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Strategies to Maximize Academic Integrity in Online Education

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Strategies to Maximize Academic Integrity

IN ONLINE EDUCATION

When educators transitioned to teaching remotely because of the COVID-19 pandemic, students rapidly gained skills in using Internet-connected devices and learning tools online.[1] While many believed increased access to and exploration of new technology would expand the array of academic-integrity breaches, Peterson's review of numerous studies[2] indicates that cheating may be more prevalent on campus than in online classes. Smaller regional differences than previous literature reported were found through analysis of theses and dissertations from all world regions.[3] Al-though differences have been found in why and how students cheat, it remains a "pervasive issue"[4] in all education systems and delivery formats. This "damages both the integrity of the perpetrator and assumptions about the quality of education."[5]

An extensive survey of students and teaching staff across eight Australian universities[6] found that students who (1) perceived cheating opportunities existed, (2) faced language-learning challenges, or (3) were dissatisfied with the teaching and learning environment were most at risk for paying someone to do their coursework (i.e., contract cheating). Recognizing that contract cheating[7] is a symptom rather than the problem, this study's recommendations included improving institutional policies and procedures, providing training in teaching practices that build relationships with students, and implementing better curriculum and communication standards.

Notably, the focus was on positive educational change with systems to detect, deter, and manage cheating but not central to maximizing academic integrity. Reflecting on online cheating as many educators pivoted to using digital technology for the first time during the pandemic, Supiano[8] noted that better teaching is more effective than smarter cheating-detection tools.

In this context of increased online education and potentially greater risks of academic dishonesty, this article fo-

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cuses on strategies to maximize academic integrity applicable to online Christian education today. While the authors write from the context of Adventist online higher education, most of the strategies for teaching, learning, and assessment explored in this article are relevant to secondary and tertiary levels of education in both in-person and online settings.[9]

Teaching Integrity

Helping students understand what academic integrity is and why it matters is at the core of developing Christian character and preventing academic dishonesty. Intentionally teaching biblical and ethical principles in every subject, modeling personal integrity (e.g., honesty in the use of images, videos, and sources; being trustworthy, respectful, conscientious, etc.), and living the institutional mission (in and out of the classroom) are foundational to maximizing academic integrity in both teachers and students. Faith-integrating skills, virtues, and mission-aligned values should be articulated as qualities sought in hiring and developed in continuing education for all employees in a Christian education community.

Biblical Foundations to Character and Virtues Education

In Christian education, one starts with the Bible. The Ten Commandments' injunctions against stealing, bearing false witness, and coveting (Exodus 20:15-17) are foundational to character education. Using someone else's work without giving proper credit is stealing and falsifying ownership. One who plagiarizes attempts to claim the credit that rightfully should go to someone else. Teaching students to think through motives for academic dishonesty should include discussion of societal or parental pressure to get good grades, laziness, inadequate planning, a perception that they can get away with it, that "everyone is doing it," and that paying someone else to do their classwork is no different than paying for a carwash or other service.

Much of the discussion in Judaism concerning honesty centered around the concept of respecting the boundary markers of one's neighbors. In the Ancient Near East, territory was defined by stone markers that indicated who owned that space. The Bible condemns the disrespect of such boundary markers. Deuteronomy 27:17 says that one is cursed who moves another's boundary stone; Proverbs 22:28 and 23:10 denounce moving boundary stones. This forbidden removal of boundary stones, known in Hebrew as *hassagat gevul,*[10] is much

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discussed in the Talmud and later writings. Applied to respecting intellectual boundaries, plagiarizing is like removing someone else's boundary stone. Claiming as one's own intellectual effort what someone else did (whether paid for or stolen) is misrepresenting ownership.

From the Christian perspective of educating for eternity, we recognize that each person is created in the image of God. Each one is broken by sin; thus, students, teachers, and administrators alike fall short of biblical guidelines for a life of integrity, a life that reflects God's character. In grat-

itude for God's solution to sin, Christian educators choose to partner in the work of redemption through modeling and teaching academic integrity.

Addressing contract cheating and how to deter it, Taylor[11] suggested that the ethical behavior of educators, their clear expectations for honesty in learning, and their use of creative learning strategies are three keys to maximizing academic integrity. Christian education should help students internalize the value of integrity in academics and all other spheres of life. Creating a grace community, where employees disciple students, caring as much for their character and virtues development as academic achievement, is equally important in face-to-face and online education.

A redemptive-education approach intentionally and preventatively builds awareness of and inspires commitment to academic integrity. The International Center for Academic Integrity (ICAI)[12] defines *academic integrity* as a commitment to six fundamental values: *honesty, trust, fairness, respect, responsibility,* and *courage*. An academic community of integrity, then "advances the quest for truth and knowledge by requiring intellectual and personal *honesty* in learning, teaching, research, and service (p. 5); fosters a climate of mutual *trust*, encourages the free exchange of ideas, and enables all to reach their highest potential (p. 6); establishes clear standards, practices, and procedures and expects *fairness* in the interactions of students, faculty and administrators (p. 7); recognizes the participatory nature of the learning process and honors and *respects* a wide range of opinions and ideas (p. 8); and upholds personal *accountability* and depends upon *action in the face of wrongdoing* (p. 9)."[13]

Institutional Culture Matters

As scholars and Christ-followers, teachers in Adventist schools and universities commit to learning and growing together with students as Christ's living body in their academic community. Orientation to the institution,

for employees and students, and to each class should include a review of the institution's mission-aligned academic-integrity standards and policy, as well as processes to be implemented when these are breached. Formal processes serve to (1) centralize records to provide context (is this a first offense or a pattern of behavior?) that informs how the case is handled, (2) ensure consistency of penalties for similar offenses, and (3) provide students an appeal option by an impartial third party (see Andrews University[14] and MIT[15] standards, including training tools for staff and students). In combination with intentionally modeling and teaching academic integrity, schools need to develop policies and processes that define the appropriate approach(es) the academic community will take with those who breach integrity standards.

To achieve the mission of Adventist education, in an age of shifting moral and ethical thinking about the use of online resources, Adventist program outcomes must include at least one outcome relating to faith integration, ethics, and virtues. Teachers thus have opportunities to make connections between the program's ethics class and the application of academic integrity in other classes. A short presentation in the first week, with impromptu reminders of what the culture of integrity means in context, is key.

In online higher education, students build trusting relationships with their professors and academic advisors, whose teaching and nurture helps them navigate academia and life in order to achieve their unfolding career goals. When advisors help students set up realistic study loads for their situation, this can reduce the temptation to cheat. Advising students to enroll in classes that build skills in academic integrity (e.g., college writing) early is another strategy to maximize integrity. Other student-life professionals who serve online students (e.g., librarians, counselors) must also model and teach virtues and values that positively influence students to resist dishonesty in any form.

Recognizing the diversity of student backgrounds, teachers can plan online discussions of specific components of academic integrity applicable to various lessons. They can also help all students engage and belong by inviting and affirming their divergent experiences. Regular monitoring of student participation in forums, e-mails, texts, and calls helps teachers learn which expectations need clarifying; rapid responses help students keep engaged and on task.

All educators in Christian online learning communities have the privilege of praying with students. Being real by sharing personal experiences, remembering what students have shared, and following up via digital communication tools students prefer builds trusting relationships that help students thrive, which in turn reduces at-risk behaviors such as dishonesty.

Crafting learning activities that reinforce a culture of genuine care and modeled integrity further mitigates dishonesty and ensures student achievement of desired learning outcomes.

Learning With Integrity

Designing learning activities and classes to minimize the temptation to cheat is an important proactive strategy. While the mission of Christian education focuses on inspiring students to choose to love and live for Christ, the reality is that we all fall short of God's ideal. Being aware of and prepared to reduce breaches of academic integrity is essential to facilitating learning with integrity.

Honor codes, explicit instructions, and assignment design, briefly shared in this section, are strategies that help students choose to learn with integrity
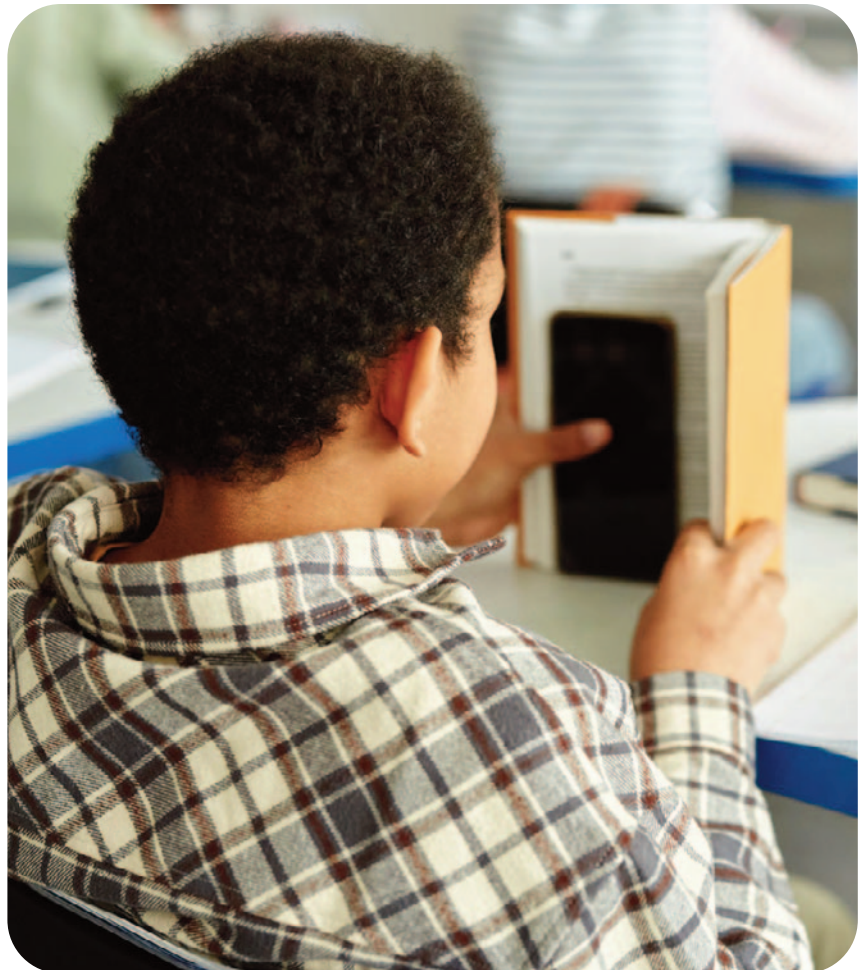
in a community valuing academic integrity.

A student honor code included in course orientation and as the first item on assessments can remind students of the ethical choice they make as they demonstrate their learning. Students may be asked to copy or paraphrase wording such as: *I promise, on my honor, and in adherence with the Integrity Standards of [school/university name], that I will neither give nor receive unauthorized assistance in completing this learning activity.*

Teachers can reduce stress by writing explicit instructions for every learning activity, including samples and rubrics that are discussed in class. They need to be clear about what learning must be completed alone, when group work is allowed, and how work will be graded. They should estimate time commitments for major learning activities and review the hours per week students should be scheduling in and out of class to succeed. In online studies where students figure out more alone, the ability to reread or have clear, written instructions read aloud, use online translation tools, or have a tutor able to comprehend and help depends on the quality of scaffolding the teacher provides through detailed procedural information.

Making the creation of a course syllabus a collaborative project in the first week of class increases ownership, as it provides students with choices about major projects and due dates and allows them to ask questions that will help clarify expectations for all. While learning outcomes and institutional policies are non-negotiable, allowing customization of learning activities and assessments can provide many benefits.

Structuring term papers with several partial deadlines increases learning with integrity. For example, students can submit their topic for a term paper early in the term, an outline a few weeks later, a first draft with peer review after a few more classes, and the final paper at the end of the course. Breaking down larger assignments with more opportunities to clarify and review formative feedback reduces opportunities to procrastinate and therein the pressure to plagiarize.

Another approach to maximizing academic integrity is to create assignment questions that require individual application. In this digital age, whether learning online or on campus, students use the Internet, so the following examples are relevant in any learning format:

• Instead of an essay describing the tenets of Plato's philosophy (for which responses would vary little),

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have students analyze an event or concept in their recent experience according to Platonic thought.

• In a nutrition class, a plagiarism-resistant assignment could require a log of everything a student eats for a day, with an analysis of what was eaten according to the diabetic diet, without moral judgments by the teacher or student. It is highly unlikely that every student will list the same foods eaten for three consecutive meals with the same analysis. If this does happen, even the most forgetful teacher would likely have a strong feeling of *déjà vu*.

• In a course on the education philosophy of Ellen G. White, students might analyze how a lesson in another course aligns with Ellen White's views on education. Even if two students choose the same lesson in the same course, the same analysis would raise suspicion.

• In place of an essay describing one of Jesus' parables and its relevance today, students might write an essay about how Jesus would respond to an event that occurred in the past week.

Plagiarism-resistant essays will differ greatly, with fascinating news stories making grading enjoyable. Increasing relevance engages the learner and makes the teacher more connected, relational, and approachable. Students will have more fun, remember more, and regard the class as more practical. Such a positive class climate reduces the urge to copy, and the sense that students can get away with any form of academic dishonesty.

Investing in character-building education through building trusting relationships, and crafting plagiarism-resistant and authentic assessments may take more time initially, but creative learning activities can be reframed or applied in diverse contexts. Time previously spent investigating possible plagiarism cases can be redirected to other worthwhile tasks that will benefit both teacher and student.

Assessing With Integrity

Assessing with integrity is just as important as learning with integrity. In this section, we explore assessment types, designs, and proctoring. Each of these components contributes to student success and to maximizing academic integrity in online courses.

Vary Forms of Assessment

Wherever class and program outcomes allow, create assessments that apply essential knowledge and skills. These may include term papers, group projects, podcasts, videos, presentations, performances, annotated bibli-

ographies, fact sheets, portfolios, a series of reflective papers or blog posts, creating a test and the answers, service learning to meet a community need, or a student-proposed project.[16] Giving students choices in how to demonstrate learning and assessing learning through online discussion posts[17] and several smaller assignments rather than one exam or term paper increases student engagement and decreases the temptation (and opportunity) to cheat.

Where assessments such as a comprehensive test or examination are required (e.g., national or other external examinations) or most feasible (e.g., very large classes), consider administering several assessments rather than one or two comprehensive exams. This allows students to learn teacher expectations with formative feedback, reducing stress and enhancing performance.

Mastery learning is a model that allows retaking tests—either the same or an alternate version—until a minimum score is achieved. Using online instructional tools to randomize questions drawn from a test bank makes it easier to support mastery learning. This excellent revision or self-quizzing option also reduces the likelihood of cheating. Even so, including one or two proctored or supervised exams in a class with mastery quizzes is recommended to ensure that the student taking unsupervised repeatable quizzes is the one who is enrolled in the online class.

Another plagiarism-preventing strategy is to structure assessment essays so that students cannot regurgitate assignment answers. Consider a class with one assignment on the image in Daniel 2, and another about the beasts of Daniel 7: An examination essay could ask the students to compare and contrast the two visions. Students are thus unable to directly copy or write memorized assignment answers because they must analyze and synthesize what they learned to create a unique exam response.

Creating Online Assessments

Consider the following when setting up an online test in any learning-management system:

• In the syllabus and where assessment reminders are placed, clearly state what materials are allowed during the assessment (e.g., calculator, Bible, textbook if an open-book test), as well as the time allowed with a deadline for completion. Multiple communications are helpful to all, but particularly support students experiencing online proctoring for the first time and students working with tutors or special accommodations who need more time to prepare.

• Provide a comprehensive review of what will be included in an assessment, consistently placed in the course space along with the assessment link. Include a reminder for students with disability accommodations to bring appropriate documentation for proctors to provide additional time or technology support that sets such students at ease from the start of their exam session.

• Include in the syllabi the instructor's right to require alternate forms and locations of assessment, so changes can be made on an individual basis when dishonesty is suspected.

• Randomize the order of multiple-choice questions and answer options within items. If possible, randomly draw test items from a larger pool of questions testing each learning outcome, so each student receives a different test.

• Set up test duration so students lose online access once the allotted time expires. Display a countdown of time remaining in the assessment window online. This allows proctors to focus on observing students rather than timekeeping, and provides students with guidance on how to spend available time.

• Use passwords to limit access until the student is in the presence of an approved proctor. This is essential for in-person and remote proctoring (via video conferencing).

• Provide all instructors with training so that they can consistently implement standards like password control, randomization, and clear instructions. Provide all proctors with training in how to check students in at an exam session, manage passwords and accommodations, troubleshoot technology, observe students' actions, and document any suspicious behavior or clear evidence of cheating. Proctors must be persons of integrity, calm and caring, quick to learn, with clear speech and excellent written communication skills.

• Wherever feasible, use a custom browser that permits students to access only the assessment in their learning-management system (e.g., Respondus Lockdown Browser). Test the program thoroughly, and know your students' situations before setting this up, as corporate policies (institutional or product policies) may not allow the installation required on the local machine. Proctoring without this security feature requires greater surveillance, including a second device connected to the same video conference.

• If possible, use a variety of question types both within each assessment and between various assessments in a class. Be sure the assessment review outlines what kinds of questions will be included. This will improve the quality of student preparation and reduce test anxiety.

• Revise assessments frequently, improving and changing items to thwart leaking of items or entire examination. Ensure that as student learning outcomes are updated in a class, the assessments reflect the change and weighting of what is assessed.

• For open-book tests, activate a plagiarism-detection tool such as Turnitin, and teach students to use this to ensure that they have written answers in their own words and have adequately cited references.

• Display only a few items per screen to limit sharing items, increase focus on current items, and assure students that their answers are regularly being saved online.

Online Proctoring

An institution's commitment to academic integrity includes being able to verify that the student who completes the coursework is the person registered for the class.[18] In online classes, student authentication can be achieved by requiring participants to complete at least one assessment where a legal photo-identification document held up to the screen by the student sufficiently matches the student's face in video conference and his or her name in the online course space. Even in open-book assessments, the identity of the student needs to be verified, so teachers must require proctoring for all major tests or exams.

Currently, there are two ways to supervise students taking exams remotely—live and automated proctoring. Live proctoring services have trained personnel observe students who are taking tests remotely. Automated proctoring services use artificial-intelligence technology to monitor students during the time they are taking examinations. Both types of proctoring require students to connect with a proctoring service through videoconferencing tools such as Zoom, Microsoft Teams, or Google Meet from a device with speakers and a video camera, in a location with reliable Internet access. Automated proctoring services have limitations in differentiating between reasonable Internet bandwidth variations, movements and noises in the student's environment, and skin tones.[19] Brown describes how proctoring services without human interaction discriminate against students of darker skin tones and those with disabilities needing special devices, personal assistants, or accommodations for body movements these automated systems would flag.[20] The need to follow written or audio directions can increase test anxiety for students unfamiliar with automated systems, especially in unexpected situations that may flag or end their test session—but which communication with a person could calm and resolve.

While automated-proctoring options are easier to outsource and expand as enrollments increase, live proctoring offers a better method of supporting the diversity of students who study online. Where some fear that a live proctor's checking of student surroundings and identification constitutes an invasion of privacy, automated proctoring records both surroundings and identification documents, which raises concerns about the ethical use of data. Although live proctoring requires an investment in equipment and employees, the authors of this article have found that the cost of conducting proctoring in-house to be considerably less than outsourcing.

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In a Christian educational institution, live proctoring requires investment in a testing center with proctors who are committed to the institution's mission and who have received training in how to troubleshoot technical issues and build relationships with students. Having a calm, caring, problem-solving person to help students deal with the stress of test-taking adds value to the quality of student services and increases student success on exams. Furthermore, trusting relationships positively affect student honesty.

Reflecting on their experience in rapidly transitioning a British university to live proctoring through video conferencing, Linden and Gonzalez[21] noted that in carefully planned online exams, students can indeed "demonstrate their learning in a supportive, valid and authentic assessment . . . appropriate for the self-regulated, digital and remote world of work we are preparing students to be a professional member of."[22]

Keep the following in mind to maximize academic integrity through proctoring:

• Require proctoring for open- and closed-book exams, to verify identity. In-person and video-conferencing options can be considered.

• Have the students use their video camera to verify that their physical location is clear of all unauthorized study materials.

• If a lockdown browser is not activated, require screen sharing for device monitoring, checking that all applications not used during the exam remain closed.

• Having students join an exam session through video conferencing (e.g., Zoom, GoogleMeet, Teams) using their cell phones or tablets adds another angle to observe their actions and that they can use to communicate, should the computer lose connection or power.

• Proctors need be granted permission in the learning-management system to be able to view passwords and enter overrides for approved disability and deadline accommodations.

• If proctoring is allowed through external proctoring services, ensure that institutional academic-integrity standards are consistently applied and that student feedback informs contract renewals.

• Establish clear procedural communications with easy appointment management to help students prepare for online assessments.

Conclusion

Plagiarism awareness and detection tools are important, as there will al-

ways be the choice for students to cheat or misrepresent the work of others as their own. In times of rapid technological advances, training in fully understanding technology to be used, including possible unethical uses and the controls set to maximize integrity is essential in every field and at each level of education. Professional development for educators will be needed for them to keep current with forms of academic dishonesty and to stay up to date about best practices for intentionally designing teaching, learning, and assessments to maximize academic integrity.

Faith-based institutions whose mission features education in character building and eternal values have a special calling concerning integrity development. By instilling faith-based academic-integrity practices through good teaching, learning, and assessment strategies, Christian educators have the privilege of collaborating with the Holy Spirit in forming the next generation of honest and honorable members of society. ✐

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NOTES AND REFERENCES

1. Tricia Bertram Gallant, "Special Issue: Academic Integrity in the Twenty-First Century: A Teaching and Learning Imperative," *ASHE Higher Education Report* 33:5 (March 2008). doi.10.1002/aehe.3305.

2. See page 29 in Jennifer Peterson, "An Analysis of Academic Dishonesty in Online Classes," *Mid-Western Educational Researcher* 31:1 (2019): https://www.mwera.org/MWER/volumes/v31/issue1/V31n1-Peterson-FEATURE-ARTICLE.pdf.

3. David C. Ison, "An Empirical Analysis of Differences in Plagiarism Among World Cultures," *Journal of Higher Education Policy and Management* 40:4 (2018): 291-304. doi.10.1080/1360080X.2018.1479949.

4. Ibid., 293.

5. Susan M. Taylor, "Term Papers for Hire: How to Deter Academic Dishonesty," *The Journal of Adventist Education* 76:3 (February/March 2014): 34-41: https://circle.adventist.org/files/jae/en/jae201476033408.pdf.

6. Tracey Bretag et al., "Contract Cheating: A Survey of Australian University Students," *Studies in Higher Education* 44:11 (2018): https://www.tandfonline.com/doi/abs/10.1080/03075079.2018.1462788?journalCode=cshe20.

7. "What Is Contract Cheating," International Center for Academic Integrity: https://academicintegrity.org/what-is-contract-cheating.

8. Beckie Supiano, "Students Cheat. How Much Does It Matter?" *The Chronicle of Higher Education* 67:5 (2020): https://www.chronicle.com/article/students-cheat-how-much-does-it-matter.

9. "Best Practice Strategies to Promote Academic Integrity in Online Education," *WCET, UT TeleCampus, and Instructional Technology Council* (Version 2.0, June 2009): https://wcet.wiche.edu/resources/best-practice-strategies-to-promote-academic-integrity-in-online-education-version-2-0-2/.

10. Jewish Virtual Library, "Hassagat Gevul": https://www.jewishvirtuallibrary.org/hassagat-gevul.

11. Taylor, "Term Papers for Hire: How to Deter Academic Dishonesty."

12. "The Fundamental Values of Academic Integrity," *International Center for Academic Integrity,* 3rd ed. (2021): https://academicintegrity.org/resources/fundamental-values.

13. Lori McNabb and Alicia Olmstead, "Communities of Integrity in Online Courses: Faculty Member Beliefs and Strategies" (italics supplied). In *MERLOT Journal of Online Learning and Teaching* 5:2 (2009): 208-221: https://jolt.merlot.org/vol5no2/mcnabb_0609.pdf.

14. Academic Standards at Andrews University: https://www.andrews.edu/academics/academic_integrity.html.

15. Academic Integrity at MIT: A Handbook for Students: https://integrity.mit.edu/.

16. Glynis Bradfield, "Assessing Students Remotely," Andrews University School of Distance Education (June 2021): https://www.andrews.edu/distance/dlit/guides/testing-remotely.html.

17. Flower Darby, "Seven Ways to Assess Students Online and Minimize Cheating," *The Chronicle of Higher Education* (2020): https://www.chronicle.com/article/7-ways-to-assess-students-online-and-minimize-cheating.

18. U.S. Higher Education Opportunity Act of 2008. Public Law 110-315: 122 STAT. 3078: https://www.govinfo.gov/content/pkg/PLAW-110publ315/pdf/PLAW-110publ315.pdf.

19. Joe Friesen, "Use of Surveillance Software to Crack Down on Exam Cheating Has Unintended Consequences," *The Globe and Mail* (December 2020): https://www.theglobeandmail.com/canada/article-use-of-surveillance-software-to-crack-down-on-exam-cheating-has/.

20. Lydia Brown, "How Automated Test Proctoring Software Discriminates Against Disabled Students," Center for Democracy and Technology (November 16, 2020): https://cdt.org/insights/how-automated-test-proctoring-software-discriminates-against-disabled-students/.

21. Kelly Linden and Prue Gonzalez, "Zoom Invigilated Exams: A Protocol for Rapid Adoption to Remote Examinations," *British Journal of Educational Technology* 52:4 (2021): 1,323–1,337. doi.10.1111/bjet.13109.

22. Ibid.