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
Hong Kong Baptist University
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>
</tr>
<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>
</tr>
</tbody>
</table>
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:
  o The Hong Kong Baptist University (Lead)
  o The Hong Kong Polytechnic University
  o The Chinese University of Hong Kong
  o 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)
Trail of Integrity & Ethics
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>Statement</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I find this App easy to use.</td>
<td>Ease of Use</td>
</tr>
<tr>
<td>2. My interaction with this App is clear and understandable.</td>
<td>Fun &amp; Interest</td>
</tr>
<tr>
<td>3. This App makes learning academic integrity and ethics more interesting.</td>
<td>Fun &amp; Interest</td>
</tr>
<tr>
<td>4. Working with this App is fun.</td>
<td>Fun &amp; Interest</td>
</tr>
<tr>
<td>5. The WiFi connection is stable.</td>
<td>Data Stability &amp; System Quality</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>Statement</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I find this App easy to use.</td>
<td>3.67</td>
<td>0.82</td>
</tr>
<tr>
<td>2. My interaction with this App is clear and understandable.</td>
<td>3.88</td>
<td>0.70</td>
</tr>
<tr>
<td>3. This App makes learning academic integrity and ethics more interesting.</td>
<td>4.06</td>
<td>0.75</td>
</tr>
<tr>
<td>4. Working with this App is fun.</td>
<td>3.79</td>
<td>0.96</td>
</tr>
<tr>
<td>5. The Wi-Fi connection is stable.</td>
<td>2.85</td>
<td>1.06</td>
</tr>
<tr>
<td>6. My overall usage experience with this learning trail is good.</td>
<td>3.76</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

TIE-1

Please also think about whether your information is considered to be **common knowledge** for your target audience.

Common knowledge refers to information that the average, educated reader would accept as reliable without having to look it up.

Citing sources protects you from committing plagiarism by acknowledging that specific information in your paper has been taken from another source.

If you are unsure about whether or not to cite a source, ask your professor for guidance.

Please also consider the following:

- **Check Point:** Status of Dr. Sun Yat-sen

However, if your audience are non-Chinese speakers, then they may not be familiar with the phrase, and thus this would not be considered a common knowledge. In this case, you should provide the proper citation.

- **Check Point:** Status of Dr. Sun Yat-sen

In our example, if your target audience are Chinese, then “公為天下” can be considered a common Chinese idiom, and therefore a citation is not required.

TIE-2
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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Academic Integrity and Ethics
# Ethical Reasoning Rubric

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet level 1 performance.

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethical Self-Awareness</strong></td>
<td>Student discusses in detail/analyses both core beliefs and the origins of the core beliefs and discussion have greater depth and clarity.</td>
<td>Student discusses in detail/analyses both core beliefs and the origins of the core beliefs.</td>
<td>Student states both core beliefs and the origins of the core beliefs.</td>
<td>Student states either their core beliefs or articulates the origins of the core beliefs but not both.</td>
</tr>
<tr>
<td><strong>Understanding Different Ethical Perspectives/Concepts</strong></td>
<td>Student names the theory or theories, can present the gist of said theory or theories, and accurately explains the details of the theory or theories used.</td>
<td>Student can name the major theory or theories she/he uses, can present the gist of said theory or theories, and attempts to explain the details of the theory or theories used, but has some inaccuracies.</td>
<td>Student can name the major theory she/he uses, and is only able to present the gist of the named theory.</td>
<td>Student only names the major theory she/he uses.</td>
</tr>
<tr>
<td><strong>Ethical Issue Recognition</strong></td>
<td>Student can recognise ethical issues when presented in a complex, multi-layered (grey) context AND can recognise cross-relationships among the issues.</td>
<td>Student can recognise ethical issues when issues are presented in a complex, multi-layered (grey) context OR can grasp cross-relationships among the issues.</td>
<td>Student can recognise basic and obvious ethical issues and grasp (incompletely) the complexities or interrelationships among the issues.</td>
<td>Student can recognise basic and obvious ethical issues but fails to grasp complexity or interrelationships.</td>
</tr>
<tr>
<td><strong>Application of Ethical Perspectives/Concepts</strong></td>
<td>Student can independently apply ethical perspectives/concepts to an ethical question, accurately, and is able to consider full implications of the application.</td>
<td>Student can independently apply ethical perspectives/concepts to an ethical question, accurately, but does not consider the specific implications of the application.</td>
<td>Student can apply ethical perspectives/concepts to an ethical question, independently (to a new example) and the application is inaccurate.</td>
<td>Student can apply ethical perspectives/concepts to an ethical question with support (using examples, in a class, in a group, or a fixed-choice setting) but is unable to apply ethical perspectives/concepts independently (to a new example).</td>
</tr>
<tr>
<td><strong>Evaluation of Different Ethical Perspectives/Concepts</strong></td>
<td>Student states a position and can state the objections to, assumptions and implications of and can reasonably defend against the objections to, assumptions and implications of different ethical perspectives/concepts, and the student's defence is adequate and effective.</td>
<td>Student states a position and can state the objections to, assumptions and implications of, and respond to the objections to, assumptions and implications of different ethical perspectives/concepts, but the student's response is inadequate.</td>
<td>Student states a position and can state the objections to, assumptions and implications of different ethical perspectives/concepts but does not respond to them (and ultimately objections, assumptions, and implications are compartmentalized by student and do not affect student's position.)</td>
<td>Student states a position but cannot state the objections to and assumptions and limitations of the different perspectives/concepts.</td>
</tr>
</tbody>
</table>

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Academic Integrity and Ethics

• Ethics is defined as an individual’s personal beliefs about whether a behavior, action, or decision is right or wrong.

• Ethical behavior is defined as behavior that conforms to generally-accepted social norms.

• An individual’s ethics and values are developed from a young age, structured within the family institution and can vary tremendously from culture to culture.

• Advances in information technology (IT) have put students under pressure to perform quickly and at a high level, and act as a catalyst for unethical behavior or low-integrity actions.

(Owunwane, Rustagi, & Dada, 2010)
Augmented Reality + Mobile
Augmented Reality

• Although the term ‘AR’ is sometimes used in the narrow, technocentric sense of an annotated viewfinder display, it has been suggested that a broad conceptual definition is more productive (FitzGerald et al., 2012; Wu, Lee, Chang, & Liang, 2013).

• Dynamically overlaying contextually relevant digital information on a real-world environment (Pegrum, 2014, p.78)
AR + Mobile for Situated / Embedded Learning

• Allow students to learn in real-world settings with the support of digital information and communication channels, helping them to connect their learning with their everyday lives through a situated, or embedded, learning approach (Johnson et al., 2011)

• The need to transfer abstract learning from a formal setting to the real-world setting where it applies (transfer distance) is minimized, if not eliminated, since students are already learning in the real world (Pegrum, 2014).
Screenshots
Situation...
I am a new student at HKBU. My first assignment is due tomorrow, but I have not completed it. My friend is kind enough to let me borrow her assignment so I can copy it.

If I were caught this time, will I be forgiven for a first-time offense for committing an act of academic dishonesty?

Yes  No

That is correct! Consequences for any form of academic dishonesty can be severe. You should abide by the University's rules and regulations that preserve academic integrity and abide by them at all times!

Copy each other's homework assignment is a form of plagiarism in the University. Plagiarism means taking someone else's words or ideas and passing them off as your own, and is considered to be the most common form of academic dishonesty.

Check Point Code:
(Copy this to your map hand out)

Collected all four Checkpoint Codes?

Yes  No
Check Point: Statue of Dr. Sun Yat Sen - GPS

Your current location:

“天下為公” is a famous Chinese phrase. If we mention this phrase in our work, should we cite it for authorship?

unsure  yes  no

That’s correct! Citing your source is always a good practice.

back  next

When in doubt, cite your source. You will never find yourself in trouble if you acknowledge a source even when it’s not absolutely necessary.

back  next

Check Point: Statue of Dr. Sun Yat Sen

However, what may be common knowledge in one culture, nation, academic discipline or peer group may not be common knowledge in another.

公為天下

In our example, if your target audience are Chinese, then “天下為公” can be considered a common Chinese idiom, and therefore a citation is not required.

Got it!

next

Check Point: Statue of Dr. Sun Yat Sen

Please also think about whether your information is considered to be common knowledge for your target audience.

back  next

Common knowledge refers to information that the average, educated reader would accept as reliable without having to look it up.

Check Point: Statue of Dr. Sun Yat Sen

Citing sources protects you from committing plagiarism by acknowledging that specific information in your paper has been taken from another source.

back  next

If you are unsure about whether or not to cite a source, ask your professor for guidance.

Please also consider the following…
Your current location:

Situation...
You are chatting with your best friend, Paul, about a library book...

What should you tell Paul?
Don't do that! Other students will not be able to find the book!
Well, as long as you put it back on the original shelf later, then I guess that's OK...
Paul, that is such a CLEVER idea!!

Placing the books back on the correct shelf is the behavior of a responsible student and citizen. Ethically, we should be considerate when using public resources. Doing so is a sign of respect for one another in our community.

That's right. Paul's scheme is selfish and unethical!

No, because Paul will be denying other students access to the book while he uses it. This is selfish and unethical.

No, Paul's scheme is selfish and unethical!
Checkpoint 4 (Bee Recycle Bin - Camera Image Recognition)

**Situation...**
Felix is working on his final year project on the topic of recycling.
He is conducting an interview survey to gather data on recycling ton usage by HKBU staff and students.

**Today, you are chatting with Felix about his project...**

**That’s correct!**
Depending on the project brief, change of method for data collection might be acceptable. Before you change anything, be reminded to consult your tutor to find out what is the bottom line.

**Absolutely not!** Even if the results were not affected, it is critical to indicate your survey method so that others can validate the results. You should state clearly how your data are collected.

**That’s right. Always check with your tutor or teacher if you are in doubt.**
Data Fabrication refers to the incorrect use of information (e.g. misrepresentation of its meaning or data filtering without proper rationale).

**Sometimes the results do not come from experiments conducted by you, but by others and their results are listed in books. It is therefore important for you not only to make it clear where you obtained these results (i.e. not just acknowledge the others’ efforts, but also indicate to your readers how you obtained the results), so they can further evaluate your work.**
Pre- / Post-Trail Questions
• **Pre-trail question:**
  – *In your own words, what is your understanding of the words "Plagiarism" and "Citation"? (within 100 words)*

• **Post-trail question:**
  – *From the trail, what have you learnt about "Plagiarism" and "Citation"? And how do they relate to Academic Integrity?*

Response are passed to *The Hong Kong Institute of Education* (HKIEd) for Learning Analytic processing. (Li et al., 2015).
Learning Analytic Results

**RPG Students**

- Ethic: Pre - 2, Post - 1
- Data Falsification: Pre - 10, Post - 10
- Plagiarism: Pre - 18, Post - 18
- Citation: Pre - 16, Post - 16

**GA Students**

- Ethic: Pre - 4, Post - 2
- Data Falsification: Pre - 10, Post - 10
- Plagiarism: Pre - 16, Post - 16
- Citation: Pre - 14, Post - 14

# of Students
Click Stream
Checkpoint 1 Click Data

START

Situation...
I am a new student at HKBU. My first assignment is due tomorrow, but I have not completed it. My friend is kind enough to let me borrow her assignment so I can copy it.

If I were caught this time, will I be forgiven for a first-time offense for committing an act of academic dishonesty?

Some students think the University will treat first-time offenders who commit an act of academic dishonesty in a lenient manner... but sorry, that is NOT true! HKBU treats academic dishonesty as a serious matter and will show no leniency for any form of academic dishonesty.

That is correct! Consequences for any form of academic dishonesty can be severe. You should abide by the University’s rules and regulations that preserve academic integrity and abide by them at all times!

0% 100%
Checkpoint 2 Click Data

Checkpoint: Statue of Dr. Sun Yat-sen

“天下为公” is a famous Chinese phrase. If we mention this phrase in our work, should we cite it for authorship?

- **Yes**: 81.2%
- **Unsure**: 12.5%
- **No**: 6.3%

When in doubt, cite your source. You will never find yourself in trouble if you acknowledge a source even when it's not absolutely necessary.

That's correct! **Citing** your source is always a good practice.
• Choices at Checkpoint 1 and 3 are very obvious.

Obvious question and choices may lead students to miss some of the contents

• Checkpoint 2 and 4 present less obvious choices

Less obvious question and choices encourage students to explore different options
Revisions (TIE-2)
Revision of TIE-1 Design

• Use streaming video contents to replace textual explanation

https://www.youtube.com/watch?v=wosqvFSKGGY