LEARNING ABOUT ACADEMIC INTEGRITY AND ETHICS USING MOBILE TECHNOLOGIES AND AUGMENTED REALITY

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Outline

• About Hong Kong Baptist University
• Objectives
• Learning activities design
• Pilot study and results
• Conclusion and next step
Whole Person Education @ HKBU

 Whole Person Education is the Institution’s founding educational philosophy since its inception in 1956
<table>
<thead>
<tr>
<th>Citizenship</th>
<th>Be responsible citizens with an international outlook and a sense of ethics and civility;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Have up-to-date, in-depth knowledge of an academic specialty, as well as a broad range of cultural and general knowledge;</td>
</tr>
<tr>
<td>Learning</td>
<td>Be independent, lifelong learners with an open mind and an inquiring spirit;</td>
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<tr>
<td>Skills</td>
<td>Have the necessary information literacy and IT skills, as well as numerical and problem-solving skills, to function effectively in work and everyday life;</td>
</tr>
<tr>
<td>Creativity</td>
<td>Be able to think critically and creatively;</td>
</tr>
<tr>
<td>Communication</td>
<td>Have trilingual and biliterate competence in English and Chinese, and the ability to articulate ideas clearly and coherently;</td>
</tr>
<tr>
<td>Teamwork</td>
<td>Be ready to serve, lead and work in a team, and to pursue a healthy lifestyle.</td>
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Academic Integrity Online Tutorial (AIOT)

Welcome to Academic Integrity Online Tutorial!

This online tutorial is designed to be an introduction for all students of HKBU in promoting academic integrity by increasing awareness of this issue, and offering suggestions and solutions to avoid committing academic misconduct unintentionally.

3 steps to complete the online tutorial:

1. Go through the “Academic Integrity Online Tutorial” carefully.
2. Complete the “Post-tutorial Quiz” with 80% or higher score
3. Make a “Declaration”

• Inclusion in the student orientation activities for all new students to understand the importance of academic integrity
A UGC-Funded Project (HK$8 million)

- Funded by University Grants Committee (UGC) of the Hong Kong SAR and HKBU (for 3 years)

- Title: *Reinforcing the Importance of Academic Integrity and Ethics in Students through Blended Learning – A Deployment of Augmented Reality Applications*

- Inter-institutional project:
  - The Hong Kong Baptist University (Lead)
  - The Hong Kong Polytechnic University
  - The Chinese University of Hong Kong
  - The Hong Kong Institute of Education
Objective

• Use a combination of mobile technology and augmented reality to facilitate students’ learning of academic integrity and ethics

• Mobile learning activities conducted in real-world environments (a form of situated learning) can help students connect their learning with everyday lives. (Johnson et al., 2011; Pegrum, 2014)
Mobile learning activities are activated at checkpoints using QR Code, geolocation-mapping (GPS), or Image Recognition.
• Learning activities are written in relation to physical objects found at each checkpoint location

• **Augmented reality** is realised by dynamically overlaying contextually relevant digital information on a real-world environment (Pegrum, 2014)
Each checkpoint reveals a scenario and/or question related to academic integrity and ethics.
Students explore different choices related to academic integrity and ethics, and learn about their consequences.
TIE-1: A Pilot Learning Trail
• TIE-1: a pilot learning trail with four checkpoints
• Conducted at HKBU as a class activity with two groups of students (45 students), at both undergraduate (UG) and postgraduate (PG) levels from various disciplines of study.
Project website: http://www.ar-learn.com/
Data Collected

Four sets of data were collected from 33 students (13 male, 20 female):

1. Usage Experience Survey
2. Qualitative Feedback
3. Click Stream (Parallel session #3; venue: C.4.16)
4. Responses to Pre- and Post-Trail Questions (Parallel session #3; venue: C.3.11)
Usage Experience Survey
# Usage Experience Survey

<table>
<thead>
<tr>
<th>1. I find this App easy to use.</th>
<th><strong>Ease of Use</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. My interaction with this App is clear and understandable.</td>
<td></td>
</tr>
<tr>
<td>3. This App makes learning academic integrity and ethics more interesting.</td>
<td><strong>Fun &amp; Interest</strong></td>
</tr>
<tr>
<td>4. Working with this App is fun.</td>
<td></td>
</tr>
<tr>
<td>5. The WiFi connection is stable.</td>
<td><strong>Data Stability &amp; System Quality</strong></td>
</tr>
<tr>
<td>6. My overall usage experience with this learning trail is good.</td>
<td></td>
</tr>
</tbody>
</table>

(1= **Strongly Disagree**, 2=**Disagree**, 3=Neutral, 4=**Agree**, 5=**Strongly Agree**)  

(adapted from Davis, 1989; Venkatesh et al., 2003)
## Survey Results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I find this App easy to use.</td>
<td></td>
<td><strong>3.67</strong></td>
<td>0.82</td>
</tr>
<tr>
<td>2. My interaction with this App is clear and understandable.</td>
<td></td>
<td><strong>3.88</strong></td>
<td>0.70</td>
</tr>
<tr>
<td>3. This App makes learning academic integrity and ethics more interesting.</td>
<td></td>
<td><strong>4.06</strong></td>
<td>0.75</td>
</tr>
<tr>
<td>4. Working with this App is fun.</td>
<td></td>
<td><strong>3.79</strong></td>
<td>0.96</td>
</tr>
<tr>
<td>5. The Wi-Fi connection is stable.</td>
<td></td>
<td><strong>2.85</strong></td>
<td>1.06</td>
</tr>
<tr>
<td>6. My overall usage experience with this learning trail is good.</td>
<td></td>
<td><strong>3.76</strong></td>
<td>0.87</td>
</tr>
</tbody>
</table>

*(1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)*
Qualitative Feedback (Summary)
1. Positive and Engaging

- “I quite appreciate the design of (the) app.”
- “Interesting – enhance communication with others”
- “I think it’s quite interesting to do a small hunt.”
2. Poor Internet Connectivity

- “Improve the Wifi…”
- “...wi-fi can be fix to be stable.”
- “School wifi connection is not good”
- “Connection is too weak... wifi is hard to detect”
- “… But the wifi-service is a quite problem…”
- “WIFI connection fail”
3. Improvements

• “Too much reading.”
• “…also the text is quit(e) long that I don’t like to read. I suggest that we can have another way to learn the plagiarism and citation. For example, video…”
• “Could include more interesting content in the interactive game, for example, ‘real-life’ whatsapp message with the character in the game.”
3. Improvements (cont.)

• “Add in some competition element in the game, like the fastest will get the biggest gift etc.”
• “...(include) sharing function: FB(Facebook), Twitter, Instagram.”
Summary

Usage Experience Survey

Students had a positive experience attending the learning trail

Qualitative Feedback

Include multimedia contents, shorter case text; Stable internet connection (3G/4G data)

Pre / Post-Question

Students demonstrates awareness of specific concept (e.g. Data Falsification) after the trail

Click Stream

Less obvious question and response choices induce students to explore different options
Revision of TIE-1 → TIE-2

• Scenario presented in storyboard
Revision of TIE-1 → TIE-2

- Use video to replace textual explanation
What’s Next?
What’s Next?

• Conduct the revised learning trail (TIE-2) with more student cohorts
  – 133 students (UG and PG) in Semester 2 (AY2104-15); results to be published
  – New students to go on a TIE in September 2015

• Adapt and extend the current pilot learning trail to partnering institutions’ campus in Hong Kong (AY2015-16)
What’s Next?

• Develop discipline-specific learning trails at HKBU:
  – Biology
  – Chinese Medicine
  – Physical Education
  – Language Centre
  – Student Residence Hall
References

- Russell, T. (2001). The no significant difference phenomenon. In R. NC (Ed.), *A comparative research annotated bibliography on technology for distance education (5th ed.)*: The International Distance Education Certification Centre.
Thank You!

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