Academic integrity matters in education: Motivating students to learn with mobile technology

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- 36,000+ students in undergraduate and graduate programs; 3,000+ faculty
- uWaterloo specializes in Computer Science, Engineering, Math & Arts
- 20,000+ co-op students - World's largest cooperative education program
- Renison specializes in Language Studies, Social Development Studies, Social Work & Religious Studies
- 2018 Nobel Peace Prize for Physics Winner: Donna Strickland
Presentation Takeaways

1) Increase awareness of academic integrity (AI) and the **values of integrity** that can directly benefit an instructor AND help students be better prepared for the demands of higher education;

2) Provide approaches to **implement AI directly into your own courses** or a broader program-wide curriculum, assisted by the use of a mobile application;

3) Value leveraging mobile technology to provide “anytime/anywhere” learning
POLL Questions

• Are there academic integrity concerns or issues at your school/institution?

• Are you using a mobile application for academic integrity?
What is Academic Integrity?

...a commitment, even in the face of adversity, to six fundamental values: honesty, trust, fairness, respect, responsibility and courage.

From these values flow principles of behaviour that enable academic communities to translate ideals into action.

Values of Integrity

• Honesty
• Trust
• Respect
• Fairness
• Responsibility
• Courage

Source: The Fundamental Values of Academic Integrity. International Center for Academic Integrity (2014)
Academic integrity (AI) is essential in post-secondary education, yet insufficient time is spent teaching and practicing its concepts (Boehm, Justice & Weeks, 2009; Carroll, 2007; Ludeman, 2005).

Talks at orientation, lectures in the first class, and notations in the course syllabus to assist first year students with the academic transition to university.
Academic Misconduct

BUT these have not been very effective at increasing students’ level of academic integrity

Academic misconduct (i.e. plagiarism, cheating) is on the rise despite these well-intentioned efforts

(Dee & Jacob, 2012; Gillis, 2015)
Integrity Matters: Foundations for Academic Success App

Objective: To develop strategies to enhance student academic integrity (AI) knowledge and understanding by employing mobile technology with an innovative pedagogical approach.
Why use a mobile device?

Learners:
- Already have mobile devices
two-thirds (61%) of college students reported using their smartphones to study (*The Impact of Technology on College Student Study Habits*)
- Access anytime and anywhere (WiFi)
- Engage using multimedia & interactive features
- Learner-centered, requires no teacher presence

Faculty:
- Effective way to reach more students
- Efficient way to share knowledge
- Frees up time to teach discipline specific scholarship
IntegrityMatters App

Android

Apple iOS

Tri-lingual:
- English
- French
- Chinese
Home screen

Overview of the project

Content

Quiz

Resources

Project team

Glossary
Modules

Values based decision-making scenarios

Illustrates ‘real-life’ situations students may find themselves in over their academic career

Each module takes 4-6 minutes to complete

Entire application takes approx. 36 minutes to finish and can be completed over time at student’s convenience
Student Life Scenarios

- University
- Student Residence
- Library
- Co-op Work Term
- Graduation
- Study Abroad
- Athletics
- High School
Setting: University Residence

Kamaljit walks across the hall and knocks on your door. Your door is halfway open and you are sitting in front of your laptop.

Kamaljit: “Hey. Have you done the online quiz yet?”

You: “Hi. Not yet. I was planning to do it this evening. Have you?”

Why might you make this choice?

- Kamaljit has better marks than me
- This is what I did in high school
- Takes less time to do it together
- Because my friend, Kamaljit, asked me to
- Because no one will know we worked together

Submit
Resources & Glossary

Click on a blue link to open the resource's webpage.

What is plagiarism? **What is Plagiarism?**

Purdue Writing Lab: Is it plagiarism? **Purdue Online Writing Lab – is it Plagiarism?**

Purdue Writing Lab: Paraphrasing **Purdue Online Writing Lab – Paraphrasing**

APA, MLA, and CMS citation styles **Citation Style Chart**

ICAI Academic Integrity Resources **International Centre for Academic Integrity – educational resources**

Tap a term to learn its definition.

- Academic advisor
- Academic integrity
- Anonymously
- Cheating
- Counsellor
- Copyright Law
- Exam invigilator
- Plagiarism
- TA
- Tutor
- Unauthorized collaboration
Games

SIX VALUES

Score: 100  Time: 53 s

Assured reliance on the character, ability, strength, or truth of something

Responsibility  Trust  Fairness
Responsibility  Responsibility  Trust
Responsibility  Responsibility  Responsibility

After having lied on your resume, you find yourself unable to answer questions about a skill you claimed to have, and decide to let the interviewer know that you have no experience with that content.

Chances: 3  Time: 9

Honesty  Trust
Respect  Fairness
Responsibility  Courage
E-Certificate & Digital Badges

E-Certificate (PDF)

Open Badge (www.CanCred.ca)

Links to user social media
Does the app work? Research Project Results

Mixed-method, non-experimental approach
Quantitative data collection using
• comparison of pilot group (with intervention of AI lessons) and control group (no AI lessons)
• pre and post tests in academic integrity app
Research Findings

• Total Participants (N=1149)

• Improved test scores by a mean of 0.48; 95% confidence interval [CI] = 0.42, 0.55

• Pre test mean = 7.5; while the post test mean = 7.98 and the difference was .49

• Conclusion: *IntegrityMatters* module lessons significantly enhanced students academic integrity knowledge

Math students performed poorly in pre-test but made the most significant gains at post-test. Engineering students were the next faculty who most enhanced their academic integrity knowledge post-test.
Participant Feedback

• **Efficacy of M-Learning:** Value learning about academic integrity through an online application; “I was able to complete the modules in the break between my classes” [1701]

• **Layout of the App:** “Lessons were quite straight forward. The animations helped in engaging me more towards the idea” [1447].

• “Realistic scenarios. Transcripts helpful for completing tasks in a silent environment without headphones” [1416]

• **Accessibility of the tool** while in hand or on-the-go; “I can learn this any-where and anytime I want” [1693]

• “I don't have to boot up a six pound laptop so this was neat” [1696]
Let’s Try the IntegrityMatters App…

ANDROID
Click on this link to download the app from Google Play Store
https://play.google.com/store/apps/details?id=uwai.dev.uwai&hl=en

APPLE
Click on this link to download the app from iTunes Apple Store
Demonstration of Integrity Matters App
We’d like to recognize and thank eCampusOntario for the funding support we received for this project.

For information about the Academic Integrity mobile application, visit https://uwaterloo.ca/academic-integrity/about-office-academic-integrity/ foundations-academic-success

QUESTIONS?

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REFERENCES


- Center for Academic Integrity (1999). The Fundamental Values of Academic Integrity.


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