Transforming Assessment

Webinar Series

18 Nov 2020: 07:00AM UTC

Defending assessment against e-Cheating: design and standards

Associate Professor Phillip (Phill) Dawson

Deakin University, Australia

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e-Assessment SIG
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SHAPING THE FUTURE OF TERTIARY EDUCATION

@phillipdawson

Defending assessment against e-Cheating: design and standards

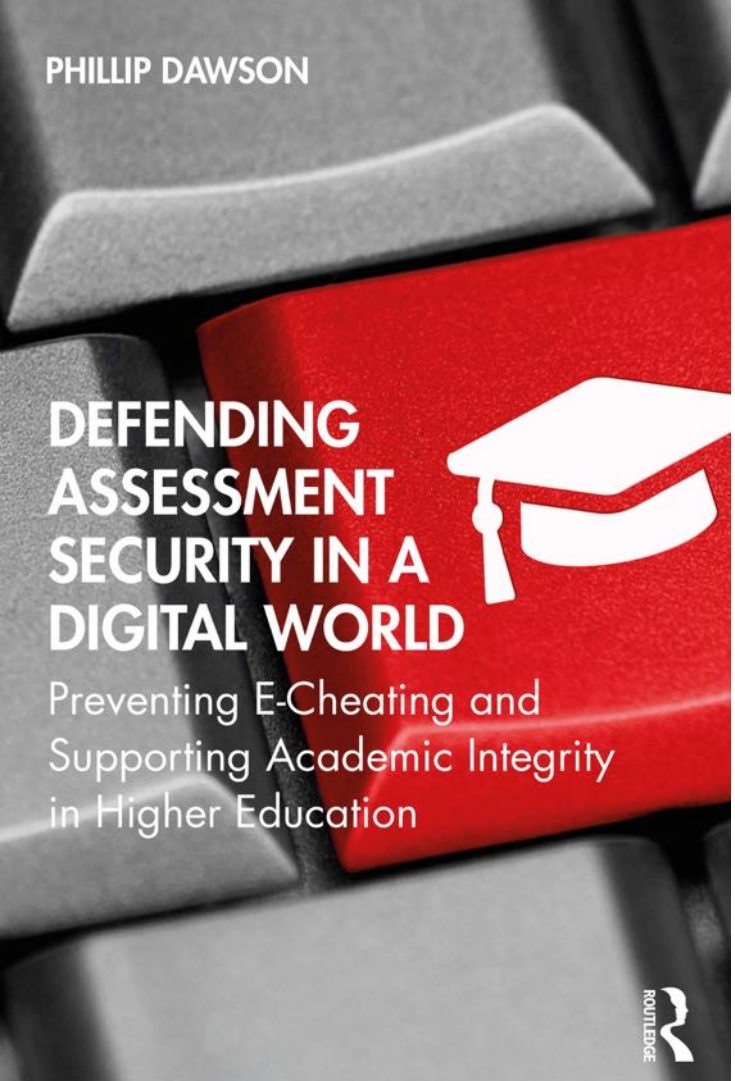
Phillip (Phill) Dawson

Centre for Research in Assessment and Digital Learning (CRADLE)

Deakin University, Melbourne, Australia

cradle

DEAKIN UNIVERSITY



Win a free copy of the ebook!

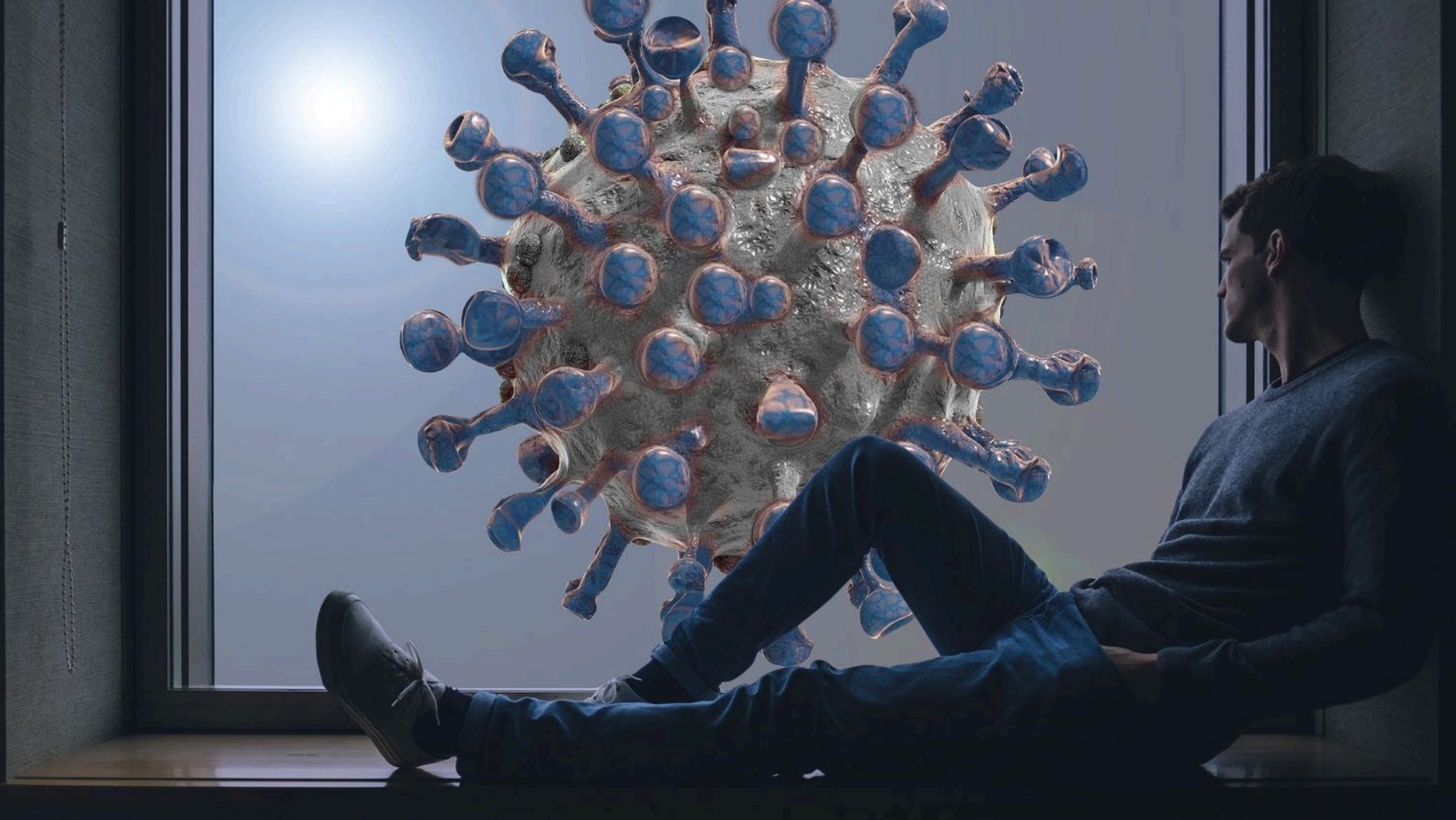
- Routledge has provided one ebook copy to be given away at this launch
- The copy will go to whoever is the first to post a specific link that I request while a slide with the title “Time to give out a free book” is being presented
- Whoever wins will need to send me a private message via this system before the end of the session
- My decision about who was first to post the link is final

Three things to take from this presentation

Balance academic integrity and assessment security

Assessment design helps but it's not enough

Set standards for assessment security

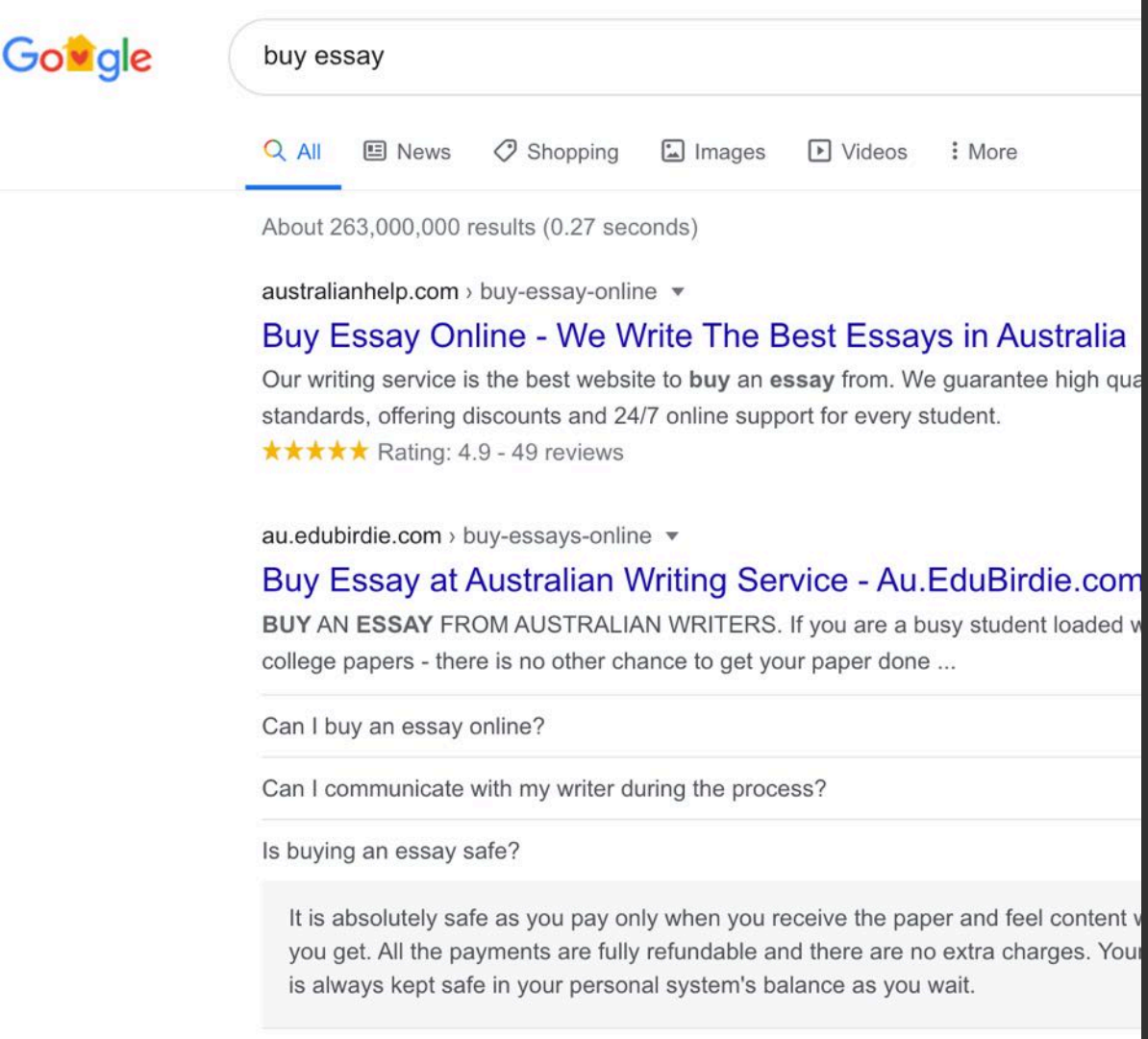


Disclaimer

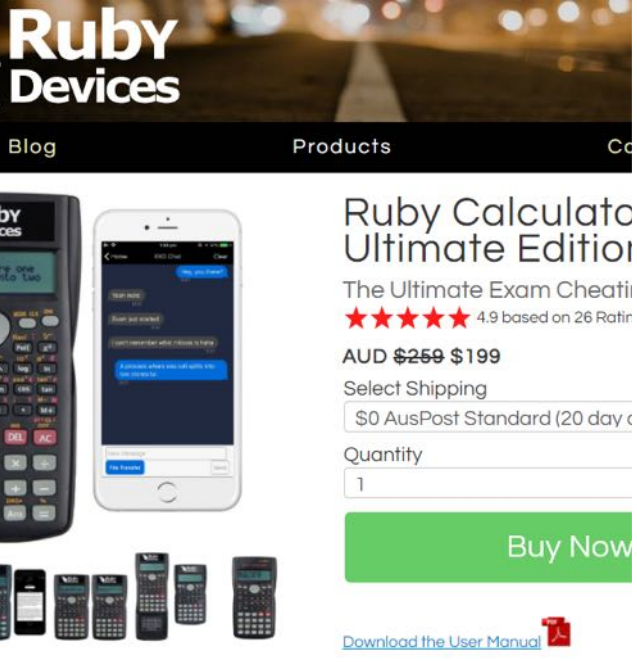
- I support AfL & AI
- I think cheating is a symptom of broader problems
- I think universities have a responsibility to try to prevent and detect cheating
- I receive research funding from ed tech companies
- My mum helped me contract cheat in year four

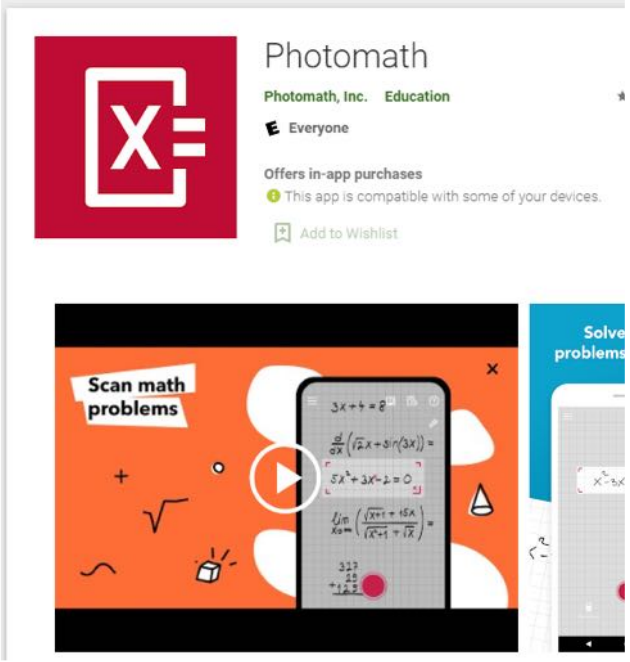
e-cheating:

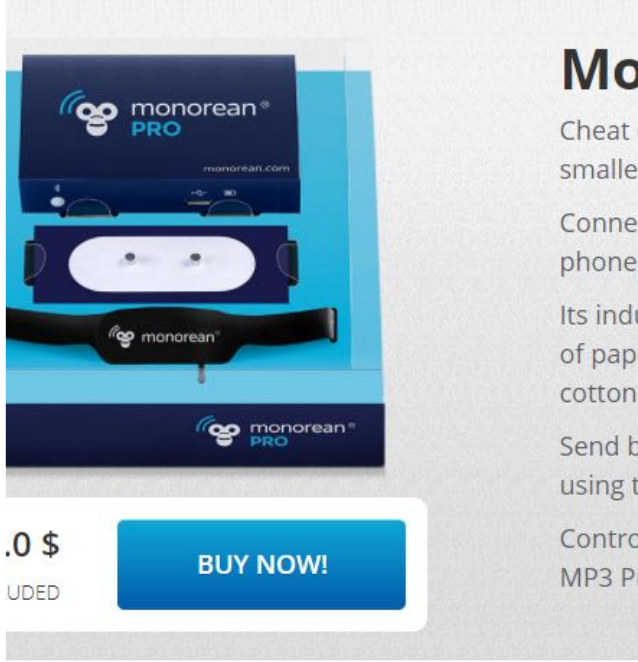
“cheating that uses or is enabled by digital technology”



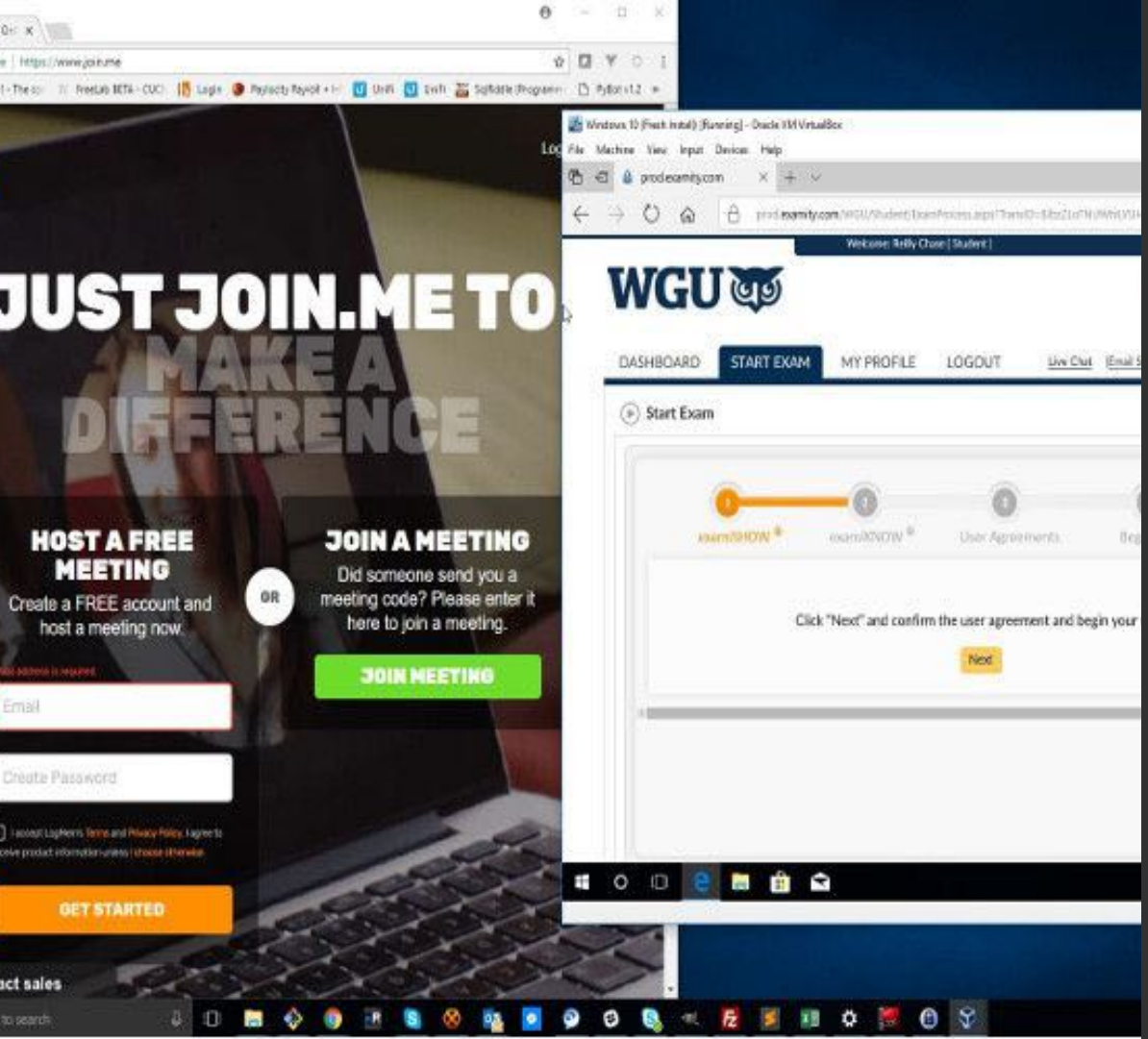
Contract cheating







Use of specialist cheating technologies



Hacking and cheating in online exams

https://blog.rchase.com/how-proctoru-and-examity-make-cheating-on-college-exams-easier-than-ever/

Is using Chegg Cheating? How to not get Caught Cheating 2020

Published by Alicia Smart at June 28, 2020

Some uses of study sites

E-cheating is different because it…

- does not require any cleverness or hard work on the part of students.
- can be packaged up and shared freely.
- can be bought with a credit card.
- can be anonymous.
- is pushed to students by social media and online advertisements.
- usually rates higher on web searches than legitimate help.
- evolves at the pace of technology.
- is never more than a web search away.

Defending Assessment Security in a Digital World

Preventing E-Cheating and Supporting Academic Integrity in Higher Education

By Phillip Dawson

Edition	1st Edition
First Published	2020
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Pages	178 pages
eBook ISBN	9780429324178
Subjects	Behavioral Sciences, Education

66 Citation

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PREVIEW PDF

For more on e-cheating, see the first chapter, available free on Taylor & Francis site

tinyurl.com/pdf-e-cheating

Three things to take from this presentation

Balance academic integrity and assessment security

Assessment design helps but it's not enough

Set standards for assessment security

Balance academic integrity and assessment security

- Academic integrity is positive, educative and values-based
- Assessment security is adversarial, punitive and evidence-based
- In tension, but not a dichotomy

Fundamental values of academic integrity

- Honesty
- Trust
- Fairness
- Respect
- Responsibility
- Courage

Assessment security:

"measures taken to harden assessment against attempts to cheat. This includes approaches to detect and evidence attempts to cheat, as well as measures to make cheating more difficult."

(Dawson, 2021)

Dawson, P. (2021). *Defending Assessment Security in a Digital World: Preventing E-Cheating and Supporting Academic Integrity in Higher Education*. Routledge.

Addressing cheating requires…

Academic Integrity

- Trusting
- Educative
- Proactive

Think ‘crime prevention’

Assessment security

- Detecting
- Punitive
- Proactive or reactive

‘policing’ or ‘surveillance’

It’s a balance, not a dichotomy

Three things to take from this presentation

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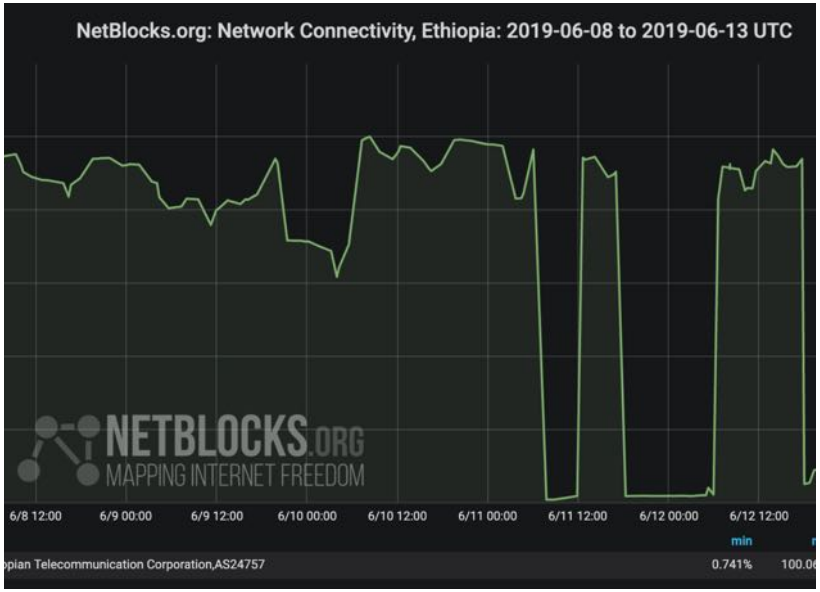
Assessment design helps but it's not enough

Set standards for assessment security

Assessment design helps but it's not enough (but neither is any other one thing)



- Harsh restrictions won't stop cheating
- Technology won't stop cheating
- Blind faith won't stop cheating
- Cheating can occur in any task type
- No single solution

Banning essays won't save us.
Authentic assessment won't save us.
Contract cheating can occur with any task type.

(Ellis et al, 2019)

Ellis, C., van Haeringen, K., Harper, R., Bretag, T., Zucker, I., McBride, S., . . . Saddiqui, S. (2019). Does authentic assessment assure academic integrity? Evidence from contract cheating data. *Higher Education Research & Development*, 1-16. doi:10.1080/07294360.2019.1680956

Exams won’t save us.

‘Third party cheating’ is likely more common in exams than assignments.

‘Third party cheating’ is likely detected less often in exams than assignments.

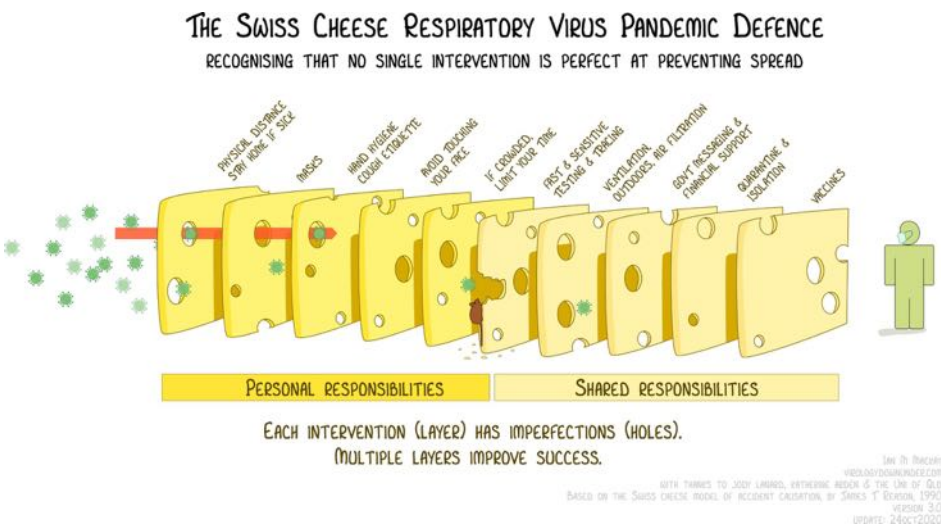
(Harper et al, 2020)

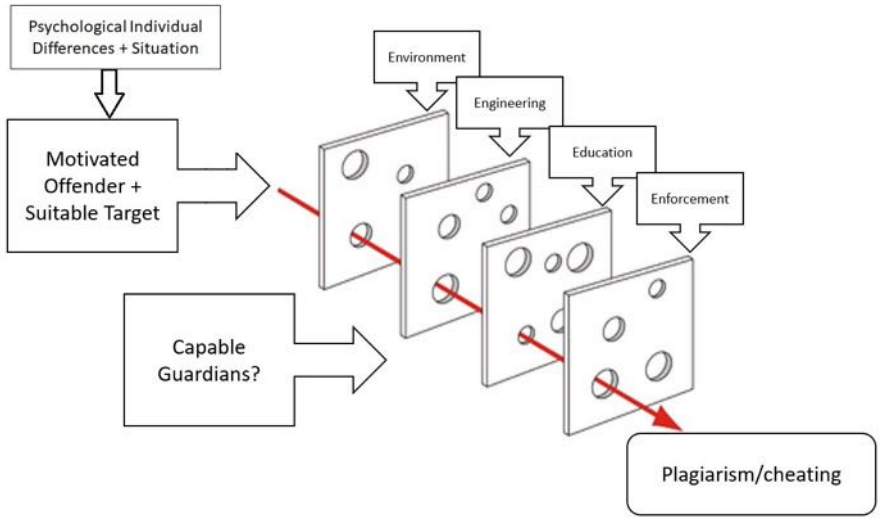
(Based on comparisons of self-reported student cheating and educator detection rates – so take with caution)

Harper, R., Bretag, T., & Rundle, K. (2020). Detecting contract cheating: examining the role of assessment type. *Higher Education Research & Development*, 1-16. doi: 10.1080/07294360.2020.1724899

Students' perceptions of the likelihood of contract cheating (%)

Bretag, T., Harper, R., Burton, M., Ellis, C., Newton, P., van Haeringen, K., et al. (2019). Contract cheating and assessment design: exploring the relationship. *Assessment & Evaluation in Higher Education, 44*(5), 676-691.





Rundle, K., Curtis, G., & Clare, J. (2020). Why students choose not to cheat. In T. Bretag (Ed.), *A Research Agenda for Academic Integrity. Edward Elgar Publishing.*

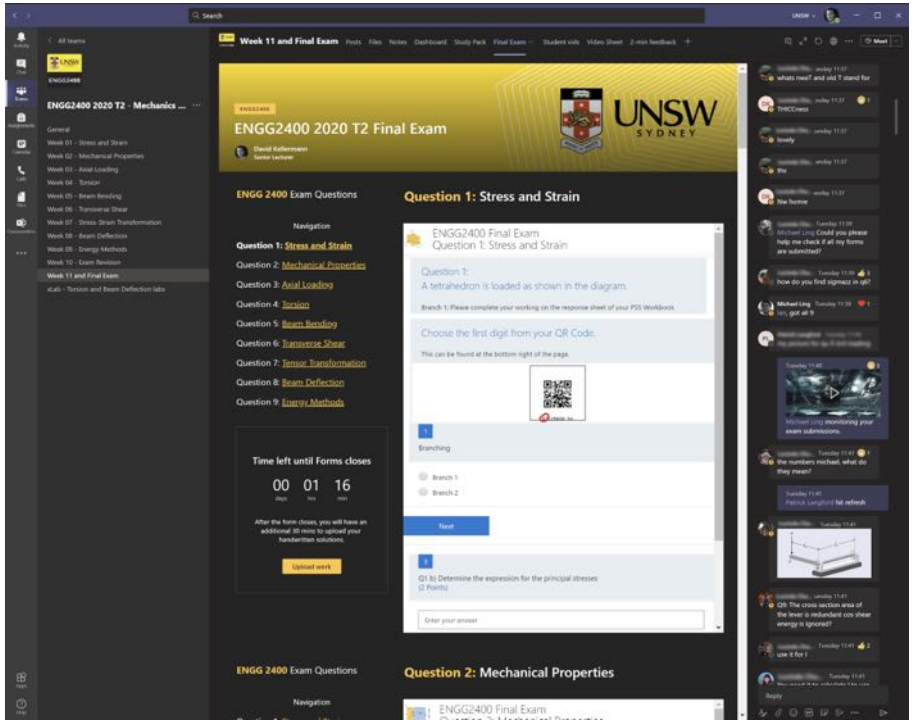
Authentic restrictions:

Authentic *assessment* is great but it doesn't stop cheating. Authentic *restrictions* might.

Restrictions need to be enforced, and therefore make assessment harder to secure.

Authentic restrictions reduce the 'attack surface'.

Allowing students tools, collaboration and/or information reduces the options for cheating.



https://teaching.unsw.edu.au/academic-integrity/case-studies
David Kellermann UNSW @DrKellermann

Programmatic assessment security:

‘Cheat-proofing’ every act of assessment is probably impossible and definitely a bad idea.

Focus on securing those acts of assessment that matter to the degree program outcomes.

Focus on developing academic integrity in the others.

“If we trust students not to cheat then cheating rates will go down” sounds good but evidence is thin.

(e.g. honor codes help, but only explain a small amount of the variance in cheating rates)

(McCabe et al 2002)

McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (2002, 2002/06/01). Honor Codes and Other Contextual Influences on Academic Integrity: A Replication and Extension to Modified Honor Code Settings. *Research in Higher Education, 43(3), 357-378. https://doi.org/10.1023/A:1014893102151*

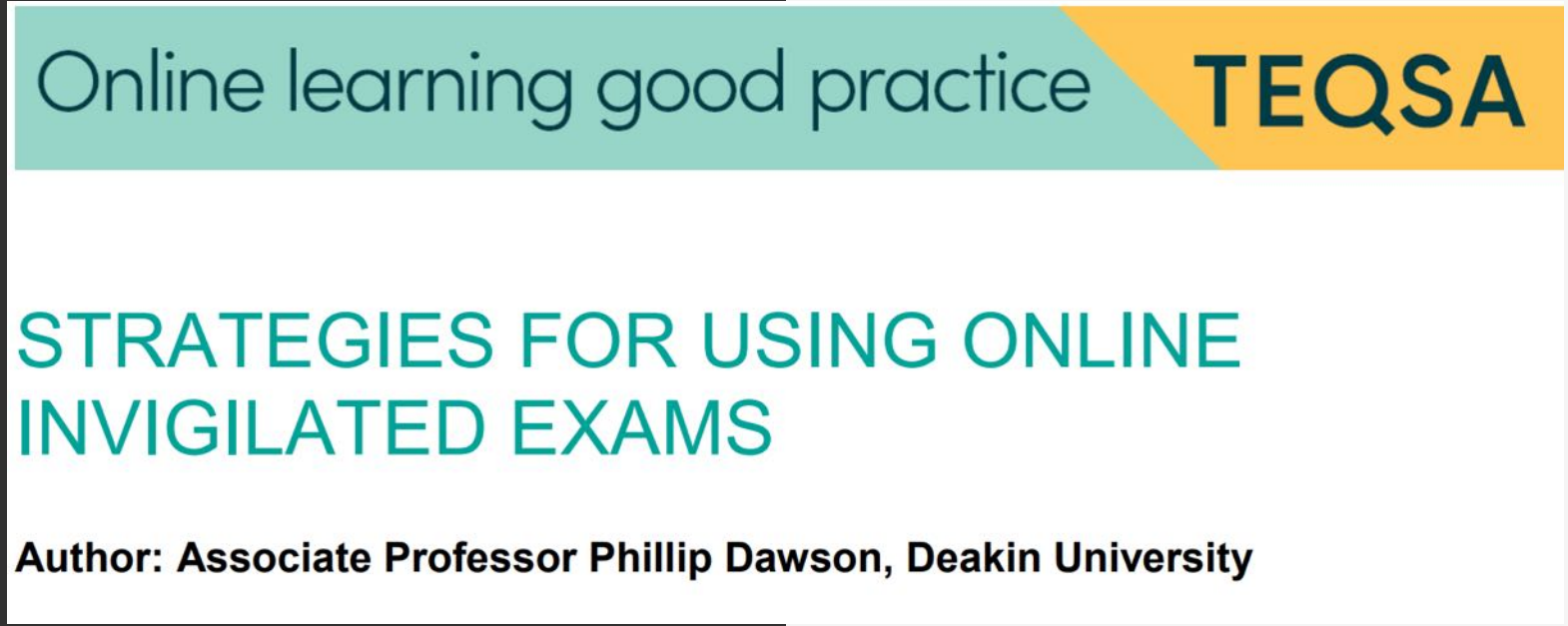
Consider the pros and cons of remote proctoring – and **demand evidence**

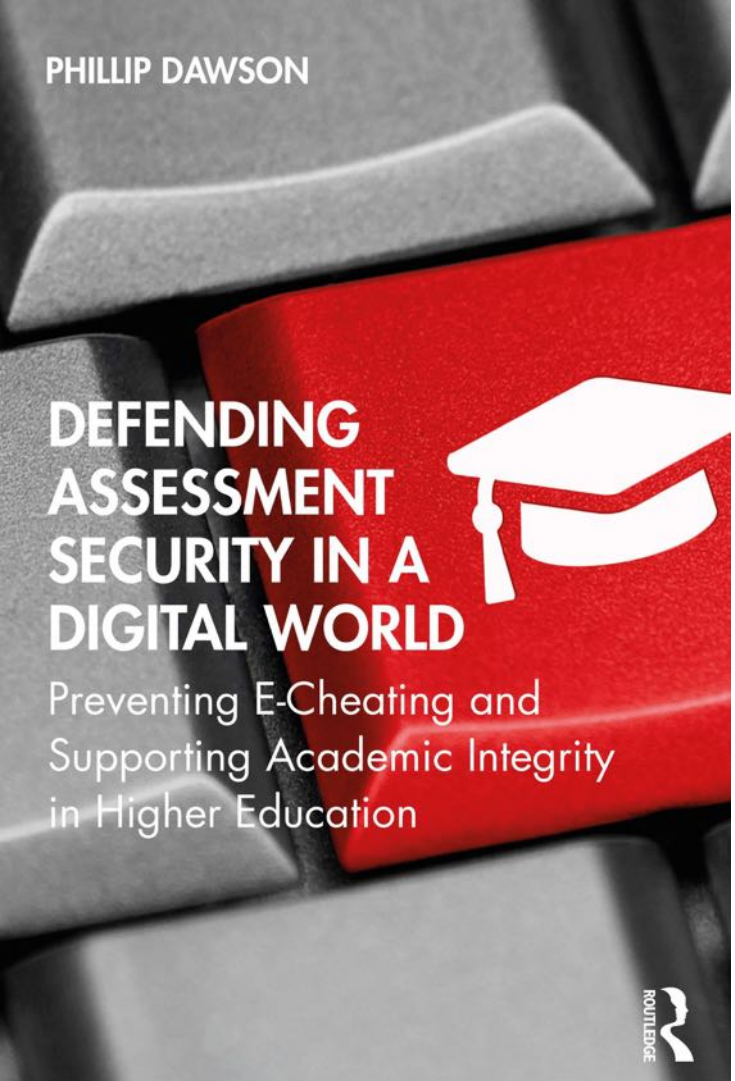
Do students *really* hate proctoring so much?

Is proctoring *actually* an effective anti-cheating measure?

Dawson, P. (2021). *Defending Assessment Security in a Digital World: Preventing E-Cheating and Supporting Academic Integrity in Higher Education*. Routledge.

For more on remote proctoring see this guide on the TEQSA site: tinyurl.com/teqsa-exams





Time to give out a free book!

Free e-copy will go to the first person to post a link in the chat to the gofundme for a Canadian learning technologist who is being sued by a remote proctoring company.

Random audit:

‘Cheat-proofing’ every act of assessment is probably impossible and definitely a bad idea.

Consider random audit of individual students’ work.

The possibility of an audit is associated with more honest behavior in other contexts (e.g. tax)

Unreliable & invalid

B

Unreliable but v

Reliable but invalid

D

If it's not valid & reliable assessment **of** learning, it's not worth securing.

See Ch9: Structuring and designing assessment for security for more info.

Three things to take from this presentation

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Set standards for assessment security

Seven proposed standards for assessment security

Coverage across a programme

How much of a degree should be secured?

Securing everything, nothing, or in a haphazard way is unacceptable

Securing the major task in each unit/ module is commonplace but we can do better

Best practice is programmatic

Authentication

How do we ensure the student is who they say they are?

Unacceptable to not attempt this (**for the tasks we are securing**)

Minimum is to use photo ID or something else like stylometrics or biometrics – but this just establishes who they are right now

Aspirational is to dialogue with students about the work

Control of circumstances

How can we be sure the task was done in the circumstances we designed for?

Unacceptable to not attempt to control (**for the tasks we are securing**)

Some tasks require a combination of proctoring, lockdown or text matching to be secure

At an aspirational level we should try non-text and/or semantic matching

Difficulty to cheat metrics

We need to know how hard tasks are to cheat in

Unacceptable to just assume tasks are hard to cheat in without any evidence

(**for the tasks we are securing**)

At a minimum, educators should complete tasks themselves and consider how to cheat

As an aspiration we should get specialists to audit tasks for how difficult they are to cheat

Detection accuracy metrics

We need to know if our detection approaches work

Unacceptable to just assume we are detecting all cases

At a minimum, approaches should be based on research into detection

As an aspiration we should validate that detection approaches actually work

Proof metrics

We need to be able to prove cases of cheating

Unacceptable to not keep records about proof rates, or to only rarely prove cases

As a minimum, records need to be kept about proof rates, and proven cases should be relatively common

As an aspiration, proof rates should be externally audited and benchmarked

Prevalence metrics

We need to know approximate rates of undetected, detected and proven cheating in a cohort

Unacceptable to not attempt to compare rates of proven cases with expected rates

At a minimum, rates of proven cases should be benchmarked against prevalence data from similar programmes

As an aspiration, existing research is used to calculate prevalence of unproven cheating

Table 8.5 Hypothetical standards for assessment security.

@phillipdawson

	Unacceptable: any of the following	*Minimum: all of the following, as appropriate, and no unacceptable*	*Aspirational: minimum, plus*	*Excessive/overkill: aspirational, plus*
Coverage across a programme	No rationale for which tasks are secure	The major task in every unit/course is secure as below	At a degree level, all major outcomes have been assessed in a secure manner as below	All tasks are secure as below
Authentication	No attempt to verify identity	Photo ID; stylometrics; biometrics	Dialogue with students on completion of tasks	DNA tests
Control of circumstances	No attempt to control circumstances	Proctoring (remote or in person); lockdown; text matching	Content matching	Constant surveillance
Difficulty to cheat metrics	No attempt to verify difficulty to cheat	Educators attempt to cheat to test difficulty	Audit by specialists shows high difficulty	Audit by specialists shows impossible to cheat
Detection accuracy metrics	No attempt to verify detection accuracy	Detection methods based on research	Local detection methods verified by research	Perfect detection accuracy
Proof metrics	No attempt to verify proof rates; proven cases of cheating are rare	Record keeping of proof rates; proven cases of cheating are common	External audit of proof rates; benchmarking with other similar programmes	Experimental studies conducted to validate proof rates
Prevalence metrics	No attempt to compare rates of proven cases with expected rates	Rates of proven cases benchmarked against prevalence data and similar programmes	Existing research used to calculate prevalence of unproven cheating, which is less than 1% of student body	Local prevalence data is used to calculate prevalence of unproven cheating

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Thanks for launching!

Please check if your library has a copy, ask your librarian if they don't, buy if you love it, and leave a review!

@phillipdawson

Transforming Assessment

Webinar Series

Webinar Session feedback

With thanks from your hosts

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Dr Mathew Hillier,
Macquarie University
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Recording available
http://transformingassessment.com

Next session – 19 Nov 2020

Re-imagining assessment to "robot-proof" our students

Prof Margaret Bearman
Reg http://taw.fi/19nov2020

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