More than Knowing Right from Wrong: Nurturing Academic Integrity and Ethics with Mobile Learning Trails

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OUTLINE

Background and Objectives (a short video)
Overview of Trails of Academic Integrity and Ethics (TIEs)
Results Highlight
Showcase of a Discipline-specific TIE (TIE-SR)
Moving Forward

http://ar-learn.com
Background of AIE-AR Project & Teachers’ Feedback

Video link: http://chtl.hkbu.edu.hk/RE2016/teacher.html
7 HKBU Graduate Attributes

Be responsible citizens with an international outlook and a sense of ethics and civility;

Have up-to-date, in-depth knowledge of an academic specialty, as well as a broad range of cultural and general knowledge;

Be independent, lifelong learners with an open mind and an inquiring spirit;

Have the necessary information literacy and IT skills, as well as numerical and problem-solving skills, to function effectively in work and everyday life;

Be able to think critically and creatively;

Have trilingual and biliterate competence in English and Chinese, and the ability to articulate ideas clearly and coherently;

Be ready to serve, lead and work in a team, and to pursue a healthy lifestyle.
Though most tertiary institutions have emphasized the importance of AIE by offering classes, tutorials and learning activities to help students understand the meaning and common practices of AIE, cases of plagiarism, data fabrication, etc. still arise with alarming regularity.

Interest Over Time – “Plagiarism”  

Google Trends (2016)

How can we turn abstract conceptual knowledge of AIE into understanding which is more directly linked to students’ everyday realities?

Could IT be used to combat an important issue brought on and worsened by IT itself?

If misconduct, e.g. plagiarism can be deterred in the first place this would reduce the need for detection!
AIE-AR Project

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

• Funded by University Grants Committee of the Hong Kong SAR, around HK$8 million; started in autumn of 2014

Project Objectives

• Enhance teaching and learning by helping students develop the concepts of academic integrity and ethics (AIE) through a thoughtful design of mobile learning activities to be conducted in real-world environment (a form of situated learning).

• Develop a learning environment supported by a combination of mobile technology and augmented reality (AR).

Project website: http://ar-learn.com
The AIE-AR team-members

The Team

Core HKBU team-members

The Hong Kong Polytechnic University

Hong Kong Baptist University

The Education University of Hong Kong

The Chinese University of Hong Kong

The University of Western Australia
TIEs Overview

**In Operation**
- TIE-General
  - For cross-Institutions (CUHK, EdUHK & PolyU) transplantation
- TIE-HT (Hall Tutor)
- TIE-HUM (Humanites)
- TIE-LabS (Laboratory Safety)
- TIE-SL (Service Learning)
- TIE-SR (Sports and Recreation)

**Under Development**
- TIE-LC (Language Learning - English)
- TIE-BUS (Business Ethics & Corporate Social Responsibility)
• Pokémon Go released in July 2016
• TIE-General, with 4 scenarios, launched in January 2015.

TIE-General: 4 Scenarios

1) Plagiarism
QR code trigger

2) Data falsification

3) Citation and common knowledge
GPS trigger

4) Ethical use of library resources
Image recognition

Image recognition
### Data Collection

<table>
<thead>
<tr>
<th>TIE-General</th>
<th>No. of students (Jan 2015 – Oct 2016)</th>
<th>Other TIEs at HKBU</th>
<th>No. of students (Jan 2015 – Oct 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKBU (UG)</td>
<td>438</td>
<td>TIE-SR (Sports &amp; Recreation)</td>
<td>111</td>
</tr>
<tr>
<td>EdUHK (UG)</td>
<td>141</td>
<td>TIE-SL (Service Learning)</td>
<td>63</td>
</tr>
<tr>
<td>PolyU (UG)</td>
<td>24</td>
<td>TIE-HT (Hall Tutors)</td>
<td>46</td>
</tr>
<tr>
<td>CUHK (UG)</td>
<td>62</td>
<td>TIE-HUM (Humanities)</td>
<td>20</td>
</tr>
<tr>
<td>HKBU (PG)</td>
<td>151</td>
<td>TIE-LabS (Laboratory Safety)</td>
<td>118</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>816 (665 UG + 151 PG)</strong></td>
<td><strong>Total</strong></td>
<td><strong>358 (UG only)</strong></td>
</tr>
</tbody>
</table>

**1174 Students**

Reinforcing the importance of integrity and ethical leadership within disciplines

#### Four sets of data collected:

1. User Experience Survey
2. Qualitative Feedback
3. Clickstream Data
4. Pre- and Post-Trail Discussion

Perception data (indirect evidence)

Learning analytics (direct evidence)
1. User Experience Survey *(Example from TIE-General, n=982)*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find this App easy to use</td>
<td>3.75</td>
</tr>
<tr>
<td>My interaction with this App is clear and understandable</td>
<td>3.92</td>
</tr>
<tr>
<td>This App makes learning AIE more interesting</td>
<td>3.89</td>
</tr>
<tr>
<td>Working with this App is fun</td>
<td>3.74</td>
</tr>
<tr>
<td>The Wi-Fi connection is stable</td>
<td>3.27</td>
</tr>
<tr>
<td>My overall usage experience with this learning trail is good</td>
<td>3.81</td>
</tr>
</tbody>
</table>

*(Strongly Agree)*
2. Qualitative Feedback *(Example from TIE-HT, n=21)*

Question: After listening to different people’s views, what is your own view? What role do you see yourself in the cited situation?

- Role model
- I didn’t behave as a good role model
- Should be more attentive and respectful to my floor-mates
- Act as a mediator to understand things and get the problem solved
- Be a role model myself, be fair, just and mediate amongst the different parties
- Be fair and listen to different opinions
- I feel I have been irresponsible and should have listened more to my floor-mates’ requests
- Should invite floor-mates to share their feelings and take action accordingly as their representative
- I didn’t do my job properly to follow-up floor-mates’ requests, I am irresponsible and not detail-minded enough
- I should apologise to my floor-mates and take up my responsibilities

Remarks: Triangulation analysis illustrated that through the TIE-HT, hall tutors recognized the importance of behaving as ethical role models to their peer hall residents.
3. Clickstream Data  *(Example from TIE-General in “Business Ethics & Corporate Social Responsibility” course, n=195)*

<table>
<thead>
<tr>
<th>Task</th>
<th>Avg. of Time on Consequence</th>
<th>Avg. of Time on Choice</th>
<th>Avg. of Time on Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plagiarism</td>
<td>40.5971</td>
<td>6.2427</td>
<td>103.068</td>
</tr>
<tr>
<td>Citation</td>
<td>23.2333</td>
<td>2.1889</td>
<td>44.2222</td>
</tr>
<tr>
<td>Library Ethical Concern</td>
<td>6.2514</td>
<td>6.7263</td>
<td>42.7318</td>
</tr>
<tr>
<td>Data Falsification</td>
<td>16.1129</td>
<td>3.4946</td>
<td>75.914</td>
</tr>
</tbody>
</table>
3. Clickstream Data cont’d (Example from TIE-General in “Business Ethics & Corporate Social Responsibility” course, n=195)

Remarks: Clickstream data collected showed that the average time on tasks was reasonable and the ethical choices varied. Hence we can infer that cognitive processes for ethical reasoning had taken place on the TIEs, and consequently, students had learned to respect the dignity and rights of others through the learning trails.
4. Pre- & Post-Trail Discussions *(Text mining example from TIE-SR in “Leadership & Communication in Sport and Recreation” course, n=24)*

**Remarks:** Analysis of the pre-/post-trail discussion showed that students’ awareness of sports ethics was heightened with increased expression of terms like doping, physical violence, corruption, etc.
Showcase of TIE-SR

Emphasize on student generated materials

Three student and alumni societies/associations

• Physical Education & Recreation Management (PERM) Society.
• PERM Alumni Association
• Sport and Recreation Leadership (SRL) Association

Each association designed 10 scenarios on either academic integrity or ethics related to Sports and Recreation management/ Fitness and wellness.

Requirements
1. Relevance – daily life scenarios
2. Engaging – use of multi-media
3. Challenging – choices of answers require students to reflect
TIE-SR

Conducted four trials
• PERM Class – September 2015
• PREM Academic week – November 2015
• SRL society activity – December 2015
• PERM Class – September 2016

Procedures:
1. 2’s in a group, found the QR code, read the case, answered the question and got the “Checkpoint Code”
2. Completed post-trail worksheet
Qualitative comments from students

Quality of the TIE-SR?

Positive
• Good game
• Great app
• Very exciting
• Nice interactive game
• Challenges on find the QR code is excited
• Questions are good for understanding the ethics.

Negative
• Very bad WiFi connection
• Data connection relatively weak
• Take time to load the QR code
• Scanning speed is slow
• Connection is weak
• App works too slow
• Too many photos

Comments on scenarios

Real case The actors involved acted very well
It enhances the interaction.

The content is useful It is important to maintain fair sport environment.

Many people may not really know

Difficult to find the code the most memorable experience

Good video
Always happen
Teach others the sport ethics

Hard to find
Moving Forward

Refining the Process to Enhance Students’ Learning in AIE

• Expansion of subject-specific TIEs can reinforce ethical behaviour and professional standards in the discipline classes (*immersion in learning will be more comprehensive*)

• Incorporation of gaming elements to motivate collaborative as well as individual learning

• Encourage student-created scenarios (*involving students in the creation and design of scenarios*)

• Introduce to the rest of the UGC-funded institutions
Dissemination – Publications to Date

Refereed Journal Articles:

Book Chapter:

Conference Proceeding:
Reimagine Education Awards 2015
Silver Award (Regional Award Asia)

Reimagine Education Awards 2016
Shortlisted (Ethical Leadership Award)

ACPIl-ECEL 2016
Certificate of Merit
浸大虛擬「學習徑」
手機遊戲學道德

gan teng

HKBU eNews, HKBUCPRO, 22 Dec 2015

SingTao Daily (星島日報),
8 Jan 2016

WenWeiPo (文匯報),
16 Dec 2015
All our effort is for one goal:

Enhancing student learning to prepare our students to become future leaders with ethics and civility.
Students’ Feedback on TIEs

Video Link: http://chtl.hkbu.edu.hk/RE2016/student.html
Thank You!

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References

• Mohamed Amine Chatti, Anna Lea Dyckhoff, Ulrik Schroeder, Hendrik Thüs
• 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.