

Confronting Assessment Integrity of Higher Education Institutions during COVID-19 Pandemic

Argie Anthony C. Inciso*

argiea.inciso@lnu.edu.ph

Leyte Normal University, P. Paterno St., Tacloban City, Philippines

Abstract

During the COVID-19 pandemic, a number of institutions were unprepared to support online assessment. However, the integrity and quality of online learning assessments must be safeguarded. This study is a synthesis, a written discussion integrating the findings of many online assessment researches on Higher Education Institutions during the COVID-19 pandemic. The findings of this study include issues and challenges to assessment integrity posed by online assessment and a discussion of assessment practices and pedagogy for maintaining students' academic integrity.

Keywords: Assessment integrity; Online learning; COVID-19 pandemic; Academic integrity

1. Introduction

Since the effectiveness of teaching is ultimately measured by how effectively students learn, it is important to maintain the integrity and quality of assessments in online learning. During COVID-19 pandemic, many institutions were not completely equipped to support online delivery and assessment (Gamage, Silva, & Gunawardhana, 2020). Several institutions have turned to other methods of student assessment. As schools and universities have increased their online options, new problems with best practices, equality, and justice, as well as assessment security and integrity, have emerged (Eaton, 2020; Egarter, Mutschler, & Brass, 2021; Middleton, 2022). One of the main difficulties and drawbacks of online assessment is the need to eliminate online cheating to maintain assessment integrity.

When universities with little experience in the digital world were forced to quickly switch to online teaching because of COVID-19, existing trends toward education, created an environment that was conducive to cheating. To make sure that graduates of higher education have attained the requisite learning outcomes, academic integrity and assessment security are essential. Teachers thought the pandemic was a perfect chance to change their assessment practices and introduce innovations that complimented their own beliefs and the needs of their students (Almossa & Alzahrani, 2022). Indeed, a period like these calls for the development of online platforms, policies for online teaching and learning, and rules and regulations (Gamage, Silva, & Gunawardhana, 2020). Designing assessment tasks that are resistant to the problems posed by cheating might reduce threats to assessment integrity. Making ensuring that exams allow students to realistically show their learning is a fundamental idea in assessment design. While assessment design is crucial for safeguarding assessments to avoid instances of plagiarism and cheating, assessment integrity is crucial for assuring a good assessment procedure and accurate outcomes.

The specific conditions brought on by technology and COVID-19 measures heighten the integrity

threat. For instance, the quick switch to online exams that resulted in the use of assessment methods inappropriate for online contexts and a corresponding increase in test scores (Eaton, 2020). Students had a chance to act inappropriately during online assessments that they would not have had otherwise (Richardson, 2022). The issue has become so bad that in the worldwide university sector, where it is increasingly recognized as a serious threat to the maintenance of academic integrity (Lancaster, 2019; Walker et al. 2012). Academic integrity is about making ethical judgments every day at educational institutions to get used to the process rather than to avoiding wrongdoing or following a set of rules (Turner, Adams, & Eaton, 2022). Academic integrity, regardless of the teaching method, is crucial for the legitimacy and prestige of educational institutions (Reyneke, Shuttleworth, & Visagie, 2021). Academic institutions should provide for and carry out actions to lessen the threat that certain venues pose to the quality of education (Lancaster & Cotarlan, 2021). Also, institutions must acknowledge the need for more student engagement when formulating academic integrity policies and in the implementation (Peytcheva-Forsyth, Mellar, & Aleksieva, 2019).

There seems to be a dearth of thorough information on ethics, the hazards to integrity, and the drawbacks of assessment outsourcing in present academic integrity education programs (Sefcik, Striepe, & Yorke, 2019). While it was obvious that many students and some professors did not have a clear understanding of what constituted plagiarism, both teachers and students perceived cheating and plagiarism as a very substantial issue (Peytcheva-Forsyth, Mellar, & Aleksieva, 2019). Both plagiarism and ghostwriting have been around for centuries; one is a crime, the other is a service (Dougherty, 2020).

The literature that is currently accessible on COVID-19-related assessment modifications points to an increase in online supervision, which may or may not be financially advantageous for academic institutions like universities (Khan & Jawaid, 2020; Nizam et al., 2020). However, universities must acknowledge that COVID-19 has expedited the need for rigorous analysis of the ways in which technology, academic integrity, and assessment processes interact on a broader scale than has previously been explored (Hill, Manson, & Dunn, 2021).

2. Threats to Assessment Integrity

The integrity of assessments, particularly for students who were not directly invigilated by instructors, posed a new problem for educators (Gamage et al., 2020). Despite the strict exam integrity tools and procedures, educators questioned the validity of online tests (Al-Karaki et al., 2021). It may be difficult to detect academic misconduct during remote online delivery and remote assessments, and it may be exceedingly challenging to deal with instances of academic misconduct when faculty activities are limited.

There are difficulties in adjusting to a new teaching, learning, and assessment method, such as technology barriers and faculty and student incompetence (Garca-Pealvo et al., 2020; Guangul et al., 2020; Inciso, 2021; Watermeyer et al. 2021). According to Maphalala, Khumalo, and Khumalo (2021), the digital divide, constrained pedagogical approaches, insufficient proficiency with the use of the learning management system, the fact that the quality and integrity of assessment were somewhat compromised, as well as students' unfavorable living conditions that make learning from home challenging, were among the problems that universities had to deal with during the COVID-19 pandemic. Technical difficulties, departmental limits such as the inability to use particular assessment types and questions, a lack of responsiveness to training requirements, problems obtaining online assessments, and a lack of assessment credibility were some of the difficulties in conducting online assessments (Almosa & Alzahrani, 2022). Furthermore, students must have access to enough technical infrastructure in order for online proctoring to function properly (Hussein, et al., 2020).

The process of detecting academic dishonesty and upholding academic integrity is fraught with several challenges and complexities like the disagreement among academic staff members about what counts as academic misconduct, the difficulty to identify academic fraud if student performance and assignments are

not carefully tracked on an individual basis, the establishing academic integrity laws and regulations which may be difficult due to ambiguous and pronounced techniques, and the faculty operations being limited or taking place mostly remotely during the COVID-19 period (Gamage, Silva, & Gunawardhana, 2020). It was evident that instructors' experiences with academic integrity varied, but it was also obvious that there was a lack of consistency in approach at the institutional level, which led to students' varying impressions of policies and support (Peytcheva-Forsyth, Mellar, & Aleksieva, 2019).

Regardless of the kind of assessment task, some students' inclination to outsource their work poses a serious danger to the public and has the ability to undermine confidence between businesses and graduates as well as between professions and institutions (Ellis et al., 2020). According to Almosa (2021), students have developed a variety of strategies for cheating on tests, including utilizing WhatsApp groups or asking individuals who took the test before them for the answers. The lack of direct supervision may cause students to ask friends and freelancers to do the task for them (Gamage et al., 2020). Some students are abusing academic integrity by accessing file-sharing websites (Lancaster & Cotarlan, 2021). In light of the sophisticated and readily available enterprises poised to profit from such a disruption, some individual institutions are ill-equipped to create, implement, and monitor assessment to discourage and avoid academic integrity violations (Hill, Manson, & Dunn, 2021). Even software that detects plagiarism may not always catch all instances of it and sometimes gives false findings (Daubner, et al., 2020; Eaton et al., 2020).

It is important that educators should have enough training in pedagogical literature and teaching and learning methodology. Academic staff members who do not participate in curriculum and assessment design that minimize academic misconduct and dishonesty are a major contributor to the rise in academic dishonesty period (Gamage, Silva, & Gunawardhana, 2020).

Some students cheated because of pandemic-related problems like inadequate supervision, but there are also other causes, such poor time management, feeling overburdened and pressured, and having trouble with technology (Verhoef & Coeter, 2021). The lack of awareness of plagiarism, cultural issues and background, time constraints, lack of desire and interest, and pressure for achievement as factors that contribute to students engaging in academic misconduct (Gamage, Silva, and Gunawardhana, 2020; Patak et al., 2021).

3. Implications for Online Assessment and Pedagogy

The principles of validity, efficiency, fairness, reliability, and variability are at risk when using online assessment (Harris et al., 2020; Al-Maqbali & Raja Hussain, 2022). There is a need to update the concept of academic misconduct to take into account how exams have changed in the digital age (Reedy et al., 2021). The outcomes we anticipate from a university education in terms of broad knowledge, skills, and employability is confronted by online assessment in higher educational institutions since it has to cope up with the changes (Munna, 2021). The increasing adoption of online exams and the accelerated growth of contract cheating services have wide-ranging effects on academic practice and institutional responses like policy and procedures at institutions throughout the world (Hill, Manson, & Dunn, 2021). Academic dishonesty has a negative impact on the teaching-learning process as well as the disparities of grades to students (Guangul et al., 2020).

For the institution to implement academic integrity policies, pedagogy and assessment strategy need to be reviewed (Peytcheva-Forsyth, Mellar, & Aleksieva, 2019). Assessment design is essential to prevent academic dishonesty (Mahmood, 2009; Morris, 2016; Morris & Carroll, 2016; Newton & Lang, 2016; Walker & Townley, 2012; Walker & White, 2014). Students will conduct assessment activities honestly and the results will be a real representation of their performance if assessment security is maintained, which entails being secure about one's judgments and the repercussions of them. In order to fulfill these requirements, assessment security must regulate the environment in which assessment activities are carried out (Dawson 2020). Across institutions in the higher education sector, assessment security is ensured by adherence to

deadlines. However, deadlines no longer deter cheating. High-stakes, short-term freelancers are tapped for their service. With this, instructors may monitor student engagement using "checkpoints" or advanced drafts. Many institutions use vivas to prevent academic dishonesty and secure assessments (Gamage, Silva, & Gunawardhana, 2020). Teachers and researchers should carefully consider how to provide these tests or assessments in the most safe, equitable, and legitimate way possible while still preserving the test's integrity and interpretation as more assessments are given online (Middleton, 2022).

According to Ahadiat and Gomaa (2020), instructors generally believe that assignments, quizzes, and examinations that are administered in-person are more secure than those that are administered in other ways. Faculty thought that hybrid classrooms offered more secure tests, assignments, and quizzes than synchronous or asynchronous modalities of instruction. Almossa & Alzahrani (2022) recommends that all departments should develop evaluation procedures and update their course descriptions, exams should be administered in university labs to prevent cheating and faculty should be advised of specific training needs for instance, training on how to use technology in distance education. Some of the main actions taken by instructors to protect the integrity of assessments on the online platform include the use of the applications, presenting one question at a time on the screen, avoiding backtracking, randomizing the answers, and changing the questions from the textbook (Reddy et al., 2022). Giving each student a new set of questions is a great strategy for reducing academic dishonesty (Guangul et al., 2020). Raje and Stitzel (2020) identified techniques for limiting the use of outside resources during assessments, such as preventing backtracking, limiting the use of notes and textbooks on the final exam, changing questions to incorporate knowledge transfer, using watermarks as an anti-cheating technique, and assessing the techniques.

The assessments, which included anything from assignments to multiple-choice questions, were done online, forcing the instructors to reconsider how they were set up in order to prevent students from having easy access to the answers in a textbook or online (Baboolal-Frank, 2021). There are several ways to adapt conventional assessment to work with online assessment, including timed assessments like quizzes, non-restricted assessments like home assignments, essay questions, video streaming assessments like oral exams, and viva voce presentations (Gamage et al. 2020). To effectively scaffold students' development of concept mapping abilities, incorporating concept maps into our current assessment strategies would be helpful (Lau et al., 2020). Also, the study of Sotirjadou et al. (2020) show how interactive orals and scaffolded assessment tasks may help prevent academic misconduct. Combining different assessment techniques, such as report submission with an online presentation, reduces cheating since the evaluator will have an opportunity to verify that the student is the author of the submitted work (Guangul et al., 2020). Engaging oral exams can help students develop their professional identities, awareness, and communication abilities, all of which increased their employability. Finally, educators should put in mind that technology-transformed assessment should be reliable, continuous, secure, and automated properly (Iosad, Pauli, & Attewell, 2020).

Increased assessment frequency, novel, higher-order thinking short answer questions, and higher-order thinking multiple choice questions may all be utilized to stop online cheating and guarantee that students are making progress in the new learning environment (Nguyen, Keuseman, & Humston, 2020). In order to discourage plagiarism and peer cooperation, more theory to practice application questions have to be assessed more (Baboolal-Frank, 2021). Assessment tests that emphasize application of learning rather than memorization of information reduce the likelihood of academic dishonesty (Ellis et al., 2020). It may be efficient to lessen collaboration and cheating by creating assessment tasks that enable students to show the application of their knowledge in relevant circumstances (Amrane-Cooper, Hatzipanagos, & Tait, 2021). The more closely the test mimics actual-world circumstances, the less probable it is that students would cheat (Sotirjadou et al., 2020).

Digital skills should be learned as a result of the recent assessment adjustments, which improved their capacity to experiment with and use cutting-edge online assessment techniques (Iosad, Pauli, & Attewell, 2020). Enhancing assessment integrity using technological means while preserving the current system is a must (Lakshminarayanan & Rao, 2022). Remote computer tests using a proctoring system may be

an effective method for evaluating university students and that, when they get used to it, it may eventually replace more conventional methods (Marín García, Arnau-Bonachera, & Llobat, 2021; Verheof et al., 2022). Technology firms that provide solutions for institutions thrive with highly developed proctoring and cheating measurement systems. However, these solutions need large financial outlays, student and teacher programs, and hardware like laptops with cameras and internet connection (Eaton, 2020).

The shift to online assessments has allowed for improvements and new practices in assessment procedures due to the increase in their use. Academic integrity fosters a culture where rules, procedures, and instructional practices that deter cheating are sustained by motivating students to focus on their assigned tasks and respect their accomplishments (Dawson, 2020). Academic staff and faculties need to be provided with procedural assistance that offers moral support for faculties in order to effectively manage academic integrity during online delivery and assessment during COVID-19 period (Gamage, Silva, & Gunawardhana, 2020). Teachers should be held accountable for taking preventative measures to increase their students' awareness of and understanding of plagiarism by using supportive teaching practices (Reyneke, Shuttleworth, & Visagie, 2021). Providing a comprehensive introduction to academic integrity and assessment security at the school and college levels is the first step in ensuring academic integrity (Dawson, 2020; Gamage, Silva, and Gunawardhana, 2020). Raising awareness and sharing information on academic integrity policy, procedures, expectations, disciplinary action, and developmental tools to prevent academic misconduct are of the highest significance (Dawson, 2020). Through discussions with students, academic integrity and assessment security may be encouraged (Gamage, Silva, & Gunawardhana, 2020). Faculty and academic staff should discuss the risks of cheating with students while reinforcing and reiterating the institutional academic policy (Reyneke, Shuttleworth, & Visagie, 2021). Students will get a better understanding of the significance of academic integrity by making connections to potential vocations at the assessment, course, program, and institutional levels (Seeland et al., 2022). Interestingly, making the students sign an academic integrity pledge is a preventative measure to combat cheating before it starts (Nguyen, Keuseman, & Humston, 2020).

4. Conclusions and Recommendations

Many institutions were not fully prepared to support online assessment during the COVID-19 pandemic. It is then critical to maintain the integrity and quality of assessments in online learning. Teachers' inconsistent methods, the outsourcing of students' work, their lack of pedagogical expertise in online assessment, and students' lack of awareness of plagiarism are all threats to the integrity of online assessments. Other threats include time restraints, cultural issues, a lack of desire and interest, and pressure. Institutions must thus provide orientations on academic integrity awareness and modify online assessment guidelines in order to accommodate online learning. Teachers are crucial in maintaining the security and integrity of assessments. To regulate assessment security, educators can employ innovative assessment activities. They should also use the appropriate software to assess the quality of students' work. According to studies, either the educator or software programs still need to oversee the delivery of online assessment activities and procedures.

References

- Ahadiat, N., & Gomaa, M.I. (2020). Online Accounting Education: How to Improve Security and Integrity of Students' Performance Assessments. *Journal of Instructional Pedagogies*, 24.
- Almossa, S. Y. (2021). University students' perspectives toward learning and assessment during COVID-19. *Education and Information Technologies*, 26(6), 7163-7181.
- Almossa, S. Y., & Alzahrani, S. M. (2022). Lessons on maintaining assessment integrity during COVID-19. *International Journal for Educational Integrity*, 18(1), 1-17.
- Al-Karaki, J. N., Ababneh, N., Hamid, Y., & Gawanmeh, A. (2021). Evaluating the Effectiveness of Distance Learning in Higher Education during COVID-19 Global Crisis: UAE Educators' Perspectives. *Contemporary Educational Technology*, 13(3).
- Al-Maqbali, A. H., & Raja Hussain, R. M. (2022). The impact of online assessment challenges on assessment principles during COVID-19 in Oman. *Journal of University Teaching & Learning Practice*, 19(2), 73-92.

- Amrane-Cooper, L., Hatzipanagos, S., & Tait, A. (2021). Developing student behaviours that support academic integrity in distance learning. *Open Praxis*, 13(4), 378-384.
- Baboolal-Frank, R. (2021). Emergency remote learning during the pandemic from a South African perspective. *International Journal for Educational Integrity*, 17(1), 1-9.
- Bretag, T., Harper, R., Burton, M., Ellis, C., Newton, P., van Haeringen, K., ... & Rozenberg, P. (2019). Contract cheating and assessment design: exploring the relationship. *Assessment & Evaluation in Higher Education*, 44(5), 676-691.
- Dawson, P. (2020). *Defending Assessment Security in a Digital World: Preventing E-Cheating and Supporting Academic Integrity in Higher Education* (1st ed.). Routledge. <https://doi.org/10.4324/9780429324178>
- Daubner, L., Macak, M., Buhnova, B., & Pitner, T. (2020, March). Verification of forensic readiness in software development: A roadmap. In *Proceedings of the 35th Annual ACM Symposium on Applied Computing* (pp. 1658-1661).
- Davies, A. (2022). Enhancing academic integrity in a UAE safety, security defence emergency management academy—the Covid-19 response and beyond. *International Journal for Educational Integrity*, 18(1), 1-18.
- Dicks, A. P., Morra, B., & Quinlan, K. B. (2020). Lessons learned from the COVID-19 crisis: adjusting assessment approaches within introductory organic courses. *Journal of Chemical Education*, 97(9), 3406-3412.
- Dougherty, M. V. (2020). *Disguised academic plagiarism: A typology and case studies for researchers and editors* (Vol. 8). Springer Nature.
- Eaton, S. E. (2020). Academic integrity during COVID-19: Reflections from the University of Calgary. *International Studies in Educational Administration*, 48(1), 2020. pp. 80-85.
- Eaton, S. E., Crossman, K., Behjat, L., Yates, R. M., Fear, E., & Trifkovic, M. (2020). An institutional self-study of text-matching software in a Canadian graduate-level engineering program. *Journal of Academic Ethics*, 18(3), 263-282.
- Egarter, S., Mutschler, A., & Brass, K. (2021). Impact of COVID-19 on digital medical education: compatibility of digital teaching and examinations with integrity and ethical principles. *International Journal for Educational Integrity*, 17(1), 1-19.
- Ellis, C., Van Haeringen, K., Harper, R., Bretag, T., Zucker, I., McBride, S., ... & Saddiqui, S. (2020). Does authentic assessment assure academic integrity? Evidence from contract cheating data. *Higher Education Research & Development*, 39(3), 454-469.
- Gamage, K. A., Silva, E. K. D., & Gunawardhana, N. (2020). Online delivery and assessment during COVID-19: Safeguarding academic integrity. *Education Sciences*, 10(11), 301.
- García-Peñalvo, F. J., Corell, A., Abella-García, V., & Grande, M. (2020). Online assessment in higher education in the time of COVID-19. *Education in the Knowledge Society*, 21.
- Guangul, F. M., Suhail, A. H., Khalit, M. I., & Khidhir, B. A. (2020). Challenges of remote assessment in higher education in the context of COVID-19: a case study of Middle East College. *Educational assessment, evaluation and accountability*, 32(4), 519-535.
- Harris, L., Harrison, D., McNally, D., & Ford, C. (2020). Academic integrity in an online culture: do McCabe's findings hold true for online, adult learners?. *Journal of Academic Ethics*, 18(4), 419-434.
- Hill, G., Mason, J., & Dunn, A. (2021). Contract cheating: an increasing challenge for global academic community arising from COVID-19. *Research and practice in technology enhanced learning*, 16(1), 1-20.
- Hussein, M. J., Yusuf, J., Deb, A. S., Fong, L., & Naidu, S. (2020). An evaluation of online proctoring tools. *Open Praxis*, 12(4), 509-525.
- Inciso, A. A. C. (2021). Higher education during COVID-19 pandemic: Distance education and online learning. *International Journal of Research Publications*, 70(1), 60-65.
- Iosad, A., Pauli, M., & Attewell, S. (2020). *Assessment Rebooted: From Fixes to Foresight*. Bristol, UK.
- Khan, R. A., & Jawaid, M. (2020). Technology enhanced assessment (TEA) in COVID 19 pandemic. *Pakistan journal of medical sciences*, 36(COVID19-S4), S108.
- Lakshminarayanan, S., & Rao, N. J. (2022). Improving Integrity in CS1 Course Using Formative Assessment and Version Control Tools. *Higher Education for the Future*, 9(1), 30-44.
- Lancaster, T. (2018). Profiling the international academic ghost writers who are providing low-cost essays and assignments for the contract cheating industry. *Journal of Information, Communication and Ethics in Society*.
- Lancaster, T., & Cotarlan, C. (2021). Contract cheating by STEM students through a file sharing website: a Covid-19 pandemic perspective. *International Journal for Educational Integrity*, 17(1), 1-16.
- Lau, P. N., Chua, Y. T., Teow, Y., & Xue, X. (2020). Implementing alternative assessment strategies in chemistry amidst COVID-19: Tensions and reflections. *Education Sciences*, 10(11), 323.
- Liberman-Martin, A. L., & Ogba, O. M. (2020). Midsemester transition to remote instruction in a flipped college-level organic chemistry course. *Journal of Chemical Education*, 97(9), 3188-3193.
- Mahmood, Z. (2009). Contract cheating: a new phenomenon in cyber-plagiarism. *Communications of the IBIMA*, 10(12), 93-97.
- Maphalala, M. C., Khumalo, N. P., & Khumalo, N. P. (2021). Student teachers' experiences of the emergency transition to online learning during the Covid-19 lockdown at a South African university. *Perspectives in Education*, 39(3), 30-43.
- Marín García, P. J., Arnau-Bonachera, A., & Llobat, L. (2021). Preferences and scores of different types of exams during COVID-19 pandemic in Faculty of Veterinary Medicine in Spain: a cross-sectional study of paper and e-exams. *Education Sciences*, 11(8), 386.
- Middleton, K. V. (2022). Considerations for Future Online Testing and Assessment in Colleges and Universities. *Educational Measurement: Issues and Practice*, 41(1), 51-53.
- Morgan, K., Adams, E., Elsobky, T., Darr, A., & Brackbill, M. (2021). Moving Assessment Online: Experiences within a School of Pharmacy. *Online Learning*, 25(1), 245-252.

- Morris, E. J. (2016). Academic integrity: A teaching and learning approach. *Handbook of academic integrity*, 1037-1053.
- Morris, E. J., & Carroll, J. (2016). Developing a sustainable holistic institutional approach: Dealing with realities 'on the ground' when implementing an academic integrity policy. *Handbook of academic integrity*, 449-462.
- Munna, A. S. (2021). Assessment and Verification: A Higher Education Perspective. *Journal of education and learning (EduLearn)*, 15(3), 425-431.
- Newton, P. M., & Lang, C. (2016). Custom essay writers, freelancers, and other paid third parties. *Handbook of academic integrity*, 249-271.
- Nguyen, J. G., Keuseman, K. J., & Humston, J. J. (2020). Minimize online cheating for online assessments during COVID-19 pandemic. *Journal of Chemical Education*, 97(9), 3429-3435.
- Nizam, N. I., Gao, S., Li, M., Mohamed, H., & Wang, G. (2020). Scheme for cheating prevention in online exams during social distancing.
- Patak, A. A., Wirawan, H., Abduh, A., Hidayat, R., Iskandar, I., & Dirawan, G. D. (2021). Teaching English as a Foreign Language in Indonesia: University Lecturers' Views on Plagiarism. *Journal of Academic Ethics*, 19(4), 571-587.
- Peytcheva-Forsyth, R., Mellar, H., & Aleksieva, L. (2019). Using a student authentication and authorship checking system as a catalyst for developing an academic integrity culture: A Bulgarian case study. *Journal of Academic Ethics*, 17(3), 245-269.
- Raje, S., & Stitzel, S. (2020). Strategies for effective assessments while ensuring academic integrity in general chemistry courses during COVID-19. *Journal of Chemical Education*, 97(9), 3436-3440.
- Reedy, A., Pfizner, D., Rook, L., & Ellis, L. (2021). Responding to the COVID-19 emergency: student and academic staff perceptions of academic integrity in the transition to online exams at three Australian universities. *International Journal for Educational Integrity*, 17(1), 1-32.
- Reddy, L., Letswalo, M. L., Sefage, A. P., Kheswa, B. V., Balakrishna, A., Changundega, J. M., ... & Nemakhavhani, T. E. (2022). Integrity vs. Quality of Assessments: Are They Compromised on the Online Platform. *Pedagogical Research*, 7(2).
- Reyneke, Y., Shuttleworth, C. C., & Visagie, R. G. (2021). Pivot to online in a post-COVID-19 world: critically applying BSCS 5E to enhance plagiarism awareness of accounting students. *Accounting Education*, 30(1), 1-21.
- Richardson, S. (2022). Mathematics assessment integrity during lockdown: experiences in running online un-invigilated exams. *International Journal of Mathematical Education in Science and Technology*, 53(3), 662-672.
- Seeland, J., Cliplef, L., Munn, C., & Dedrick, C. (2022). Mathematics and academic integrity: institutional support at a Canadian college. *International Journal of Mathematical Education in Science and Technology*, 53(3), 673-680.
- Sefcik, L., Striepe, M., & Yorke, J. (2019). Mapping the landscape of academic integrity education programs: what approaches are effective?. *Assessment & Evaluation in Higher Education*.
- Sotiriadou, P., Logan, D., Daly, A., & Guest, R. (2020). The role of authentic assessment to preserve academic integrity and promote skill development and employability. *Studies in Higher Education*, 45(11), 2132-2148.
- Turner, K. L., Adams, J. D., & Eaton, S. E. (2022). Academic integrity, STEM education, and COVID-19: a call to action. *Cultural Studies of Science Education*, 17(2), 331-339.
- Verhoef, A. H., Fourie, M., Janse van Rensburg, Z., Louw, H., & Erasmus, M. (2022). The enhancement of academic integrity through a community of practice at the North-West University, South Africa. *International Journal for Educational Integrity*, 18(1), 1-19.
- Verhoef, A. H., & Coetser, Y. M. (2021). Academic integrity of university students during emergency remote online assessment: An exploration of student voices. *Transformation in Higher Education*, 6, 12.
- Walker, C., & White, M. (2014). Police, design, plan and manage: Developing a framework for integrating staff roles and institutional policies into a plagiarism prevention strategy. *Journal of Higher Education Policy and Management*, 36(6), 674-687.
- Walker, M., & Townley, C. (2012). Contract cheating: A new challenge for academic honesty?. *Journal of Academic Ethics*, 10(1), 27-44.
- Watermeyer, R., Crick, T., Knight, C., & Goodall, J. (2021). COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education*, 81(3), 623-641.