

# 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







# WPE @ HKBU

embodied by the 7 Graduate Attributes

5

## 公民 Citizenship

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

## 知識 Knowledge

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

## 學習 Learning

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

## 技能 Skills

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

## 創意 Creativity

Be able to think critically and creatively;

## 溝通 Communication

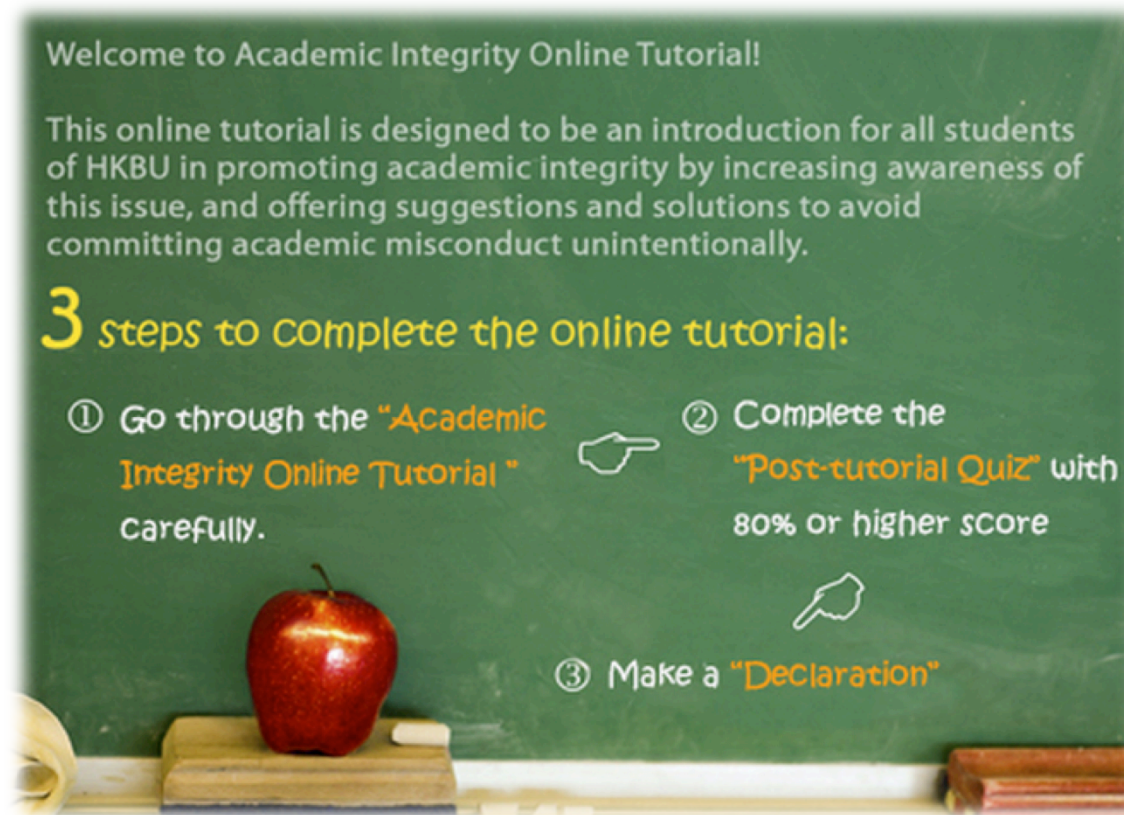
Have trilingual and biliterate competence in English and Chinese, and the ability to articulate ideas clearly and coherently;

## 群體 Teamwork

Be ready to serve, lead and work in a team, and to pursue a healthy lifestyle.



# Academic Integrity Online Tutorial (AIOT)



- 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)



***TIE***



**Mobxz MLS**  
BorderlessHealthLab Pte Ltd.



# 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


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




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

孫中山先生  
Dr. Sun Yat-sen  
1866-1925  
天下為公  
The World for All

**unsure** **yes** **no**

 **Check Point:**  
**ACC209**




**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**


 **Paul**  
online


Hey Paul, still have that useful reference book you borrowed from the library?

Yea.. but I got a book-recall notice from the library...another student has requested it.. got to return it today! 😞

Next time I will hide the book on another shelf in the library, so only I can locate it... and no one else can find it! 😏

**back**

 **Check Point:**  
**Library Book Return**



**What should you tell Paul?**

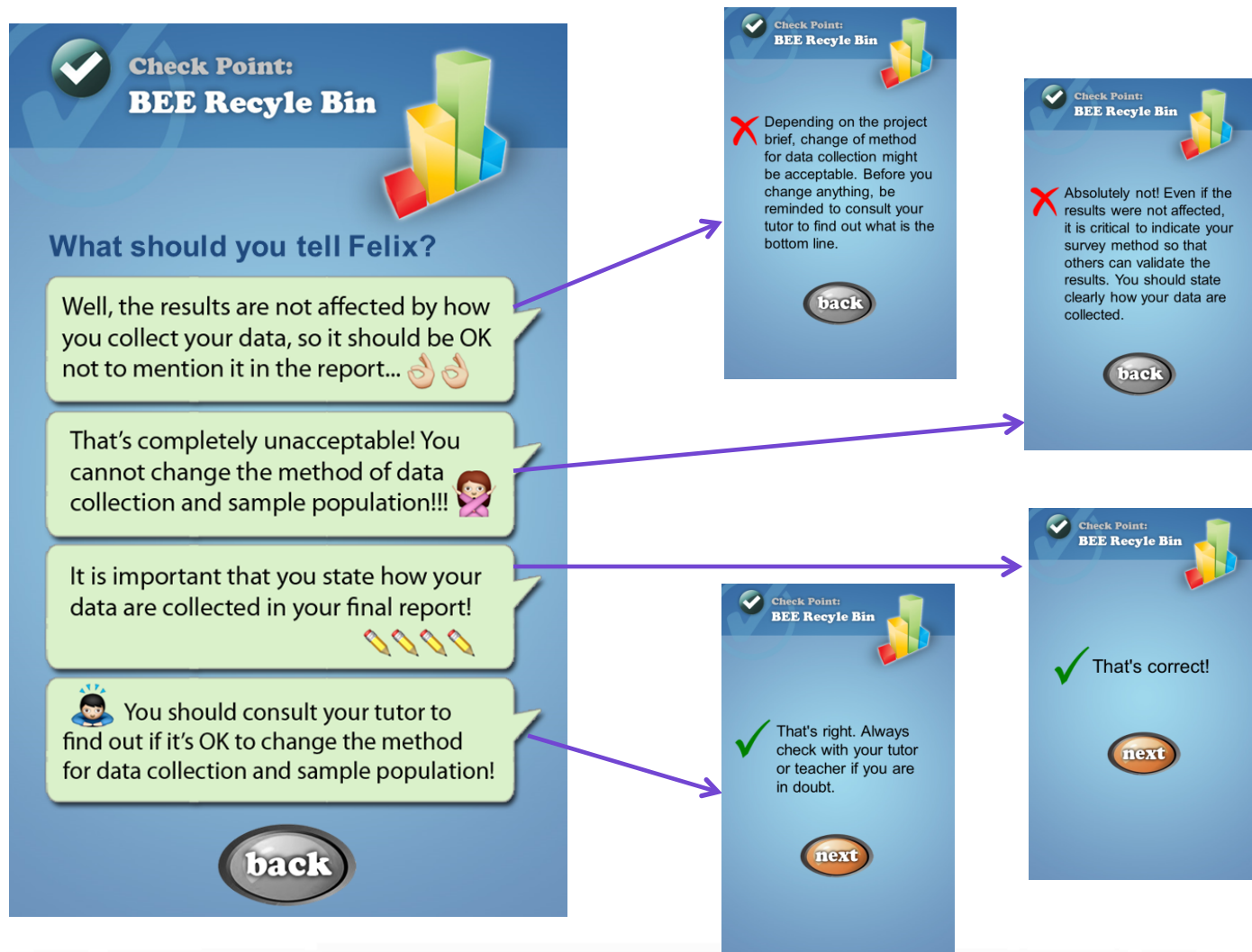
😞 Don't do that! Other students will not be able to find the book!!

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!!! 👍

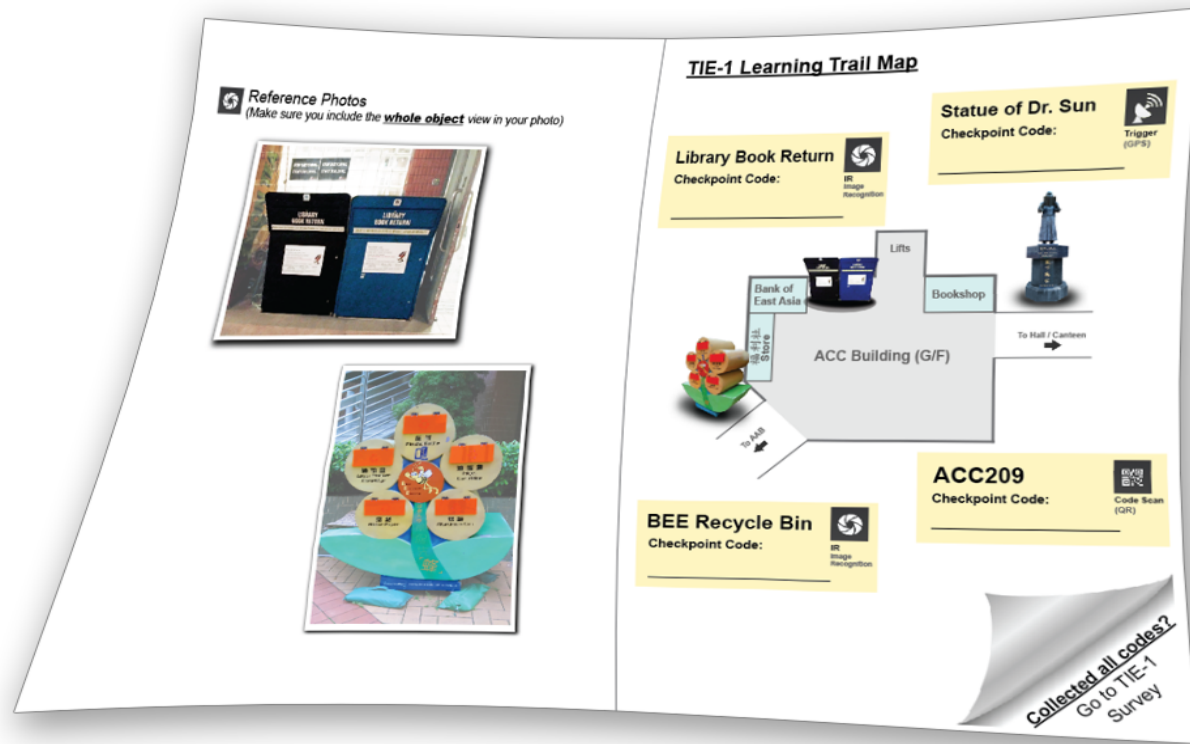
**back**

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-Trial Questions (Parallel session #3; venue: C.3.11)

# Usage Experience Survey

# Usage Experience Survey

1. I find this App easy to use.

*Ease of Use*

2. My interaction with this App is clear and understandable.

3. This App makes learning academic integrity and ethics more interesting.

*Fun & Interest*

4. Working with this App is fun.

5. The WiFi connection is stable.

*Data Stability & System Quality*

6. My overall usage experience with this learning trail is good.

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

*(adapted from Davis, 1989; Venkatesh et al., 2003)*

# Survey Results

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

***(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”*

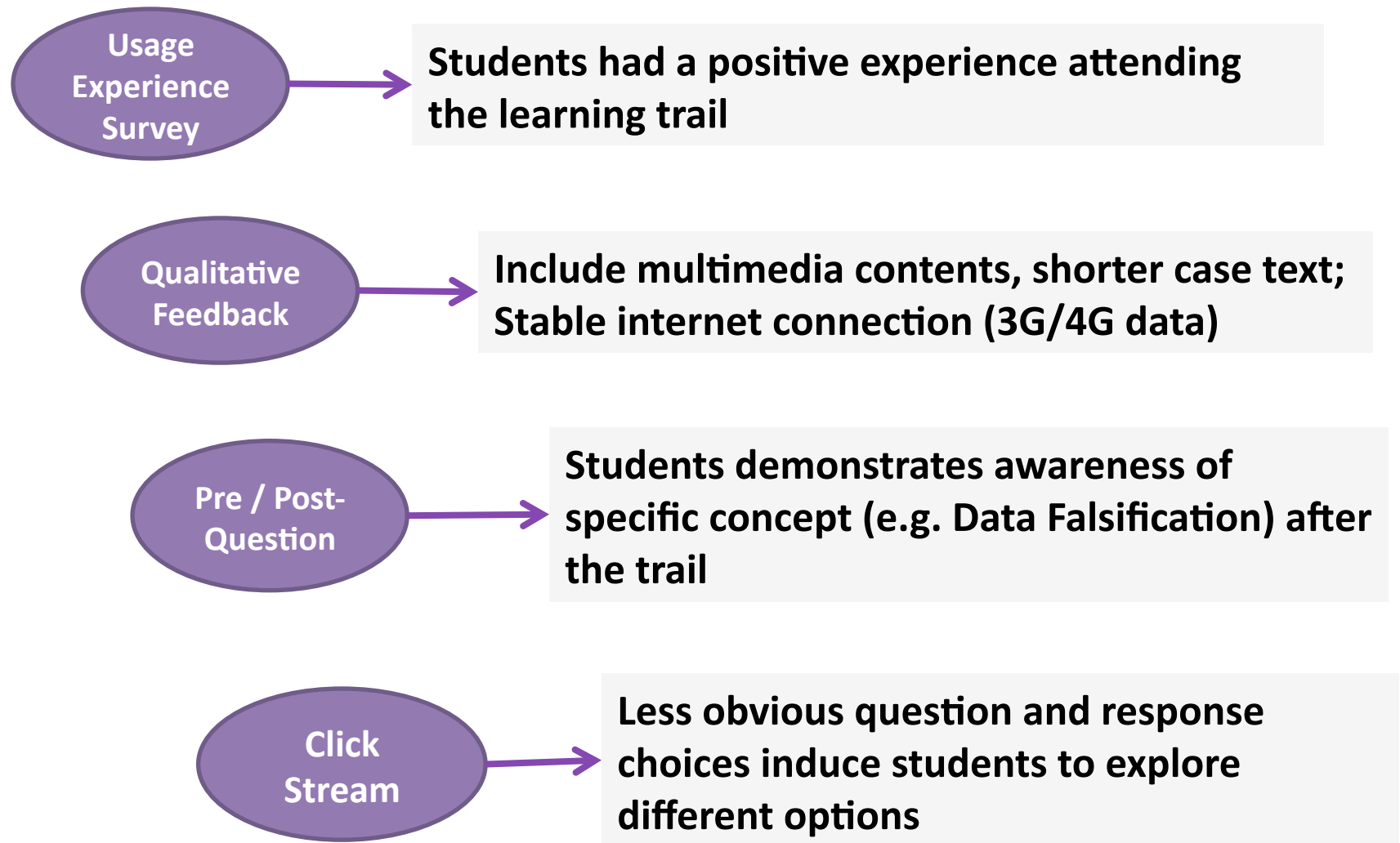
### 3. Improvements

- *“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




# Revision of TIE-1 → TIE-2

- Scenario presented in storyboard

TIE-1



 **Check Point:**  
**ACC209**



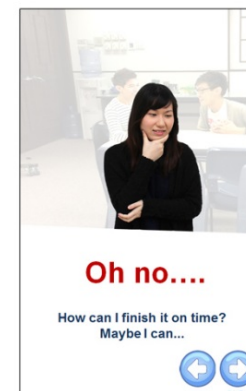
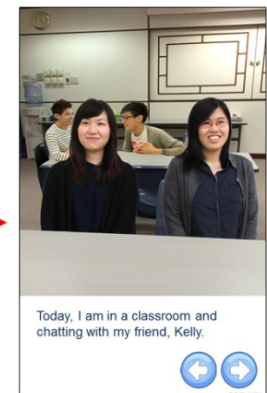
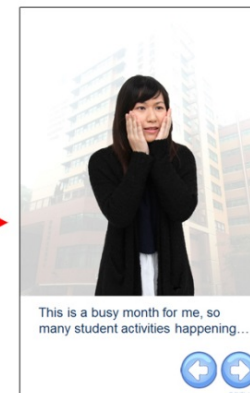
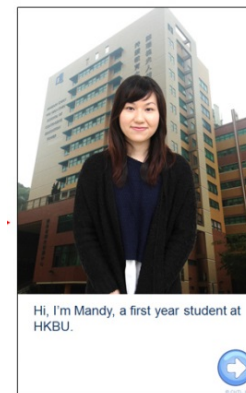
**Situation...**

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

TIE-2

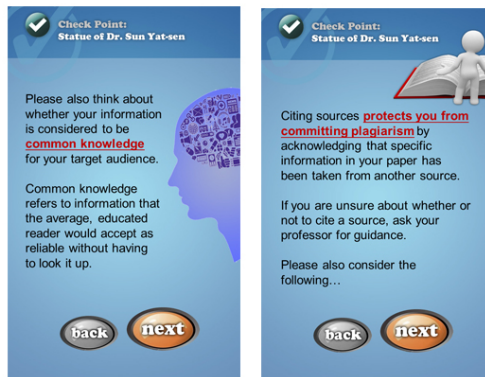




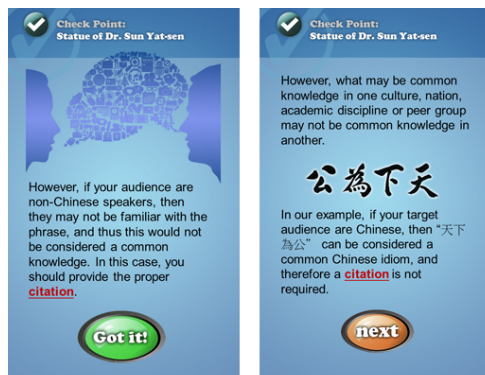
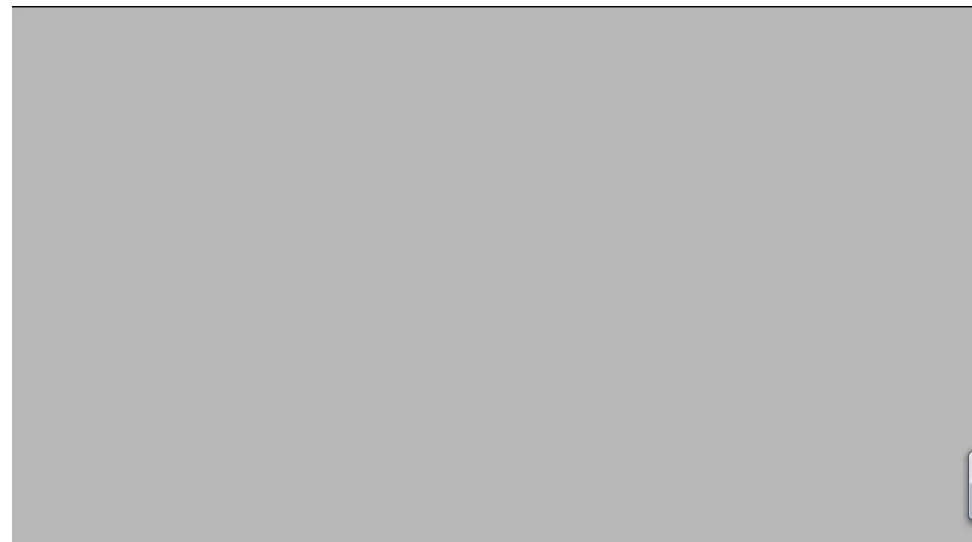
# Revision of TIE-1 → TIE-2

- Use video to replace textual explanation

## TIE-1



## 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

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# 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.*

	4	3	2	1
<b>Ethical Self-Awareness</b>	Student discusses in detail/analyses both core beliefs and the origins of the core beliefs and discussion have greater depth and clarity.	Student discusses in detail/analyses both core beliefs and the origins of the core beliefs.	Student states both core beliefs and the origins of the core beliefs.	Student states either their core beliefs or articulates the origins of the core beliefs but not both.
<b>Understanding Different Ethical Perspectives/Concepts</b>	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.	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.	Student can name the major theory she/he uses, and is only able to present the gist of the named theory.	Student only names the major theory she/he uses.
<b>Ethical Issue Recognition</b>	Student can recognise ethical issues when presented in a complex, multi-layered (grey) context AND can recognise cross-relationships among the issues.	Student can recognise ethical issues when issues are presented in a complex, multi-layered (grey) context OR can grasp cross-relationships among the issues.	Student can recognise basic and obvious ethical issues and grasp (incompletely) the complexities or interrelationships among the issues.	Student can recognise basic and obvious ethical issues but fails to grasp complexity or interrelationships.
<b>Application of Ethical Perspectives/Concepts</b>	Student can independently apply ethical perspectives/concepts to an ethical question, accurately, and is able to consider full implications of the application.	Student can independently apply ethical perspectives/concepts to an ethical question, accurately, but does not consider the specific implications of the application.	Student can apply ethical perspectives/concepts to an ethical question, independently (to a new example) and the application is inaccurate.	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.).
<b>Evaluation of Different Ethical Perspectives/Concepts</b>	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.	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.	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.)	Student states a position but cannot state the objections to and assumptions and limitations of the different perspectives/concepts.

# 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

# Checkpoint 1 (ACC209)

✓ Check Point:  
**ACC209**




## 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**


✓ Check Point:  
**ACC209**



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!

**next**


✓ Check Point:  
**ACC209**




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.

**back**

✓ Check Point:  
**ACC209**




Copying 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**.



**next**

✓ Check Point:  
**ACC209**



## Checkpoint Code:


(Copy this to your map hand out)

**i**


Collected all **four** Checkpoint Codes?

**yes** **no**

✓ Check Point:  
**ACC209**





For further information, please refer to the "General Regulations for Undergraduate/Postgraduate Degree Programmes" section of the "Academic Bulletin"



**Got it!**


✓ Check Point:  
**ACC209**


Also note that facilitating, aiding or abetting another student's act of academic dishonesty, no matter directly or indirectly, is committing a dishonest act, which will result in disciplinary action.

**back** **next**

✓ Check Point:  
**ACC209**



The University has **zero-tolerance** for plagiarism. Whether you are breaching academic dishonesty for the first-time or multiple times, your offense will be reported and you will be penalized!




**back** **next**

## Checkpoint 2 (Statue of Dr. Sun Yat Sen - GPS)

✓ Check Point:  
Statue of Dr. Sun Yat-sen


Your current location:



next

✓ Check Point:  
Statue of Dr. Sun Yat-sen

“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

✓ Check Point:  
Statue of Dr. Sun Yat-sen

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



back next


✓ Check Point:  
Statue of Dr. Sun Yat-sen

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, 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**.

Got it!

✓ 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.

公為下天


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.

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.

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



back next

✓ 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.

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


Please also consider the following...

back next




# Checkpoint 3 (Library Book Return - Camera Image Recognition)

✓ Check Point:  
Library Book Return




Your current location:




next

✓ Check Point:  
Library Book Return





Situation...

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



next

Paul  
online



Hey Paul, still have that useful reference book you borrowed from the library?


Yea.. but I got a book-recall notice from the library...another student has requested it.. got to return it today! 😞

Oh NO!!!!...

Next time I will hide the book on another shelf in the library, so that only I can locate it... and no one else can find it! 😏

back next

✓ Check Point:  
Library Book Return



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!!! 👍

back


✓ Check Point:  
Library Book Return



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.

Got it!


✓ Check Point:  
Library Book Return



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

next


✓ Check Point:  
Library Book Return



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

back

✓ Check Point:  
Library Book Return




✗ No, Paul's scheme is **selfish** and **unethical**!

back

## Checkpoint 4 (Bee Recycle Bin - Camera Image Recognition)

✓ Check Point:  
**BEE Recycle Bin**

Your current location:



next

✓ Check Point:  
**BEE Recycle Bin**

**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 bin usage by HKBU staff and students.



next

✓ Check Point:  
**BEE Recycle Bin**

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



back next

Felix  
online

How's your FYP going?

Not good... most people on campus don't want to answer my survey! 😞

Poor you... what will you do then?

I think I will just phone my friends and relatives, and ask them to reply my survey... much easier. 👍👍

But they are not representative sample... Will you mention you changed your data collection method and sample population in your final report?

Nope! 😞😞

back next

✓ Check Point:  
**BEE Recycle Bin**

✓ That's correct!

next

✓ Check Point:  
**BEE Recycle Bin**

✗ 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.

back

✓ Check Point:  
**BEE Recycle Bin**

✗ 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.

back

✓ Check Point:  
**BEE Recycle Bin**

What should you tell Felix?

Well, the results are not affected by how you collect your data, so it should be OK not to mention it in the report. 🙄🙄

That's completely unacceptable! You cannot change the method of data collection and sample population!! 👤

It is important that you state how your data are collected in your final report! 🙄🙄🙄

You should consult your tutor to find out if it's OK to change the method for data collection and sample population!

back

✓ Check Point:  
**BEE Recycle Bin**

✓ That's right. Always check with your tutor or teacher if you are in doubt.

next

✓ Check Point:  
**BEE Recycle Bin**



**Data Falsification** refers to the incorrect use of information (e.g. misrepresentation of its meaning or **data filtering** without proper rationale).

next

✓ Check Point:  
**BEE Recycle Bin**

Even after you fixed an experiment setting, sometimes you may still observe unexpected or undesirable results...


But you should continue to **truly report** your findings instead of "filtering" of the result to match what others have found.



next

✓ Check Point:  
**BEE Recycle Bin**

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' effort), but also indicate to your readers how you obtained the results, so they can further evaluate your work.



Got it!

# Pre- / Post-Trail Questions



- **Pre-trail question:**

- *In your own words, what is your understanding of the words "Plagiarism" and "Citation"? (within 100 words)*

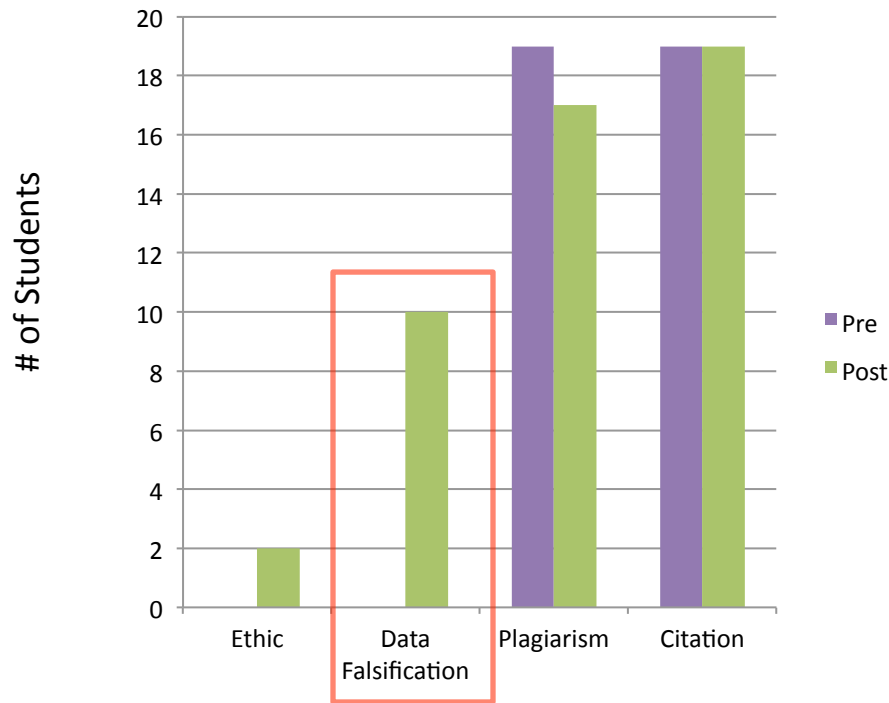
- **Post-trail question:**

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

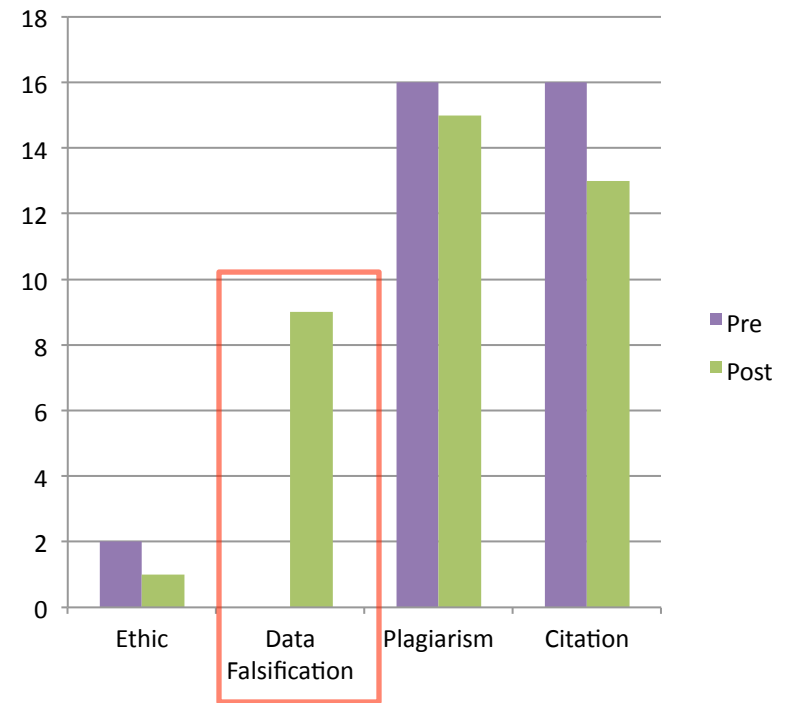
Response are passed to *The Hong Kong Institute of Education* (HKIEd) for Learning Analytic processing. (Li et al., 2015).

# Learning Analytic Results

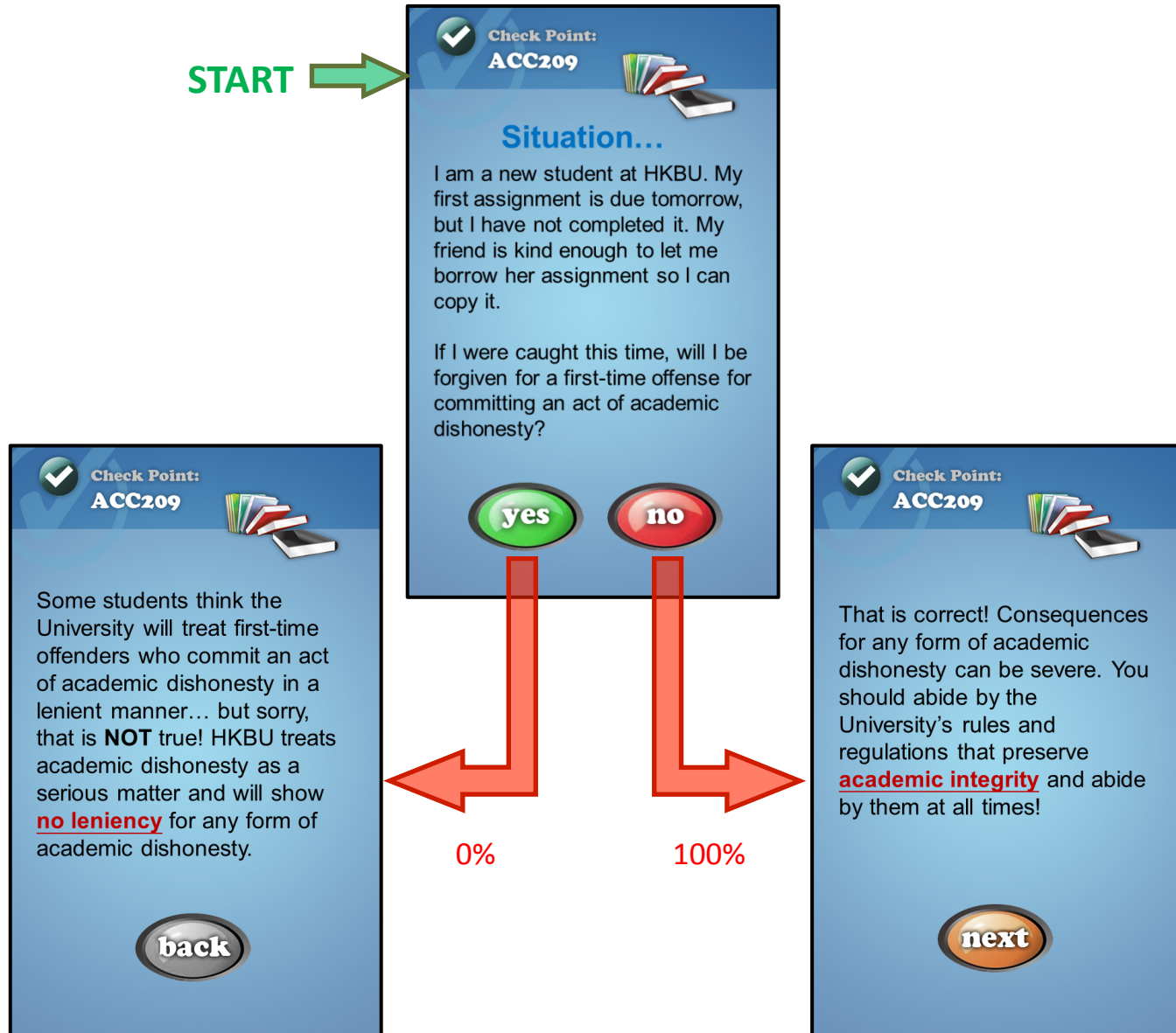
RPg Students



GA Students

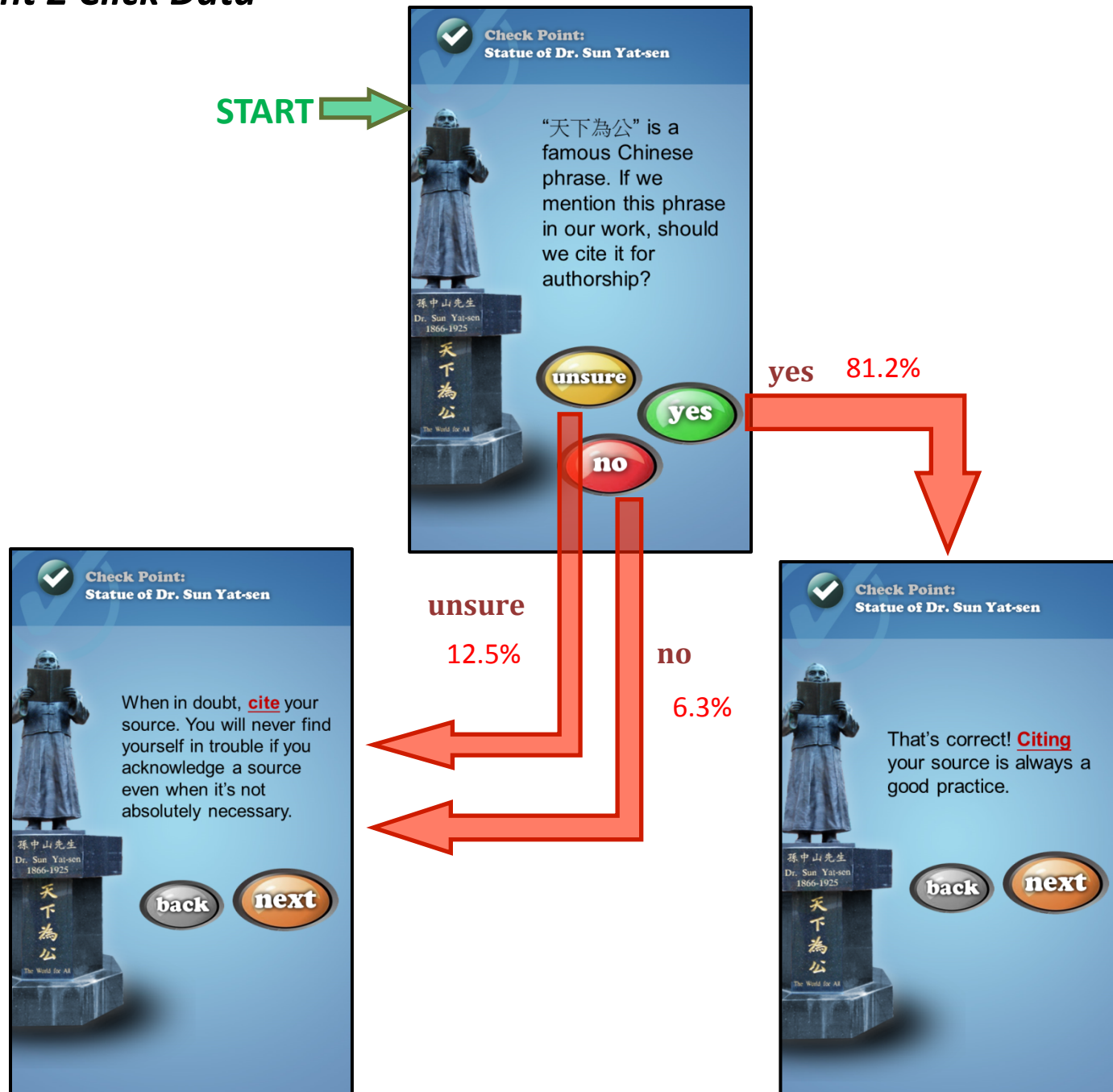


# Click Stream



## Checkpoint 2 Click Data

52



- 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**

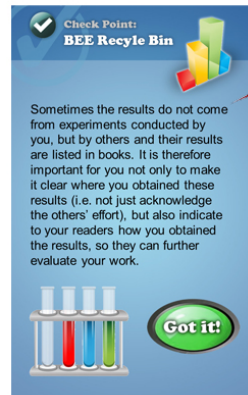


# Revisions (TIE-2)

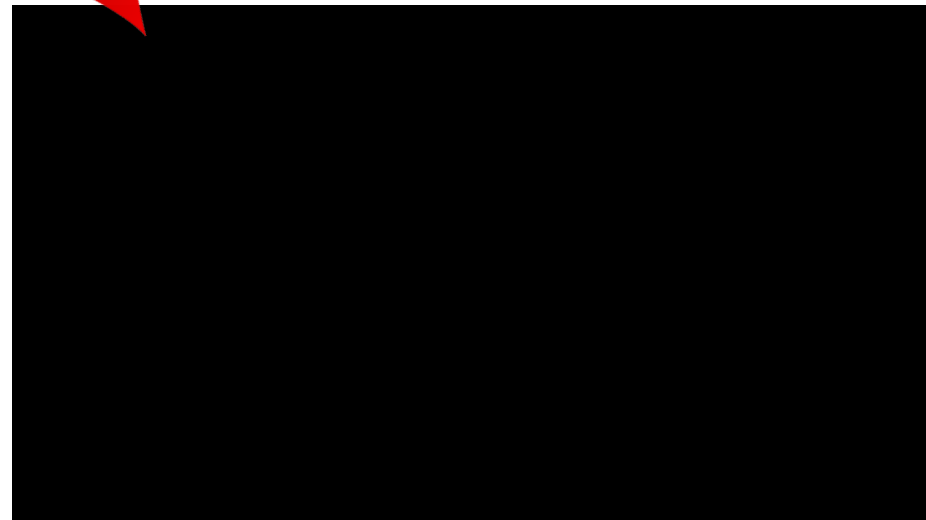
# Revision of TIE-1 Design

- Use streaming video contents to replace textual explanation

## TIE-1



## TIE-2



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