as the Two-Steps approach; solution to any individual/organization to conduct quality online examination when proctoring tools are not available or when the cost of online examination need to be optimized.

Novelty/ Originality/ Inventiveness

- No financial implication involved.
- No expensive proctoring devices required.
- Suitable to be used by various stakeholders (school, higher learning institutions, agencies, ministries, industries and other relevant parties) who have the necessity to conduct online examination.)
- Reliable results obtained and integrity achieved

Benefits/Usefulness/Applicability

- Can be used by anyone and various stakeholders (school, higher learning institutions, agencies, ministries, industries and other relevant parties) who have the necessity to conduct online examination.
- As the approach does not require external tools or software as it is now, it offers an attractive solution to perform quality online examination with integrity being observed with no financial implication to the stakeholder.

Status of Innovation

- Has been piloted on two formal semesters (Semester II 2019/2021 and Semester I 2020/2021) with total participants 111 second year undergraduate students.
- Findings have been presented to various stakeholders.
- Apply for copyright.

Achievement/Award

- Gold Medal at the International Putra InnoCreative Poster Competition, International Putra InnoCreative Carnival in Teaching and Learning 2020. 22nd - 30th October 2020. Universiti Putra Malaysia. Integrating Strategies To Reduce Cheating With Authentic Questions To Optimise Online Examination.

Cost Analysis

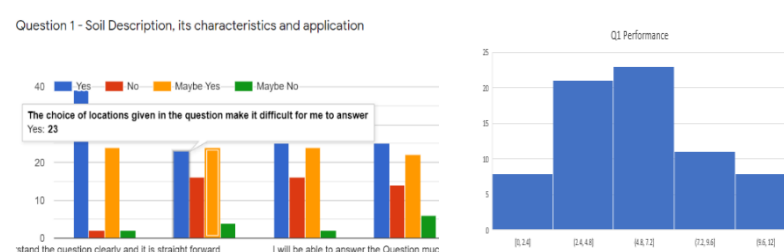
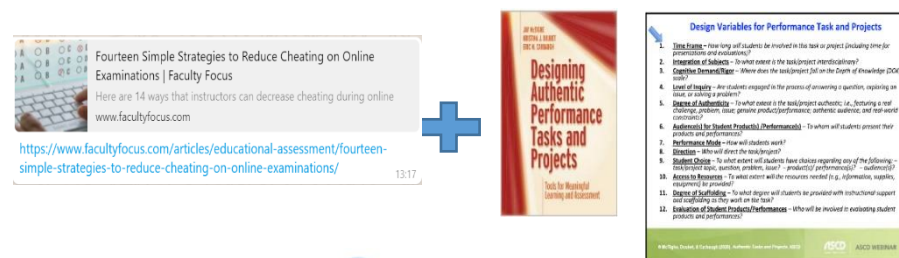
- Cost of proctoring tools subscription and staff training at UMP/ typical institution ~ RM10,000 – 30,000 / year.
- Cost of upskilling staff on formulating authentic examination questions ~ RM3,000 one-off.
- Total saving of RM7,000- 25,000 yearly

State of the Art/ Methods

The two-steps approach for enhancement of an online examination integrity

- Integrating Step 1: applying strategies to reduce cheating with
- Step 2: formulating authentic examination questions using design variables for performance task and projects
- No proctoring tools required.

Product Image and Product Characteristics/Results



Students result on Semester II Session 2019/2020

Publication

- Shared and disseminated through
- Using Alternative Assessment for Meaningful Learning; Universiti Malaysia Pahang, Malaysia (28 May 2020)
- Designing Authentic Examination Questions; Faculty of Civil Engineering Technology, Universiti Malaysia Pahang, Malaysia (3 July 2020)
- Dealing with Alternative Assessment, University of Malaya, Malaysia (4 June 2020)
- Online Assessment, Universiti Teknologi Petronas, Malaysia (11 August 2020)
- Future Ready Curriculum, Universiti Malaysia Kelantan, Malaysia (9 September 2020)
- Evaluation and Quality Assurance in the New Normal: Expectation vs. Reality, Sultan Qaboos University, Oman (19 October 2020)

Marketability & Commercialisation

- The Two-Steps approach innovation will be packaged as digital examination software development and will be commercialised

Environmental Impact

- Reducing e-waste to zero by opting not to use proctoring tools and devices

Collaboration/Industrial Partner

- Not yet