Creating Integrous Classrooms in the GenAI Era

Tricia Bertram Gallant
Director
Academic Integrity & Triton Testing Center
University Of California, San Diego

@tbertramgallant | Twitter, LinkedIn
choose integrity...
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WHAT DO WE DO?!?!!??!?!??

ChatGPT ➔ PANIC!!!
A Panel Discussion: How Can Educators Maintain Academic Integrity in the Age of GenAI?

Navigating the Era of Outsourcing: Rethinking Higher Education in the Age of GenAI and Contract Cheating

Answering the Call to Rescue Academic Integrity from the Grips of GenAI

If you are an academic integrity professional, or academic integrity expert on your campus, you have likely experienced what I’ve experienced the last 9 months: repeated calls for help in responding to the release of GenAI tools like ChatGPT, Bing, Bard, Midjourney, and CoPilot. Maybe those calls came from your institutional leadership or maybe they came from the faculty, but they all likely sounded a lot like this—“how do we assure academic integrity when students can outsource their academic work to GenAI?”
The HE Institution-Society Social Contract

HE Institution

Developing the next generation of (ethical) citizens & professionals

Society

Citizens & Professionals who positively contribute

Develop & Certify knowledge & abilities
Breakdowns in the **Moral Obligation Supply Chain**

- **Instructors**
  - Design fair and honest pedagogy & assessments

- **Students**
  - Fairly & honestly demonstrate learning

- **Instructors**
  - Fairly & honestly assess student learning

- **Institution**
  - Certify student’s knowledge & abilities
WHY ARE STUDENTS CHEATING?

HOW CAN WE STOP THEM?
The truth is....
Students cheat for all sorts of reasons...

- They are in a heightened state of arousal – under stress & pressure
- There are opportunities
- The class rewards performance, not mastery
- The student is oriented towards extrinsic, not intrinsic, goals
- The students have low self-efficacy
- They can justify their actions
- When it’s less likely that they will be costs to cheating
- They can disassociate their identity from their actions
- They fail to recognize an action as unethical
- They perceive or observe their peers to be cheating

Things instructors can influence
And students (aka humans) have always cheated...
So, why does it feel so different now?
Generative AI

- Machines that have been trained on TONS of data
- The data, which was in words, is translated into numbers (0s and 1s)
- The computers are programmed to generate output based on input
- ChatGPT-3.5 (or 4) is most well known
  - Chat = “chatbot” = human interface
  - GPT = Generative Pre-Trained Transformer
  - Large Language Model (LLM)
- Other LLMs include: Bing Chat, Google Bard, and Github’s Co-Pilot
- Other GenAI tools include:
  - image generators like Midjourney and Dall-E
  - music generators like Google’s MusicLM
Students can (easily) offload their work to other humans and machines.
“Cognitive offloading”* isn't new

* Dawson, P. (2020). Cognitive Offloading and Assessment

Getting exam questions/answers from friends
Using spell & grammar checks
Using google translate
Using a calculator
Using Cliff/Sparks Notes
Getting other humans to do the work
Cognitive Offloading doesn’t have to mean cheating
Cognitive Offloading Becomes Cheating when the action:

• undermines learning objectives
• gives a dishonest impression of knowledge & abilities
• violates the rules for that class/assignment
How do we stop students from cheating?

How do we ensure students are learning?
How can we best facilitate & assess learning?

*(in the new realities of the 21st century where companies and AI exist to do assessments for students)*
Enhancing Institutional Support for Teaching & Learning

Fostering a Mastery-Oriented Environment

Communicating Integrity in Action

Improving Instruction

Reducing Institutional Constraints to Teaching & Learning

Protecting Assessment Integrity

Integrity

Fostering Integrity: The Teaching & Learning Way


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Use GenAI as an opening to Communicate Integrity
Students are worried about GenAI

- 27% worried about the impact of AI on their education
- 31% worried about AI impact on their career
- 40% worried about AI defeating the purpose of education
- 48% worried about the impact of AI on society

https://www.bestcolleges.com/research/college-students-ai-tools-survey/
Yet many are already using it....

48% of students who have used AI tools...

- It is possible to use AI in an ethical way to complete assessments

50% assistance

30% majority

- Using AI tools to complete assessments is morally wrong

51% think the results can pass as "human."

17% entirety

41%
And AI is and will increasingly be a big part of our lives.....
1. How familiar are you with GenAI (like ChatGPT)?
2. How regularly do you use a GenAI tool?
3. What have you used GenAI tool to do?
4. How skilled do you feel in using GenAI to help you with academic work?
5. When do you think it’s acceptable to use GenAI for academic work?
6. When do you think it should be considered cheating?
7. What else would you like to share with me about GenAI use?
8. What do you need from me to understand if, how and when you can use GenAI in this class?
Co-create a Statement of Values

CLASS STATEMENT OF VALUES
In order to best facilitate teaching, learning and the assessment of learning, this class operates according to the International Center for Academic Integrity’s 6 Fundamental Values: Courage, Fairness, Honesty, Respect, Responsibility & Trustworthiness.

All members of this class – students, faculty and instructional assistants – are expected to uphold these values. Anyone who feels they cannot do so should reconsider being a member of this community.

<table>
<thead>
<tr>
<th>VALUES</th>
<th>Upholding this value means that STUDENTS will...</th>
<th>Upholding this value means that the INSTRUCTIONAL TEAM will...</th>
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<tbody>
<tr>
<td>Courage</td>
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<td>Fairness</td>
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EXPLORE GENAI USE FOR EACH ASSESSMENT

LOOK CLOSELY AT EACH ASSESSMENT & THE LEARNING OBJECTIVES

ARE THERE ANY WAYS THAT GENAI COULD BE USED ETHICALLY?

MAKE RECOMMENDATIONS OF IF, WHEN & HOW GENAI SHOULD BE USED

72% of students want to be taught how to use A.I. ethically¹

Part of communicating is having a clear academic integrity policy
<table>
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<tr>
<th>Level</th>
<th>Description</th>
<th>Notes</th>
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</table>
| 1     | NO AI       | The assessment is completed entirely without AI assistance. This level ensures that students rely solely on their knowledge, understanding, and skills.  
AI must not be used at any point during the assessment. |
| 2     | AI-ASSISTED IDEA GENERATION AND STRUCTURING | AI can be used in the assessment for brainstorming, creating structures, and generating ideas for improving work.  
No AI content is allowed in the final submission. |
| 3     | AI-ASSISTED EDITING | AI can be used to make improvements to the clarity or quality of student created work to improve the final output, but no new content can be created using AI.  
AI can be used, but your original work with no AI content must be provided in an appendix. |
| 4     | AI TASK COMPLETION, HUMAN EVALUATION | AI is used to complete certain elements of the task, with students providing discussion or commentary on the AI-generated content. This level requires critical engagement with AI generated content and evaluating its output.  
You will use AI to complete specified tasks in your assessment. Any AI created content must be cited. |
| 5     | FULL AI     | AI should be used as a ‘co-pilot’ in order to meet the requirements of the assessment, allowing for a collaborative approach with AI and enhancing creativity.  
You may use AI throughout your assessment to support your own work and do not have to specify which content is AI generated. |

Secure the assessment

Remind students of the LOs and Facilitate Transparency & Critical Thinking

Table 1: The AI Assessment Scale
GenAI Use MUST be Transparent

- Students share whether or not they used ChatGPT or another AI technology in specific assignment/activity.

- Students reflect on their use of GenAI:
  - How did it help them achieve learning outcomes; how did it hinder that?
  - What was it particularly helpful for; what wasn’t it?
  - Would they use it again and if so, would they change how?

- Students share prompts, outputs, and modifications.

- Make sure students use a tool that saves their history, like ChatGPT-3.5 or Google Bard (Bing Chat does not).

Think about using Google docs with draftback, e.g.
Communicating helps because it...

- They are in a heightened state of arousal – under stress & pressure
- There are opportunities
- The class rewards performance, not mastery
- The class reinforces extrinsic, not intrinsic, goals
- The students have low self-efficacy
- They can justify their actions
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mitigates these temptations to “offload”
Foster a Mastery-Oriented Environment
“Motivation theory and research helps us to identify the root causes of cheating and offer research-informed strategies that instructors can adopt to decrease the prevalence of cheating in college classrooms”

(Anderman et al, 2022, p. 92)

**Performance vs. Mastery**

<table>
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<tr>
<th>Learners are oriented to</th>
<th>Performance</th>
<th>Mastery</th>
</tr>
</thead>
<tbody>
<tr>
<td>when assessments are</td>
<td>superficial, easy, and contrived</td>
<td>meaningful, variable, and deep</td>
</tr>
<tr>
<td>which leads to</td>
<td>surface learning and extrinsic motivations</td>
<td>Meta-cognition and intrinsic motivations</td>
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Foster a Mastery-Oriented Environment

Pedagogical Tools
- Learning Objective Alignment
  - Meaningful Assessments
  - Choice & Control
  - Scaffolded & Multiple
  - Active Learning

Mastery orientation

More learning + Less cheating
Bright Idea

Move assessment up a taxonomy of learning

Illustration: Rawia Inaim
https://addyosmani.com/blog/blooms-taxonomy/
Original Question (Knowledge/Remembering)
What is the primary function of the nephron in the human kidney?

Revised Questions for Each Level of Bloom's Taxonomy

1. Comprehension/Understanding
   Explain how the nephron in the human kidney processes blood and forms urine.

2. Application/Applying
   Given a case where a patient has a significantly reduced number of functioning nephrons, discuss how this condition might affect the kidney’s ability to filter blood and maintain homeostasis.

3. Analysis/Analyzing
   Compare and contrast the functions of the different segments of the nephron (such as the proximal convoluted tubule, loop of Henle, distal convoluted tubule, and collecting duct) in terms of their role in urine formation and electrolyte balance.

4. Synthesis/Evaluating
   A patient presents with symptoms of dehydration and hypernatremia. Evaluate how these conditions can affect nephron function and suggest potential treatment strategies.

5. Evaluation/Creating
   Design a clinical study to investigate the impact of a new drug on nephron function. Outline the methodology you would use to assess its effects on glomerular filtration rate, tubular reabsorption, and secretion.

https://chat.openai.com/share/03624e16-42bf-4c99-88b5-18ec81e2b0ec
• Scaffold summative assessments
  • Formative assessments (assessments for learning) provide steps towards completion
  • Feedback and improvement is the goal (not grades)

• Have students write in format where process is observable
  • Google docs with Draftback extension
  • other programs that provide some insight into process (e.g., Lex)

• Observe the student doing the skill

• Talk to the students about their process
  • Change "office hours" to conference hours
Reconsider Grading Structures

Bright Idea

• Don't grade everything – some assessments can simply be for providing feedback
• Develop & Share Assessment Rubrics
• Reconsider what "mastery" means given what machines can do
• Consider alternative forms of grading (e.g., ungrading, specs grading, contract grading)
• Be explicit about your grading structures with students
• If writing isn't a learning outcome, don't require writing!

• Give students some choice & control
  • e.g., Research paper OR research presentation OR research poster

• Add public accountability
  • e.g., oral assessments, peer review, class presentation
Ask yourself: what do students have to do that is NOT being assessed?

(I.E., TASKS THAT ARE NOT LEADING TO MASTERY OF THE LEARNING OBJECTIVES)

Can these tasks be cognitively off-loaded to GenAI?
Fostering a mastery-oriented environment....

- They are in a heightened state of arousal – under stress & pressure
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mitigates these temptations to “offload”
Give (Perceived) Good Instruction
“when a student with poor time management skills encounters a highly disorganized course and unresponsive instructor...this student can become easily frustrated and desperate, introducing the risk that an unauthorized shortcut becomes the ‘least bad’ way [to proceed]”

(Goldman et al, 2022, p. 157)

Give(Perceived) Good Instruction

Students perceive instruction to be

<table>
<thead>
<tr>
<th>Poor</th>
<th>Good</th>
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When the instructor

| is disinterested, disorganized, unresponsive & unclear | demonstrates passion for content; is organized, clear, and timely |

which leads to

| decreased motivation for learning | increased motivation for learning |

More cheating

More learning

Intrinsic Motivation

- Be engaging/engaged
- Attend to “at risk” signals
- Be consistently reliable
- Have a growth mindset
- Be clear and specific

Personal Tools

More learning + Less cheating

Give(Perceived) Good Instruction
think about reducing "logistical rigor" to focus on "intellectual rigor"
Giving good instruction....

- They are in a heightened state of arousal – under stress & pressure
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mitigates these temptations to “offload”
Secure Assessments
Secure Some Assessments

measures taken to clamp down on cheating opportunities

“assessment security starts where academic integrity finishes” (Dawson)

Is "surveillance" (aka "close observation")

*We are responsible for assuring that the person we're certifying has the knowledge & skills represented by that certification*
Assessments that should be Secured are those that:

- evaluate, rather than facilitate or improve learning
- determine if a student is ready to progress into the next course in the sequence
- predict a student’s ability to succeed in a particular genre/discipline (e.g., math placement tests)
- require a restriction of cognitive offloading (because lower level knowledge is being assessed)
- have to be reused term after term with few changes
- result in degrees being granted (e.g., theses, culminating exams, capstone projects, dissertations)
The Future of Assessments

Non-Secure Mastery-Based Assessments
- Individualized
- Multiple attempts
- GenAI allowed
- Scaffolded to summative assessments

Secure Mastery & Summative Assessments:
- Focus on process, not artefact
- If must be an artefact
  - Individualized (using GenAI) must be invigilated
  - Best in a Computer-Based Testing Center (CBT)

Program
- Course
  - Oral Assessments
  - Demonstrations
  - Presentations with Q&A
Securing Your Assessments...

- They are in a heightened state of arousal – under stress & pressure
- There are opportunities
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mitigates these temptations to “offload”
4 Lessons

1. Communicate integrity clearly and often
2. Focus on mastery (not performance)
3. Give good instruction
4. Secure (some) assessments
The 5th Element

Respond to cheating when it occurs

(no matter what else you do, if you ignore cheating, it will keep happening in your classes)
Degree Integrity is the ultimate goal
Crafting Your GenAI & AI Policy: A Guide for Instructors

Prepared by Tricia Bertram Gallant, Ph.D.
Director, Academic Integrity & Triton Testing
UC San Diego

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