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Integrity

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# Keynote Talks

# EVOLVING AN UNDERSTANDING OF ACADEMIC INTEGRITY

Guy Curtis<sup>1</sup>

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I have been conducting research on academic integrity, on and off, for over 15 years, with academic integrity becoming the increasing focus of my research. This presentation will summarize my research journey. Starting in 2004, I investigated the prevalence, understanding, and perceived seriousness of plagiarism, and I've repeated this investigation every 5 years since. This research has suggested how

plagiarism trends are changing, why they might be changing, and how to change them. Additionally, as a psychologist, I've become increasingly interested in psychology of plagiarism and cheating, raising questions such as why do students plagiarise, what makes cheaters different from non-cheaters, and how do personality, attitudes, and emotions interact to predict cheating and plagiarism?

# COMMUNITIES OF INTEGRITY: ENGAGING ETHICALLY ONLINE FOR TEACHING, LEARNING, AND RESEARCH

Sarah Elaine Eaton<sup>1</sup>

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The COVID-19 crisis challenged us to learn, teach, and work in ways we never had before. As we move further into 2021 more educational institutions are thinking about how online teaching and learning can become a permanent way of offering programs. However, there are still ethical considerations that merit deeper consideration. Before the pandemic, there was 20 years of research from various countries

to show there was less misconduct in online courses than in face-to-face courses, yet during COVID-19 academic and research misconduct increased dramatically around the world. So, what happened? And how do we move forward from here? Join us for an evidence-informed keynote about how to support ethical teaching, learning, and researching in online and blended contexts in 2021 and beyond.

# SUPERVISION AS AN ARENA FOR TEACHING AND LEARNING ACADEMIC INTEGRITY AND RESEARCH ETHICS

Erika Löfström<sup>1</sup>

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Academia depends on fostering new generations of researchers and teachers who advance our common knowledge base and in turn, foster new generations. It is not irrelevant how the new generations are equipped with relevant knowledge and competences. What values and behaviors they exhibit depend to a great extent on the academic culture, which they are socialized in. Supervisors play a crucial role in the learning processes. Students and novice researchers pick up both good and undesirable practices from their supervisors. In my talk I focus on supervision

as a key activity through which new generations of academics learn about research ethics and about values and behaviors related to integrity. I answer the question, how does integrity and ethics emerge and manifest themselves in the supervisory relationship, and how do supervisors and supervisees perceive the relationships in terms of integrity, ethics and associated challenges. While focus is on the supervisory relationship, I will also discuss implications for meso and macro levels in a systems perspective, i.e. departmental and national levels.

# **Academic Integrity and Text Matching Software Tools**

# CROSS-LANGUAGE PLAGIARISM DETECTION: A CASE STUDY OF EUROPEAN UNIVERSITIES ACADEMIC WORKS

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The present report examines the problem of detecting cases of plagiarism in academic works with the use of automated plagiarism detection systems.

Over the past two decades, the research of methods of cross-language plagiarism detection has been rapidly evolving (Potthast et al., 2011; Franco-Salvador et al., 2016). The key prerequisites for such development are, on the one hand, a significant improvement in the methods of machine translation (Vaswani et al., 2017) that facilitate the generation of translated texts, and, on the other hand, in natural language processing methods (Belinkov et al., 2019), especially those using the deep learning (Li et al., 2018).

However, the scope of their application in the plagiarism detection systems oriented towards the verification of works on the commercial scale was quite limited until recently. The leading producers were either not announcing such opportunities or this feature was implemented nominally. The ambiguity of translation, high requirements to equipment, and significant time inputs for building indexes, configuring the algorithm, and processing a single document during the research were the most significant obstacles towards the broad-scale use. A number of studies were aimed at developing the methods based on the analysis of bibliometric data, such as title, author(s), abstract, bibliography (for example, see Mazov et al., 2016; Mazov and Gureev, 2017). These methods are characterized by significantly lower requirements to equipment and time inputs, but the scope of their application is also rather limited. In general, the opportunities provided by the cross-language plagiarism cases have been considered by the leading experts as accidents rather than as the result of a targeted research.

Since 2017 the developers of the Antiplagiat system, which is widely used in universities in Russia and the former Soviet countries (Nikitov et al., 2012), have been working on algorithms and services for the translated plagiarism detection (Bakhteev et al., 2019), which are used to process large amounts of verifiable documents that are compared with commercial scale source databases (with hundreds of millions of source documents). First, an algorithm was developed that allowed to detect text reuse from English-language sources in Russian texts; then other language pairs were added, with a unique algorithm for each pair configured separately. In 2020, the cross-language plagiarism detection algorithm was developed to trace text reuse by 100 languages.

The technology for detecting translated plagiarism cases, implemented in the Antiplagiat system, is implemented in two stages: finding the so-called candidate texts and comparing text pieces in the verified document with the candidate documents. The shingles method for document search in a large collection of documents is used at the stage of candidate selection. For each document in the collection, the text is normalized, split into n-grams, and the hashes of these n-grams are then saved in the index. During the search for cross-language plagiarism cases, an automatic machine translation system translated the document into a language from the collection. At this stage, the requirements to the quality of machine translation are not high, which is why the chain of translation tools is used to cover all possible language pairs made by 100 supported languages. Multilingual methods of sentence vectorization are used for document comparison: all the sentences from the verified document and the documents in the collection selected at the

first stage are placed in the vector space using the deep learning models. As such deep learning model, the distilled version of Language-agnostic BERT Sentence Embedding model used (Feng et al., 2020). This model showed a high quality in many natural language processing tasks related to multilingual document analysis. The model assumes that if the vectors of some sentences are located next to each other in the vector space, they are similar in meaning, and therefore can be considered as an instance of text reuse.

The present study is aimed at searching for previously undetected cases of cross-language plagiarism in the papers published by European universities in their open access repository. We test the hypothesis stipulating that some authors, who wanted to benefit from the imperfection of plagiarism detection tools, used translated parts of texts by including them in their works and not providing the reference to actual authors.

In this research, we used the scientific papers from the repositories of the 25 leading universities in the countries with a high level of education, where English is not the official language: France, Germany, Portugal, Spain and Sweden. More than 10 thousand works were analyzed during the research. The analyzed collection of papers is balanced across the considered countries and mainly contains papers written in the most common language of each country. The experiment is conducted by comparing the collection of 10 thousand multilingual documents against the large web collection of documents. The size of the web collection is 50 million and it contains mainly documents written in English, Russian, and other European languages. We analyze the obtained results and classify detected cases into several groups such as improper text reuse, self-citation, bibliographic source citation, and legal documents citation. The analysis of detected cases is provided in the report.

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# WORKSHOP: INTERPRETING TEXT-MATCHING SOFTWARE SIMILARITY REPORTS

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This is a follow-up workshop to one of the most successful educational activities of the European Network for Academic Integrity – the workshop “Where is the borderline of plagiarism” (ENAI, n.d.), which has been presented at numerous events with great success. Participants of the workshop often asked for a continuation, to deal with selected topics more in detail.

Interpreting text-matching software similarity reports is a challenging task requiring expertise and experience. Percentages presented by the system usually do not convey much useful information. Each report has to be carefully evaluated by humans. Their task is to distinguish false positives caused by random matches from possible seeds of disguised plagiarism, identify translation or paraphrase plagiarism, and spot other oddities that may indicate that some parts of the submitted document were taken from elsewhere. Although lots of universities use various text-matching software tools, only some of them organize sufficient training for their staff (Foltýnek and Glendinning, 2015). This workshop aims to fill this gap. The workshop is not specific to any text-matching software, it focuses on general features of disguised plagiarism and on how to discover it.

There are three learning outcomes of the workshop:

1. Understand the pros and cons of different institutional approaches to plagiarism cases
2. Learn more about the advantages and pitfalls of text-matching software tools
3. Be able to objectively judge a text-matching similarity report

The core activity of the workshop is a judgement of two cases of suspicion of plagiarism. The task of the participants will be to decide whether the given case is plagiarism or not by interpretation of a report from a text-matching software. Both cases

are prepared artificially but they are based on real student assignments. None of them can be decided at first sight, so their aim is to simulate real cases which a teacher might need to deal with when deciding about plagiarism. The reports do not come from any particular text-matching software. They were also created artificially based on features which are common in reports of the wide-spread text-matching tools, so that the activity is independent of software available at institutions of workshop participants.

Further, there will be a space for discussion and sharing experience.

The workshop outline is as follows:

- Definition of plagiarism
- Institutional processes dealing with plagiarism
  - Sharing examples of good practice
  - Pros and cons of particular scenarios
- Results of the project Testing of Support Tools for Plagiarism Detection (Foltýnek et al., 2020)
  - What text-matching tools are capable of?
  - What are their advantages and pitfalls?
- The core of the workshop: Interpreting the reports: Judgement of the cases
  - A pair of cases with the same percentage. Which of them is plagiarism and which is a false positive?
- Prevention of plagiarism
  - Addressing all sides of the Fraud triangle
  - Preventative measures substantiated by scientific literature

During the workshop, participants will be encouraged to share their personal experience not only with specific cases, but mainly with institutional processes, policies, and preventative measures. The discussion will be interlaced with the results of several international research projects.



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# **Academic Integrity in Online Education**

# ASSESSING DISTANCE EDUCATION AND ACADEMIC INTEGRITY

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In the current situation of a global Covid epidemic, many universities have either completely or partially switched to distance education. Most universities in Bulgaria have now spent a total of 9 months (three in summer 2020, three in winter 2020, three in summer 2021 and counting) in distance education classes. Under the terms of distance education, regular scheduled classes and regular scheduled examinations were adapted to take place online. After an initial adaptation period (during which instructors chose their own means of conducting online education) at the author's affiliated university, a centralized online platform (Blackboard) was set up for those instructors who wished to use it; instructors were still free in their choice of online platform as the use of Blackboard is not mandatory. After the first lockdown, both students and instructors seemed to have settled in a routine.

It was the perfect situation (the pandemic notwithstanding) to finally rush higher education in Bulgaria into the post-digital age (after Negroponte, 1998): after all, troves of Google Gen students already went through higher education and early educators considered the traditional educational setting ill-adapted for them (e.g. Prensky, 2001). Finally, higher education instructors had to move instruction into a more natural environment for the students. Surely, the effects on students and the learning outcomes should correspondingly improve...

My unwavering interest for multimedia-environment-aided learning and instruction (Chankova 2020a), and its effects on students' attitude towards cheating (Chankova 2017) has led to an investigation of online instruction in order to elicit its effects on the students' learning process, their motivation to attend classes, their involvement in online evaluations.

Data was collected, first, through two online questionnaires, one conducted in June 2020 and

one in January 2021, targeting questions about the quality of the online classes, the students' perceptions about the advantages and disadvantages of online classes, as well as an assessment of their learning and motivation. Second, I took extensive notes on students' participation in online classes and have conducted semi-structured interviews with a number of them. Third, online assessment tests and written assignments were used to gather additional information about the students' results and their attitudes towards testing and knowledge. In all three methods of data collection, the data were collected after the express consent of the participants.

One important aspect of academic integrity is discussed in this contribution. Stepping on the students' evaluation of their own learning process, I look into problems related to academic integrity. The proposition under scrutiny is that while online education does not allow for a dramatic increase in cheating or otherwise dishonest behavior (I am excluding here cases of 'phantom students' – those who log in and do not manifest themselves vocally or by writing in the chat session – those cases might be difficult to ascertain) in accordance with earlier research (e.g. Watson and Sottile 2010, Grijalva et al. 2006), it creates a different frame of expectations in students. This altered frame of expectations leads to assuming that online access to a vast quantity of materials directly translates as having the corresponding knowledge and skills.

The results of the questionnaire analysis demonstrate that online classes have a mild positive influence on attendance, do not really act as an interest boost for students, are a source of conflicting emotions in students and affirm the students' need of face-to-face interaction and personal socialization of the kind provided by on-site classes. Students tend to be less interested by the quality of their learning process, tend to list "comfort" as the one

important thing they like about online classes (eating and drinking coffee during class, being in PJs, multitasking and “doing other things while listening to the instructor”) and tend to assess the workload as definitely increased in comparison to on-site classes. The major negative aspect about online classes listed after the lack of face-to-face interaction is the technical aspect: bad connectivity, poor or inexistent connection, platform saturation, delays in speech and video, power outages, battery malfunctions and other technical problems.

There is a substantial difference between the results between the two questionnaires, which could

be accounted for at least in part by the experience accumulated by both instructors and students alike in dealing with online instruction. Cheating is seldom directly named as an issue (consistent with my earlier findings, Chankova 2020b); students will talk instead of “less stress at exams”, and of “less pressure”; they tend to assume that they will be able to do better at the exam because they are at home and can “check stuff up” as they go. It is noted when it plays onto the hand of the cheater. The students expect credit merely for logging in the virtual classroom (as opposed to class participation).

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# REMOTE PROCTORED EXAMS: MINIMIZING THE HARMS AND MAXIMIZING THE BENEFITS

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Remote proctored exams are a type of assessment where students sit an examination on a computer while they are monitored through a range of technologies such as their webcam and microphone (Dawson, 2021). During the pandemic, use of remote proctoring has soared, as educators have sought to replicate the security of in-person exams in an online environment (Clausen, 2020). Opinions about remote proctoring tend to be highly polarized. On the one hand, some educators, academic integrity experts, civil liberties advocates, and anti-surveillance scholars view remote proctoring as harmful for students and learning, and an intrusion into students' lives (Feathers, 2021). On the other hand, some educators, accrediting bodies, and the vendors of these products, view remote proctoring as a necessary step to address cheating in online assessment (Butler-Henderson and Crawford, 2020; Dawson, 2021). This presentation does not seek to address the debate about if remote proctoring is appropriate or acceptable; there are other resources available that address that question (e.g. Bearman, Dawson, O'Donnell, Tai, and Jorre de St Jorre, 2020). Instead, it recognizes that remote proctoring is currently happening in many institutions, and seeks to explore how to minimize the harms of remote proctoring while maximizing the potential benefits.

In late 2020 I was contracted by the Tertiary Education Quality and Standards Agency (TEQSA, Australia's higher education regulator) to produce a set of suggestions for institutions seeking to use remote proctored exams. I consulted to varying degrees with more than 20 scholars from four continents. Over three iterations I gradually refined the following ten suggestions which form the basis of this presentation. These are available online in greater detail in a free resource I will provide at the presentation (Dawson, 2020). In brief, the consultation process and the literature suggested that

to minimize the potential harms and maximise the potential benefits of remote proctored exams, the following conditions should be met:

1. Remote proctored exams are used as a last resort: They should not be considered a default assessment type, rather, they should be one that is used only after other avenues have been explored.
2. Exam designs are sound assessments of learning: The only type of assessment that remote proctoring is suited to is assessment of learning, not assessment for learning. The exam designs used need to meet the standards of assessment for learning, such as reliability and validity.
3. Only the minimal restrictions required are used: Each additional restriction, such as a prohibition on the use of notes or particular software, needs to be enforced, which makes the task of proctoring that much harder. Less restrictive designs such as open book exams are easier to enforce than more restrictive designs.
4. Students are offered an alternative: For a variety of legitimate reasons, some students may be unable to take a remote proctored exam, or they may choose not to. Many of the potential harms of remote proctored exams can be addressed by simply allowing students an alternative, such as a pen-and-paper examination.
5. Equity, diversity, adversity and accessibility are catered for: Students come from a broad cross-section of society, and any technology or assessment design needs to be considered in terms of how it may advantage or disadvantage particular groups.
6. Providers pilot remote proctored exams adequately before using them in assessment: As with other innovations in high-stakes contexts, a hasty switchover to remote proctoring can be

- disastrous. Careful piloting involves more than just a phased implementation of the technology; it includes work on policy, pedagogy, logistics, and work with students.
7. A whole-of-institution approach is taken: There are many groups within an institution that need to be consulted and involved in implementing remote proctored exams, including groups such as the exams unit, the IT department, the learning and teaching office, legal, governance teams, and most importantly, everyday educators and students.
  8. Regulatory requirements and standards around privacy and data security are met: Different jurisdictions have a range of legislation and expectations around the use of student personal information. There are also a range of interpretations of those requirements, such as the varying views on the acceptability of proctoring under the GDPR (Clausen, 2020).
  9. Effective governance, monitoring, QA, evaluation and complaints procedures are in place: Remote proctoring is usually implemented in partnership with a third-party vendor, and the entire partnership should be subject to the same institutional procedures that other major initiatives are.
  10. Staff and student capacity building and support are available and ongoing: Everyone involved in remote proctored exams needs to feel they have access to high-quality capacity building and support. This includes support before, during and after exams, as well as clear guidance about how to raise concerns if they think there is a problem.
- Remote proctoring may be contentious, but it is my intention with the above practice suggestions to reach a pragmatic middle ground.

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# “AI IS NOT A GAME” – STUDENT ENGAGEMENT WITH ACADEMIC INTEGRITY THROUGH AN ADVENTURE STYLE GAME

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## INTRODUCTION

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The University of Southampton takes Academic Integrity (AI) seriously with the aim of helping students internalise and develop AI into lifelong good practice. Effective AI education is increasingly seen as essential with the focus being holistic, covering principles and values as well as understanding processes (Morris, 2015). The objective of this project is to develop students' understanding of what it means to work with academic integrity and how values translate into actions (Khan et al. 2021).

Current AI Education signposts students to online University resources, including videos and quizzes and includes teaching sessions, with different disciplines deciding on the best approach for their students. The University Academic Integrity Network (UAIN), whose membership includes students, student advisors, academics, librarians and administrative staff, recognised that some students would appreciate a more interactive, narrative-orientated

approach through the use of scenarios, presented as dilemmas. Covid-19 restrictions required it to work online.

A game called ‘AI is not a Game’ was developed to address these requirements. The workshop will focus on the game developed and consider the use of such approaches with students as part of AI education. The workshop will consist of (1) an introduction, (2) an opportunity for participants to try the game, (3) a short presentation of the evaluation conducted and (4) a discussion with participants around the benefits, challenges and future direction of gamification and game-based education in AI, building on work by Khan et al. (2021). Whilst the scenarios have been designed to match the University's specific AI regulations, they could readily be adapted to suit other contexts. The workshop leads have experience in both AI education and game design for educational settings

## GAME DESIGN

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White (2020) and Khan et al. (2021) suggest that incorporating games within AI education provides a useful way to develop students' understanding. A process of brainstorming sessions together with the UAIN yielded the following design specifications:

- The game would be narrative-based and based on real life situations students may encounter.
- Vignettes of these real situations were collected from UAIN (including student representation as suggested by White, 2020) and incorporated in the game.
- A range of AI topics was selected for the game: plagiarism, self-plagiarism, collusion, cheating and use of unauthorised external support.
- Players choose an ending for each vignette. Some answers have more desirable outcomes than others.
- The game was primarily designed for group work but would be available for individual play as well and should be embedded within AI education to enable discussion with peers and academics.

The game was intentionally designed to interface flexibly with the existing teaching at any stage within the process. The game can give students an introduction to AI at the beginning of the teaching sequence, deepen discussion during the teaching sequence or act as a summative activity. An important aspect of the game is that it encourages collaborative discussions between students and between students and staff in order to enhance understanding of principles and practices in relation to AI (Sefcik et al., 2020).

A trial version was created using MS PowerPoint. Players are told that they have been assigned the role of 'Academic Integrity Ambassadors' (QAA, 2020) helping students in a range of scenarios with potential AI issues. After a brief set of instructions, players see a map of the campus scattered with pictures of students and professional services. Clicking on each student character takes players to a new screen which presents the AI dilemma the character is confronted with. Players then need to discuss the dilemma before

moving to another screen to choose the advice they would give the character. After choosing, the number of points given to this choice is shown with a short explanatory feedback. Players return to the map to choose a new character.

The resulting game aligns with Tekinbas and Zimmerman's (2003) definition of games which must have (amongst others): an artificial conflict (in this case solving dilemmas of fictional characters), clearly defined rules (what players may or may not do) and quantifiable outcomes (in this case using a point system). Compared with the games highlighted on ENAI (2021), the unique features of this game include the AI ambassador role taken by the players, helping student-like characters, with the aim of helping them appreciate the longer-term relevance of their learning from the game. For each scenario, as well as the range of expected responses, players have the option to consider how many points they would allocate to additional outcomes they have considered.

## PRELIMINARY EVALUATION

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The trial version was piloted in October 2020 with 40 first-year undergraduates and small changes were made based on observations and informal feedback. A newer version was piloted in February to March 2021 with 120 MSc students, many from overseas. Ethics approval was obtained for a short online survey. After three online AI sessions, the game was played in small groups of 4-6 students. Each student was asked to assume a role in the group with the group leader running the game on their computer and sharing the screen. Participants were directed to the survey after playing the game. Questionnaire items probed

students' perception of the game and included Likert-type items and open responses. Initial findings show that students thought the game was useful for their understanding of AI and highlighted the importance of concrete real-life situations. They found the game fun and indicated the importance of group work to the experience. Suggestions for improvement focused on the features of the game play such as how points are collected and how to navigate between the different screens. It is anticipated that further evidence from other cohorts will be available for presentation in the ENAI conference.

## CONCLUSION

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The game adds to the existing literature on games in AI education (Khan et al., 2021; White, 2020).

We hope the workshop will further this discussion, leading to future developments and research.

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# ASSESSING STUDENTS ONLINE: ENABLERS AND BARRIERS TO USING E-PROCTORING AND ALTERNATIVE METHODS

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## KEY WORDS

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proctoring, online assessments, assessments, e-proctoring, remote proctoring, COVID19

COVID19 forced universities to move all teaching, learning and assessment online (Coronavirus and school closures, 2020). While towards the beginning institutions were scrambling, making valiant attempts to ensure continuity of learning for students, soon the precarious issue of authenticity of student submissions and integrity of assessments became the point of discussion and worry. Many universities jumped to introduce online proctoring systems to help faculty members, especially during online examinations.

However, the backlash from both faculty and students has been resonating, making headlines globally (Swauger, 2020). It is important to note that currently, no international standards have been approved for the regulation and use of e-proctoring vendors. Best practices have been created by the Association of Test Publishers (ATP) and the National College Testing Associations (NCTA) (ATP-NCTA, 2015), but did not cover the full spectrum of services offered today. Further, technology has

changed significantly since that time. Over the past several months, diligent work has been conducted to conclude a multi-year project by ATP and NCTA to develop standards (NCTA, 2018), however until approved, universities need to consciously weigh all the aspects of e-proctoring before engaging in these practices. That said, with recent findings indicating that e-cheating may be on the rise (Lancaster and Cotarlan, 2021), it is imperative to prepare now.

This workshop proposes to present a case study of the state of e-proctoring among US universities and foster a discussion to identify enablers and barriers to using e-proctoring services for online assessments. The workshop aims to introduce the possibility of guidelines and present a framework to govern and monitor such service use, discuss possible alternatives and review definitions of commonly used terminologies that need to evolve to recognise and include parameters such as crises, technology advancements, perceptions of privacy and data security and more.

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# TEACHING ACADEMIC INTEGRITY TO MEDICAL STUDENTS IN THE MIDST OF THE COVID-19 PANDEMIC

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The COVID-19 pandemic quickly crossed boundaries and uncertainties, and sprouted unexpected changes at all levels, carrying unprecedented ethical and societal challenges. In an attempt to contain the spread of the virus the majority of the governments have temporarily closed schools and universities impacting more than 80% of students worldwide (UNESCO, 2020). In Portugal, medical schools were closed after 31 confirmed cases in the first wave of the COVID-19 pandemic (Mahase, 2020), and the teaching-learning process was promptly adjusted to remote synchronous and asynchronous classes combined with the increased use of technology for medical training (e.g., virtual simulation applications, virtual laboratories, and other digital resources), except the students in the final year, who proceed with regular medical traineeships at the hospital, as also observed in several countries (Ahmed et al., 2020).

Given the multiplicity of ethical and societal dilemmas and challenges carried out with the COVID-19 pandemic, the weight of academic integrity training and other humanistic perspectives become more relevant (Alsoufi et al., 2020). In this regard, since 2017, the Faculty of Medicine of University of Porto (FMUP) is offering an optional and semi-annual curricular unit on Academic Integrity to all medical students from 2nd to 5th academic years (6-year course), in addition to a mandatory curricular unit (CU) on Humanities in Medicine at the 1st academic year. In 2020, the singularity of the experienced global health crisis served as a motto to bring medical students into the discussion on emergent and controversial ethical questions.

This presentation aims to share a student-centered learning strategy adopted by a Portuguese medical school during the first wave of the COVID-19 pan-

demic. Valuable informative materials such as videos and flyers, and ethical reflections from students will be also presented and discussed.

Pseudoscience and retracted papers on SARS-CoV-2 and COVID-19 published in high impact journals (e.g., *The Lancet*, *New England Journal of Medicine*) (Retraction Watch, 2020), the need to readapt Ethical Codes to the new experienced scenarios concerning resource allocation and priority-setting (World Health Organization, 2020), the intensification of ethical abuses (e.g., shortage of basic goods, price inflation, xenophobia) (Kouvavas et al., 2020), the “infodemic”, the responsibility of media to more vulnerable people, the apprehension about COVID-19 deniers, and fake news (Mheidly and Fares, 2020; Schillinger et al., 2020; Su et al., 2021; van der Linden et al., 2020), were some of the course contents covered in classes. The updated course syllabus also attracted and encouraged the involvement of medical students ( $n = 14$ ) in the production of informative materials for the general public. The final grade average of 17.2 out of 20.0 (SD = 1.9) denoted a relevant academic achievement score as a result of a multilevel assessment approach; the average score of a written essay on ethical reflections (50%) and a set of informative materials for the general public plus classroom participation (50%).

Despite all the adversities of distance learning this was a time of fruitful collaboration and discussion about the impact of the COVID-19 outbreak on social norms. Our approach taking advantage of the pertinent ethical issues raised by the COVID-19 pandemic circumstances may inspire others to adjust the teaching-learning processes in forthcoming unexpected events.

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# CALLING OUT THE ELEPHANT IN THE ROOM: INTEGRITY AND ETHICAL PRACTICES IN TIMES OF CRISES – EXPERIENCE FROM THE MIDDLE-EAST

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As a result of COVID-19, institutions around the world scrambled to move teaching and assessment online. Academics realized they no longer had traditional face to face modes to invigilate, proctor and could not develop lasting impressions on their students through traditional means of engagement. Some grappled with contract cheating sites, seemingly taking advantage of students studying remotely; others faced issues of assessment design; others had to decide whether to use proctoring services at all.

Initial responses took the form of crisis management and over time, from a position of more reasoned understanding and awareness. Prior awareness and understanding of integrity values such as honesty, fairness and responsibility was of immense value but was firmly underpinned by innovative assessment and lesson delivery techniques. This was not a constant however as not every classroom or campus (school or HE) prioritized values of integrity.

Encouraging conversation and dialogue around issues of academic misconduct can sometimes be like calling out the elephant in the room; it can be one of frustration, caution and sometimes outright denial as faculty either under-report or do not report cases (Khan, 2017; McGlynn, 2019; Morris, 2018; Stoesz et al., 2019). The objective behind this session is to identify the national barriers to academic integrity and to identify possible responses in order to establish a culture of integrity in educational institutions (K12 – HEIs) that can act as good practice guide for stakeholders within the academic community such as faculty, management, policy and decision makers, students and parents.

As a result of years of awareness campaigns, publications, formal and informal activities in a middle-eastern country, a group of colleagues established a national-level centre for academic integrity. The aim of the Centre was to highlight and discuss an array of good practices in the wake of the COVID19 pandemic, some well-established and some introduced in response to the crisis, and how they have helped address challenges of integrity in education.

This session traces the Centre's activities and initiatives and attempts to develop a framework for engagement and activity and explore ways in which the focus can be on proactively instilling values of academic integrity rather than the more traditional punitive treatment or even just the focus on prevention. The session draws upon key issues such as awareness of cheating, learned behaviour from an early age, established parameters of interaction, informal and formal interaction, community engagement and building, and place these within the research framework mentioned below and discuss the role of inspiration and how best we can seek to alter the pattern of understanding and activity.

Based on the past and current experience of the researchers independently and through the Centre, we explore the concept of inspiration and the impact that this can have on establishing an environment of integrity, particularly through the development of a training module for K-12 and HE faculty and staff based on a proposed model that uses the Spectrum of Prevention by Cohen and Swift (1999). Although the spectrum was more geared to looking at injury prevention, the concepts of looking at individual knowledge and skills, promoting community education, fostering networks, changing

practices and influencing policies are all applicable to the education sector, as has been posited by Stephens (2016). Existing literature highlights models to boost academic integrity culture such as the Stephens (2016) Three-level Model of Intervention; Wangard and Stephens (2011) Toolkit to create culture in secondary school and Stephens and Wangard (2016) academic integrity seminars to train teachers on prevention and response; and Lane et al. (2009) handbook on school-wide programmes to prevent and manage behaviours. Authors felt these existing models largely looked at prevention, detection, moral judgement and penalty; whereas the AWARE model by Rogerson (2016) positioned itself as a training and management of misconducts.

Authors will present the IEPAR model in this session as a holistic approach to developing a culture of integrity within an institution, whether a school or university, with a focus on classroom, teacher role, pedagogical considerations, assessment designs, policy and procedures, community role, and rehabilitation and response. This proposed model situates its analysis within an explanatory framework that draws on elements of Activity Theory (AT), Theory of Intended Behaviour (TIB) and Social Cognitive Theory (SCT). The framework posits that how people act and interact depends on the environment, personal experience and perceived value of the approach/technology they are using.

The session incorporates components of Activity Theory (Portnov-Neeman and Barak 2013; Davies et al. 2009) as a conceptual framework for investigating student perceptions. The focus of this theoretical

approach is tools, rules and community as forming the foundation of perception and use. TIB identifies three levels of explanatory definition: personal beliefs are shaped by personal characteristics and experiences; social determinants and normative beliefs impact behavioural intentions; performing a specific behaviour is predicted by behavioural intentions, situational conditions and past experience (Taherdoost, 2018). SCT incorporates three main factors: behaviour, personal and environment to explain and predict group and individual behaviour (Middleton et al. 2018). In SCT, behavioural outcomes are linked to usage, performance and adoption. The session aims to discuss the theoretical underpinning of why and how we learn, how perception is created and the manner in which an environment of practice is established.

While the Centre has organised key events such as webinars discussing online assessment, student voices in integrity and the sharing of good practice, and most notably, the creation of a Student Board of youth champions to support and embed an environment of integrity and ethical practices in the United Arab Emirates; the presentation aims to present a background to integrity, how it links to learning theory and practice, Centre's formation, what it does, and what it is going to do next including launching the IEPAR model and how that will inform professional development for teachers and staff, and help to develop a culture of integrity nationally.

These findings presented are country-specific and by no means an attempt by authors to indicate otherwise.

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# ACADEMIC INTEGRITY LITERACY OF STUDENTS AT THE TIME OF ENROLLMENT IN POSTSECONDARY COURSES: A STUDY OF AN ONLINE UNIVERSITY

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## INTRODUCTION

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Academic integrity literacy (AIL) is an integral part of academia and a critical skill for academic success, particularly in postsecondary education. Studies reveal that many students lack this valuable competence, which becomes glaringly obvious when pursuing higher education. In secondary schools, students have exposure to written assignments with sources of information for reference, but there is a lack of clarity around how to implement this essential skill in academic writing and beyond (Hossain, 2020). A few studies (e.g., Schab, 1991; Tauginiene and Gaizauskaite, 2018) claimed that K-12 schools are the poorest education setting in promoting academic integrity. Consequently, many students fail to demonstrate the knowledge of academic integrity that is required to be successful when pursuing postsecondary education. The common belief is, students build their fundamental understanding of academic integrity at the secondary level and failing this paves the way to academic misconducts that can extend into the workplace (Tauginiene and Gaizauskaite, 2018). Samanta (2018) and Yoannou's (2014) studies claim that academic misconduct is a growing concern in schools globally that starts at the primary level and continues through college. Therefore, examining freshmen students' AIL experiences gained during their secondary education could be an important

step for postsecondary institutions to design and implement proper guidance.

The University of the People (UoPeople) markets itself as the first non-profit, American-accredited, tuition-free online university. With nearly 31,000 students from 200 countries and territories, most of its students are working adults, young parents, undocumented students, and refugees (Bella, 2020). Since the university is inclusive and not selective, students are enrolled with various educational levels and from different cultural and educational backgrounds. Thus, there is a significant possibility that many students are not familiar with the ethical use of information or how to acknowledge a source. Research has found that international students violate standards of academic integrity at a disproportionate rate to their domestic e.g., the United States and Canadian counterparts (N.A., 2011 cited in Simpson, 2016; Taylor-Bianco and Deeter-Schmelz, 2007) and among others, Scollon (1995) indicated cultural, social and political contexts affect students' views of academic integrity. As an emerging online university, the UoPeople students are no exception. It is within this context, this study was formulated to understand the UoPeople Foundation Course students' AIL competence at the time of enrollment, and the level of support they need from the university.

## AREA OF FOCUS

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The purpose of this study was to gain insight into the academic integrity literacy of the UoPeople Foundation Course (UNIV1001) students during their secondary education that may lead to addressing the

existing academic integrity competence of students and the further support they need to meet the university requirements. Mainly, the study aims to:

1. Explore students' perceptions of academic integrity and related knowledge and skills gained during secondary education;
2. Critically analyze students' current (at the time of enrollment) competence in academic integrity and related issues; and
3. Identify students' views of the UoPeople academic integrity policy and procedure and their experiences with the course instructors.

## RESEARCH METHOD

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This study used a mixed-method approach to explore the UoPeople Foundation Course students' familiarity with academic integrity and related issues, their competence at the time of enrollment, and their perceptions towards the support and guidelines they received from the university and instructors. The questionnaire consisted of open and closed-ended questions with multiple-choice questions (MCQ), checkboxes, and Likert scale options. The survey questionnaire was shared with the target population (UNIV1001 students), and the responses were automatically recorded and tabulated on Google Forms. The data was then procured in a spreadsheet and analyzed using SPSS Statistics Version 26.

The target population in this study was the students enrolled in the UNIV1001 Foundation Course. Foundation Courses are one of the admissions requirements to enroll in an undergraduate degree program. In their first term, newly admitted

students are placed in two courses: UNIV1001 and an additional course related to their major studies (University of the People, 2020). Based on admission requirements for the university, the participants are assumed to have completed education at least equivalent to a high school diploma.

### Research Questions

In pursuing the research objectives, the following Research Questions (RQs) were employed to guide this study:

- **RQ1.** What is the current academic integrity literacy (AIL) (familiarity, knowledge, and perceptions) of UoPeople UNIV1001 students?
- **RQ2.** What are the students' perceptions about existing UoPeople academic integrity initiatives?
- **RQ3.** What specific modifications do students advocate in support of the UoPeople academic integrity policy and procedures?

## FINDINGS AND DISCUSSION

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From the online survey, 431 responses were received that represented 78 countries ( $n = 407$ ) across all continents. Regarding gender ( $n = 431$ ), 56.4% (243) of respondents were male, 40.6% (175) female, and the remaining participants (3%) preferred not to disclose their gender identity. For age ( $n = 428$ ), participants were scattered across all age spans with the largest group (21.3%) falling in the range between 23 and 27 years, the youngest group (18 and 22) was 14.8%, and the oldest (50) was 8.8%.

The overall results of this study revealed that participating Foundation Course students are somewhat familiar with academic integrity and the ethical use of information (see Figure 1). A majority of them have adequate knowledge of AIL, particularly regarding what causes and is considered to be plagiarism

and the rationale of using and acknowledging sources in academia.

Further data analysis implies that students are comparatively less proficient in how to appropriately apply a particular convention such as APA (university required convention) to their writing. There might be several reasons for this, among others, a lack of emphasis and hands-on exercises in this skill in their previous level of education e.g., high school; no or minimal consequences for academic misconduct; a lack of consistency and requirements from secondary level educational institutions; and finally, the socio-cultural perspective of the respondents towards the ethical use of information within their milieu.

Surprisingly, a small portion of students indicated that they still do not know how to cite and reference (3.5%) in order to avoid plagiarism and uphold

Tab. 1: Participants' Age and Gender ( $n = 431$ )

Age	Female		Male		Prefer not to say		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
0–17	2	1.1%	2	0.8%	0	0.0%	4	0.9%
18–22	18	10.3%	43	17.7%	3	23.1%	64	14.8%
23–27	37	21.1%	52	21.4%	3	23.1%	92	21.3%
28–32	30	17.1%	45	18.5%	2	15.4%	77	17.9%
33–37	32	18.3%	36	14.8%	2	15.4%	70	16.2%
38–42	28	16.0%	27	11.1%	1	7.7%	56	13.0%
43–47	14	8.0%	15	6.2%	1	7.7%	30	7.0%
50–	14	8.0%	23	9.5%	1	7.7%	38	8.8%
Total	175	100.0%	243	100.0%	13	100.0%	431	100.0%

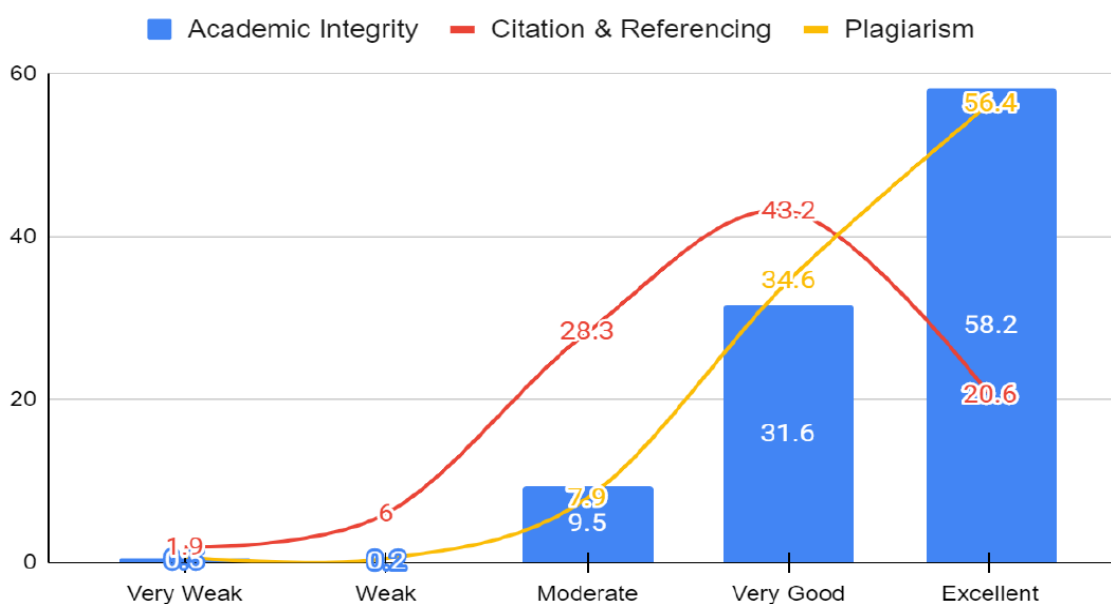


Fig. 1: Participants' familiarity with academic integrity and related issues

academic integrity. Moreover, results revealed from the five knowledge-based questions (see Table 2) were alarming as 41.3% of respondents thought that using their own works for two different assignments is legitimate and 37.2% were confused about whether they have to cite and reference their previously written works. These findings imply that the university and the course instructors need to rethink their existing and future instructional support for academic integrity to current and future students.

Participant feedback also confirmed that students are aware of their limitations and plan to upskill their AIL competencies through a variety of means such as related online resources, course instructors, friends, and librarians depicted in Figure 2.

Although a vast majority of the survey participants are overwhelmingly satisfied with the UoPeople academic integrity policy and procedures (see Figure 3), and the effort course instructors make to coach and implement it, they suggested that the university could design a foundation course, online tutorial, or workshop on academic integrity and related areas to make it a more supportive and beneficial for foundation course students. Additionally, participants expect course instructors to extend more constructive feedback, and provide pragmatic support with an individualized instructional approach to those who are in need.

Tab. 2: Participants' comprehension of plagiarism, citation and referencing

Questions	Correct answer	True/Yes/A	False/No/B	Not sure/C	Total
1. If you forget to cite a source in your paper, that is still plagiarism. *	True	96.3	3.7	–	100% ( $n = 429$ )
2. Using my own writing for two different assignments is plagiarism?	Yes	58.8	41.2	–	100% ( $n = 430$ )
3. Forming a study group to go over information prior to exams and projects is plagiarism/cheating?	False	5.6	81.8	12.6	100% ( $n = 429$ )
4. It is acceptable to copy-and-paste a sentence written by someone else into your paper and simply add quotation marks around it. *	No	23.9	76.1	–	100% ( $n = 431$ )
5. Which of the following requires proper citation? *	B	5.6 (A)	57.2 (B)	37.2 (C)	100% ( $n = 430$ )
A. When I include my own ideas that are unique to the paper I am writing; B. When I refer to my own papers that I have previously written; C. None of the above					

Note: \*) Questions adapted from Turnitin Plagiarism Quiz by Turnitin (2018).

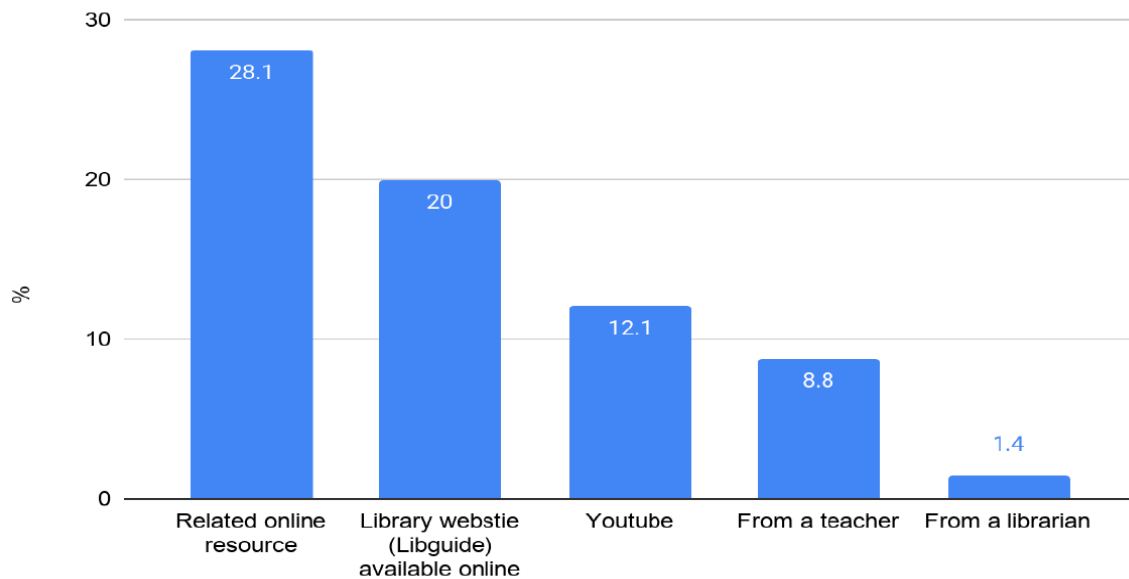


Fig. 2: Participants' plans for upskilling Academic Integrity Literacy ( $n = 431$ )

## CONCLUSION

This is, to the author's best knowledge, the first study exploring the UoPeople students' familiarity, knowledge, perceptions, and sociocultural views of academic integrity and AIL. The research provided general recommendations for the UoPeople and the course instructors including: offering a mandatory short course on academic integrity, or recommending

to complete one offered by a reliable institution; requesting worldwide librarian volunteers to support with teaching these skills; capacity building of instructors and students; and, finally and most importantly implementing a rigorous academic integrity framework for agile support.

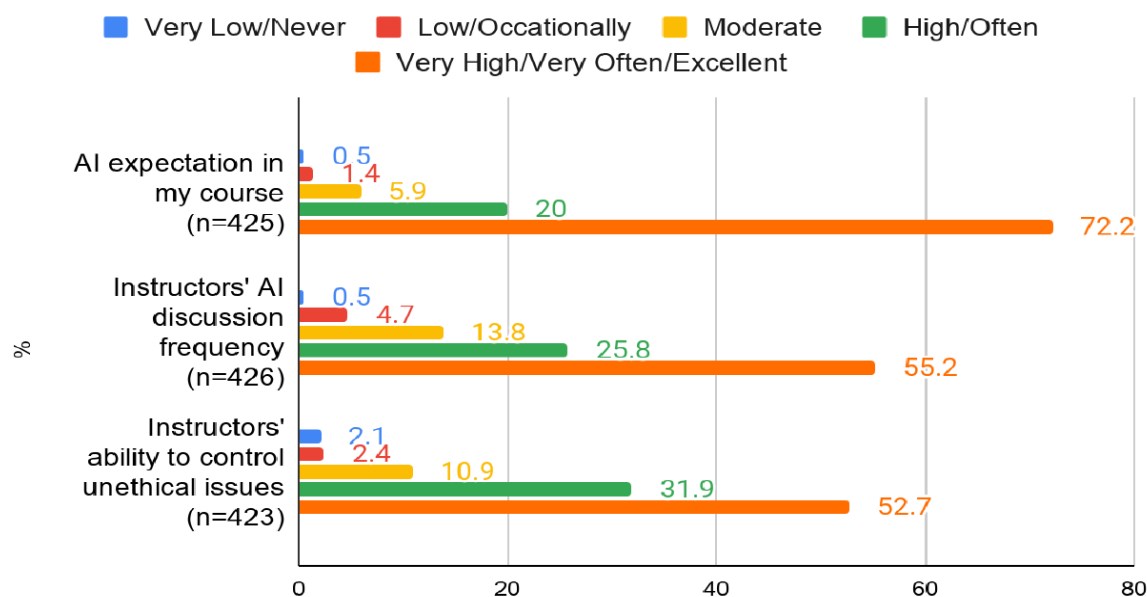


Fig. 3: Students' consolidated academic integrity (AI) related experience with the UoPeople

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# UNDERSTANDING REASONS STUDENTS MAY PLAGIARIZE IN ONLINE ASSESSMENTS

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Understanding of issues related to academic integrity has been the focus of researchers and educators worldwide for many decades (Bowers, 1964; Yu et al, 2017; Khan, Hill, Foltynnek, 2020; Hysaj and Elkhoully, 2020). According to Jussila and Majoral (2018), the globalization of the education system and the spread of federal and private universities worldwide has created conditions for people to study everywhere in the world irrespective of their financial status. For instance, it is a known fact that parents and family members, in Asian or African nations, may facilitate the funding of young people to go to university (Scully et al. 2019); however, in many western nations, the young people take charge of their education and secure loans to ensure the payment of university fees. In many cases, students take a lifetime to pay these loans back and in some instances, generations may need to get involved and pay accumulated debt (Velez, Cominole and Bentz, 2019). Reasons why people complete university studies relate to the career prospects as well as family and societal expectations. In many countries (Jones et al. 2017) these expectations are associated with a higher social status and people who earn a degree are seen as intellectuals and subsequently more favored by the societies where they belong (Merolla, 2018; Curry, Mooi-Reci and Wooden, 2019).

The issue of academic dishonesty is increasingly becoming more pressing following the uncertainty that has gripped the world due to the never-ending spread of COVID 19 and the foreseeable extensive spread of remote learning in the near future. The continuous use of technology in education has created the necessity of understanding the reasons why students opt to use technology to indulge in illegal acts of academic dishonesty (Khan, 2017; Peytcheva-Forsyth, Aleksieva and Yovkova, 2018). The prevalence of the cut and paste phenomenon is creating an unpleasant and dangerous situation in

higher education and beyond (Remez, Huang and Brown, 2018). The lockdown year of 2020 created the conditions for extensive research to take place and researchers from all the corners of the world tried to understand and analyse issues related to academic dishonesty and ways of curbing it. As a worldwide phenomenon one would think that a solution found in one part of the world would be of benefit to other parts of the world. Nevertheless, as everything in research, academic integrity requires adequate considerations in view of all the variables connected with it (Bretag, 2019). Studies have advanced and have started to take into consideration changes that have occurred in societies, education systems, business world (Aelterman, Vansteenkiste and Haerens, 2019) and most importantly the technological adaptations that all education systems had to embrace as a result of the spread of COVID 19 (Reedy et al. 2021) and will continue to embrace at least in the near future.

According to the study by Ifeagwazi et al (2019), one of the reasons why students plagiarise is connected with the peer pressure and the desire to outperform other students who are considered to be less intelligent than the ones who plagiarise. Although the correlation between reasons why students plagiarise and the subsequent action of plagiarism is seen as a highly corrupted one, yet students are caught plagiarizing or considering to plagiarise (Remez, Huang and Brown, 2018). Another reason pointed out in the study by Long et al. (2020), is the inability to connect with the matter when studying online (Cleophas et al. 2021). Connection with the discussed matter is important when studying face-to face and online, yet the skills that are required by students and teachers when studying online are different from those used when studying face-to face. Therefore, teachers and students are required to employ these sets of skills, especially if the online assessing was here to stay.



For this study, researchers conducted qualitative research as part of student feedback; information about reasons why students plagiarize was collected, classified and then analysed. The researchers were cautious to not include any personal data of the students. Students who participated in the study were undergraduate students of different majors. Majority of them were first year students but the study included a minority of students from other levels as well. 40 students participated in the study and students were from different cultures and were studying different majors. Students discussed in groups about reasons why students plagiarize. The rationale of working in separate groups was chosen to increase the possibilities of students to express their opinions and to improve the diversification of thought.

Majority of students, over 80 percent, confirmed to be aware of other students who plagiarize and the reason for it was the undue pressure imposed by the online platform. Another 50 percent of students confirmed that online learning is too impersonal and they do not feel connected with the lecturers or

with the matter that is being analyzed. More than 65% of students were of the opinion that online learning was not allowing them to receive instant feedback from the teachers unlike in face-to-face classes. Therefore, students felt that there is a need to plagiarize, although over 85% of them confirmed that plagiarizing is absolutely wrong and if classes were face-to-face the approach towards plagiarism would be substantially different.

Seeing the uncertain circumstances imposed by COVID-19 it seems that online teaching and assessing is here to stay, at least until countries decide to go back in face to face teaching and learning. Nations and governments worldwide are considering the aspect of safety prior to deciding to go back to face to face classes. Therefore, it seems urgent to research ways of curbing plagiarism in the online platform. All the aspects of teaching and learning need to be considered carefully and appropriate decisions need to be taken keeping in mind the necessity of high levels of integrity amongst teachers and students.

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# EMBRACING COMMUNITY-BUILDING IN ONLINE CLASSES TO PROMOTE ACADEMIC INTEGRITY: A CASE STUDY

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## KEY WORDS

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academic integrity, community-building, case study, EFL, online teaching

The recent transition to distance education due to the Covid-19 pandemic raises the need for universities to focus on academic integrity. In an online English as a Foreign Language (EFL) context teachers face challenges in distinguishing between plagiarism and intertextuality as language learning can be viewed as a process of borrowing from other's words (Pennycook, 1996). This study involves students taking an English Preparatory Program (EPP) in a university in Turkey and explores the community created between them and their teachers. For some students it is a compulsory part of their programme, and for others it is an optional subject. In normal times the EFL students collaborate, interact, and learn from each other, which helps them to develop their English language skills. Coping with requirements of the EFL curriculum becomes a challenge for the students with the move to distance learning.

Other research has demonstrated the need to promote academic integrity through an alignment of policy, assessment and pedagogy (Bretag et al., 2011; East, 2009) that embraces trust and community building. In the current situation, teachers not only need to refocus on subject matter, but also need to acknowledge that it is often simple day-to-day practices that build the community and establish a climate of integrity. There is a requirement to acknowledge that students moving to on-line learning and assessment have more opportunities to get inappropriate help and support that can be difficult for teachers to detect. Teachers need to remain alert to the situations that may arise and take appropriate

action. There is a need to reduce the potential for cheating and ensure that breaches to integrity are found and managed.

While previous studies have approached academic integrity by exploring detection of plagiarism by analysing text-matching software or investigating the phenomena of contract cheating, this research is about developing a learning community in on-line classes as a way to promote academic integrity and reduce academic misconduct. The current study has two key research aims. First it explores views of teachers and students on academic integrity in online teaching and whether students report on any breaches of academic integrity, either by themselves or by others. Second it seeks to provide evidence for the relationship between community building and academic integrity in online teaching. This investigation examines daily teaching practices towards community-building and analyses elements of good pedagogy that work in favour of academic integrity in the context of distance education. Eighty students of English as a Foreign Language in a Preparatory Program of a state university in Turkey and their six teachers participated in the study. This case study drew upon a mixed methods approach. The triangulation of the findings was carried out through a combination of various data sources. 80 student questionnaire responses, 13 student volunteers from the 80 contributing to 2 focus groups (6 and 7 students respectively) facilitated by researcher 1, 6 teachers undertaking self-observation and con-

tributing to one focus group, facilitated jointly by researchers 1 and 2.

The qualitative data was collected through semi-structured focus groups with six teachers undertaking self-observation and contributing to one focus group, then 6 and 7 students respectively participating in two focus groups. Quantitative data was gathered through a short survey with one open-ended question and three self-assessment items specifically designed for this context. Another aim of using the survey was to promote awareness on academic integrity among students.

In parallel with the other forms of data collection, content analysis of course syllabi, assignment documents and policy statements, was conducted to establish what advice the students had been given about academic integrity.

The results from multiple sources revealed that community-building not only facilitates positive collaboration in online classes, but also creates room for

mutual trust and reduces opportunities for academic misconduct. Understanding the views from students and teachers participating in this research has helped the teachers to design measures to prevent academic dishonesty and eventually will shape the institutional policies.

In summary, although this was just a small study, the results demonstrated how to improve support for students and integrity of the courses when delivered on-line. It showcases best practice towards building communities in an online context, that encourage students to work with integrity despite new opportunities for them to engage in academic misconduct. The authors believe that the positive implications of community-building towards academic integrity that emerged from this study will be of interest to conference participants and applicable to other contexts. A journal paper about this study has been submitted to *The Literacy Trek* and has been accepted for publication in 2021.

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# ACADEMIC INTEGRITY IN ONLINE EXAMS: AN EXPLORATORY STUDY OF STUDENT PERCEPTIONS IN THE UAE

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## KEY WORDS

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academic integrity, academic dishonesty, e-dishonesty, cheating, e-cheating, online exams, online assessments

## INTRODUCTION

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COVID 19 pandemic has significantly impacted higher education, as the universities had to transition to online learning, and online exams replaced traditional face to face exams (Salah et al., 2020). Although, online exams have previously been used across the world (Harris et al, 2020), their widespread adoption in the wake of the pandemic has made them a vital consideration for higher education (Salah et al., 2020). One major recent concern of students and faculty with online assessments is academic integrity (Harris et al, 2020) and “e-dishonesty” a more recent phenomenon, refers to academic dishonesty in the online environment (Sendag et al., 2012)

Extant research reports mixed results for student perceptions of the scope of academic integrity in online exams. Some studies e.g. (Miller et al. 2012, Watson and Sottile, 2010) found that students believed there was more cheating on online exams as compared to face to face exams, while other studies contradicted these findings (Harris et al. 2020). Further, perceptions and behavior are shaped by the cultural contexts (Peled et al. 2020). Therefore, more studies are needed to investigate E-dishonesty in different cultural contexts (Adanir et al. 2020) to build upon collective understanding of this relatively new phenomenon, that has emerged during the sudden unplanned transition to online environment triggered by the COVID-19 pandemic.

From a cultural perspective, few studies have been conducted studying the perception of students toward online learning in the middle east. In fact,

Elmehdi and Ibrahim (2019) suggest their study to be pioneering in this regard. They found that more than half of the students in the United Arab Emirates (UAE), irrespective of gender and age, preferred online exams over traditional exams due to the convenience. It is also interesting to note that UAE is a very multicultural society with expatriates belonging to over 200 nationalities, accounting for 88.52% population (About the UAE, n.d.). Further, the literacy rate in the UAE is close to 95 per cent (About the UAE, n.d.), and according to the UNESCO Institute for Statistics, 77,463 international students studied in the UAE in 2016 (Times higher education, 2019). In addition, the UAE has been ranked first in the Arab region, second in Asia, and seventh globally in the Telecommunication Infrastructure Index (TII), according to the UN E-Government Survey 2020 (Khaleej times, 2020).

This makes UAE an appropriate research setting to understand the phenomenon of e-dishonesty with the research objective, “To investigate student perceptions of what specific types of behaviors constitute cheating/academic dishonesty during online exams”. Through this exploratory study, we aim to address a clear research gap and contribute to the current literature on e-dishonesty. The findings will benefit higher education institutions in understanding academic integrity challenges associated with organizing online exams and hence assuring high academic integrity in the online exams.

MUMTAZ, Sabiha, WAHBEH, Sabreen, and ABUELROUB, Eman. 2021. Academic Integrity in Online Exams: An Exploratory Study of Student Perceptions in the UAE. In *European Conference on Academic Integrity and Plagiarism 2021: Book of abstracts*, pp. 43–45. Mendel University in Brno.

## METHOD

This exploratory study used the qualitative investigative approach, in particular grounded theory method to gain a comprehensive understanding of the student perceptions related to e-dishonesty. Grounded theory method comprises a systematic, inductive and comparative approach for conducting inquiry to construct theory; and is a suitable method for exploratory study, in order enhance the understanding on the topic (Glaser and Strauss, 2017).

The population for this study constituted two large, multicultural and diverse universities based in the UAE, with one traditional international branch campus university that transitioned to an online learning / assessment environment triggered by the pandemic, and the other university was an accredited semi-government university using a blended learning approach for their programs since its inception. This study adopted two popular data collection tools i.e. focus group interviews and in-depth personal interviews to collect rich qualitative data, where 20 students participated in three focus group interviews and 15 students were recruited

to participate in in-depth personal interviews. The respondents were chosen for the purpose of answering the research question i.e. purpose sampling was used. Data collection was completed after reaching the theoretical saturation where we couldn't identify any new themes or category from the participants (Strauss and Corbin 1997).

Respecting the social distancing protocol due to COVID-19, an online meeting platform was used to interview the participants. The interviews were recorded with prior permission of interviewees, with assurance of confidentiality of data and anonymity in reported results. The interviews were transcribed shortly after the recording and the analysis started immediately after the first interview; which helped in concurrent data generation and analysis. The study data was stored in a shared online repository to which all researchers had access, for independent analysis. Theoretical sampling was applied to define and follow up clues from analysis, fill gaps, clarify doubts, check intuition and test explanations as the study progresses.

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# ENSURING ACADEMIC INTEGRITY DURING EMERGENCY REMOTE TEACHING

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It is aimed to discuss concerns related to academic integrity during distance learning. To achieve this, we seek to present the Guidelines for Ensuring Academic Integrity during Emergency Remote Teaching (Guidelines), developed in 2020 because of urging to address pandemic issues in higher education.

The Guidelines were designed to help Lithuanian higher education institutions (HEIs), especially teaching staff, to prevent observed violations of academic integrity and to identify opportunities that would still safeguard high education quality and lead to fairer remote study process.

The Guidelines are based on the insights of the survey “Challenges of Distance Learning for Academic Ethics during the COVID-19 Pandemic” carried out in Autumn 2020 by the Office of the Ombudsperson for Academic Ethics and Procedures in Lithuania. Lithuanian HEIs revealed main challenges and the ways to solve the problems of organising studies remotely during the pandemic and turned to become the main aspects that were discussed in the Guidelines.

First, we carried out a survey of Lithuanian HEIs by asking to specify challenges and possible solutions in online teaching during the pandemic. 13 out of 39 Lithuanian HEIs filled in the questionnaire and provided open-ended answers. Core questions were sent to main official correspondence emails of HEIs. Internally, the institution gathered experiences from members of its academic community (mainly lecturers) and presented the answers for us in a summarized form. We analysed survey results and complemented it with literature review using qualitative content analysis. The literature review helped to overview

good practice in this regard and to enrich the overall study. This allowed us to develop comprehensive and up-to-date Guidelines.

The HEIs identified the main challenges of student misbehaviour, such as cheating in individual assignments (e.g. colluding with other students, unknown persons; use of unauthorised aid; plagiarism); apparent culture of impaired communication (e.g. use of curse words; fake (only login-based) attendance; distracting by changing virtual background); violation of intellectual property rights (e.g. making unauthorised screen shots of an exemplified other’s work; unauthorised recording of a teacher’s lecture; unauthorised circulation of teaching material). As consequences for such student misbehaviour, HEIs listed warning notice, exam failure and some other penalties.

Given the fact that Guidelines were publicized in early Winter 2020, we further studied how Lithuanian HEIs accept Guidelines. During December 2020, HEIs ( $N = 50$ ) were very progressive in absorbing these Guidelines. Guidelines were among the most popular ones in academia in terms of spreading them out to academia (46 per-cent within one month; 36 per-cent intended in 2021) while one third of the HEIs (32 per-cent) have already adopted these Guidelines and 10 per-cent of them are going to pursue their adoption in 2021. This statistic testifies a significant relevance and contribution of Guidelines to distance learning to promote academic integrity.

We were also invited to introduce Guidelines to several HEIs. The latter induced additional sharing of teaching experiences and discussions.

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# ANTI-COLLUSION DISTANCED ONLINE TESTING

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## INTRODUCTION

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Testing plays an important role in education by helping reinforce lessons, measure student outcomes and drive improvements. However, cheating poses a major challenge to effective testing, and is prevalent at all levels (Diekhoff et al., 1996; Galante, 2012), as a long-term study by The International Center for Academic Integrity (McCabe et al., 2012) conducted between 2002 and 2015 found: 43%, 68% and 95% of students admitted to cheating in assignments or exams at graduate, undergraduate, and high school level respectively. Indeed, a 2010 survey based on self-reports (Watson and Sottile, 2010), later validated by direct measurements (Corrigan-Gibbs et al., 2015) shows that 80% of cheating events involve collusion among students, significantly more than cheating from Internet websites at 42%, while 21% of cheating events fell in both categories. Recent shifts towards online delivery of education in response to the COVID-19 pandemic (Toquero, 2020; Vlachopoulos, 2020) have only exacerbated these serious concerns around cheating. Unfortunately, traditional forms of anti-collusion such as proctoring are often ineffective (Chin, 2020), or raise serious concerns regarding

privacy (Harwell, 2020; Lilley et al., 2016; Sullivan, 2016).

We address this problem by developing a DOT platform which implements novel anti-collusion techniques developed in (Li et al., 2020) to minimize total collusion gain, given students' competencies and a collusion network to represent relationships between pairs of students who can possibly collude. Here, the expected gain a student may experience by colluding to answer a question is proportional to the difference between her competency and the competency of the student they are colluding with. A key challenge to the practical use of the anti-collusion techniques developed in (Li et al., 2020) is estimating the collusion network. Our work addresses this by integrating deep learning techniques into our DOT platform to estimate the collusion network, thus enabling the practical realization and application of our DOT platform to run real online exams for the first time. Our approach of minimizing collusion is independent from and complementary to proctoring, and conserves privacy.

## DOT PLATFORM

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(1) Framework: Our framework assigns questions to students to be answered sequentially within designated time slots during which students cannot navigate to another question. The length of a time slot is carefully chosen to allow sufficient time for a student to answer one question, while being insufficient to answer more than one, based on past data. Therefore, a student involved in collusion can only share the

answer to a question they have already answered. More details about our framework can be found in (Li et al., 2020). A demonstration of our DOT platform is available at: [https://www.distancedot.ml/visitors/visitor\\_demo](https://www.distancedot.ml/visitors/visitor_demo). Our DOT platform allows educators to create an exam by specifying a roster of students, a pool of questions, number of questions each student must be assigned, and

historical data on student performance and behaviors, and optionally, each question's time slot length and difficulty. Our algorithms (shown below) estimate student competencies and collusion and compute an assignment with minimum collusion gain w.r.t. these estimates. Our DOT platform ensures fairness by allowing instructors to specify whether every student should receive an exam with equal average difficulty, length, number, and total length of questions, and can be naturally extended to ensure more sophisticated objective notions of fairness such as bounding the maximum collusion gain any student can experience, irrespective of competence or other attributes.

## EMPIRICAL VALIDATION

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We conducted midterm and final exams for a course on Medical Imaging with Machine Intelligence at the Rensselaer Polytechnic Institute involving 17 students.

(1) Student Outcomes: Our results show that the distribution of the scores of students from the midterm exams, and the final exam are similar as are the mean and mode of the scores. This suggests that collusion gain minimizing assignments do not skew class performance overall. More details and figures will be made available in a full version online.

(2) Student Feedback: Students were surveyed at the end of the final exam to rate their satisfaction

(2) Two phase approach to minimizing collusion gain: (i) Phase 1: Learn Competency and Collusion Behavior. We estimate student competencies based on past performance and use deep learning techniques to predict the collusion network of students. Our models can be trained on both real-world data of collusion behavior and large synthetic data generated using probabilistic generative models of collusion behavior and response dynamics. (ii) Phase 2: Compute Collusion Gain Minimizing Assignment. We compute a collusion gain minimizing assignment using optimal and approximate heuristic algorithms presented in (Li et al., 2020).

with the convenience of using our DOT platform, and perceptions of similarity with other online testing platforms, on a five-point Likert scale, ranging from very satisfied to very unsatisfied and from very similar to very different respectively. We observe that greater than 75% of students found the platform to be convenient or very convenient and that the length of time slots to be generally acceptable and not stressful, while more than 61% students found the DOT platform similar or very similar to other platforms.

## CONCLUSION

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The results from real world online tests demonstrate the effectiveness of our DOT platform. While the intuitively natural approach to prevent collusion by assigning questions randomly in fixed time slots is well known, it is demonstrably sub-optimal in lowering collusion in online testing. Our collusion gain minimizing approach provides a low-cost, and privacy-preserving solution to the problem of cheating in online exams during social distancing and compliments other methods to prevent cheating such

as proctoring, and methods to prevent contract cheating such as ID authentication and behavioral biometrics analysis (Amigud et al., 2017). The deep learning techniques we develop to estimate collusion networks enable the practical realization of our DOT platform to real world online tests. In the long term, we believe that our methods will help improve the quality of online courses and contribute to the future of education by democratizing it globally.



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# PANDEMIC EFFECTS ON ACADEMIC INTEGRITY IN ONLINE EDUCATION: SHIFTING THE LENS TO A DEVELOPMENTAL PERSPECTIVE

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Although the media in particular has focused on the negative outcomes of the pandemic in regards to education and integrity, a somewhat simple shift of mindset can be beneficial to be able to meet a student at their own developmental level and assist them by educating them not only the subject matter of the course, but of life skills and decision making. A student's development (or lack thereof) does not give the student permission to make decisions that go against academic integrity; however, helping to understand it can assist educators in interacting with other students to attempt to have that next student not make the same decisions. The presentation is designed particularly for educators (faculty/professors) and individuals who can have an influence on educators through administration or support.

The presentation will first quickly review pedagogy challenges, differences, and opportunities between face to face and online education as well as the connection between pedagogical choices and where the student might be developmentally. By explaining these, the presenter will connect them to the idea of authentic learning and helping to learn how educators can with confidence say their students are learning the material which in turn leads to a degree or certificate with integrity.

In the main portion of the presentation and the main take away, the presenter will explain how

having educators understand the development of the students can then be incorporated the idea of academic integrity. Through the landmark theories of Chickering and Reisser (1993), Kohlberg (1958), and Gilligan (1977), it is clear that traditional aged university students are still developing their own identity, their understanding of integrity, and their reactions to moral questions or experiences. Reminding (or teaching for the first time) educators about their students' development is imperative to help the educators to know how to best assist their students. The discussion can then shift from a negative-toned conversation of the drastic increase of academic integrity violations to a beneficial conversation about how educators can and should be helping mold and shape students to become ethical individuals who have the capacity to make good moral decisions. Practical examples will be provided on what educators can do to create the relationships with students and build a culture of integrity within the classroom and institution which will not only support academic integrity, but integrity in our communities, countries, and world.

Within the presentation, the presenter will share examples of actual students and educators, and plans to give participants tangible ideas that could be taken back to their own institution to help shift the lens of academic integrity, especially online and during the pandemic.

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# SHIFTS IN STUDENT BEHAVIOURS DURING COVID19: IMPACTS OF SOCIAL INTERACTIONS

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Institutional data management of academic integrity cases and types can reveal patterns of both reporting and student academic integrity related behaviour. Previous institutional reporting from 2017-2019 demonstrated that cases of poor academic practice identified in the early years of higher education can be remedied by targeted and structured intervention programs (blinded for review 2016, 2019).

Results from cases logged during 2020 which were impacted by the switch to remote delivery teaching and local lockdowns revealed some differences in student behaviour when compared to academic misconduct cases from previous years. Of particular note is the reduction observed in cases from first year undergraduate students, and a marked increase in instances of collusion by students in other years. Collusion cases primarily fell into two categories – those influenced by technology and others as a result of students gathering, studying and taking exams in the same location as lockdown restrictions eased.

In the Australian COVID-19 context, the first big lockdown occurred a few weeks into the start of the 2020 Autumn study session when first year undergraduates commence their degree programs. These students had only three weeks on campus before the lockdown in Australia was implemented and higher education switched to a fully remote format. In trying to determine the reasons for the reduction, investigations are underway to determine if it was a consequence of students having little opportunity to form and build the new social connections that can influence cheating behaviours. There could also be the influence of shifting teaching

to remote formats. What was recognised is that for large cohorts it is difficult to manage large groups of students with varying degrees of poor academic practice in a process that is designed to manage a smaller number of individual cases. As a result of this recognition, our institution has introduced newer and simpler reporting for cases of poor academic practice as a way of addressing behaviour through interventions that have been demonstrated to work.

With students beyond the first year of study there was a marked shift from purchased materials to instances of collusion. This involved the effects of sharing site use such as Chegg as reported by Lancaster and Cotarian (2021) in addition to the use of gaming networks to communicate with other students during online assessment tasks. Further collusion cases became evident as lockdown restrictions eased in the Spring session (July-November 2020) where students gathered together in small numbers permitted under the COVID restrictions to undertake study or assessment tasks. This resulted in higher levels of similarity of content, and errors identified through the use of text matching available through services such as Turnitin®.

As noted by Lancaster and Cotarian (2021), the COVID-19 pandemic has resulted in changes to teaching but also requires reconsideration of the way we teach and assess work. As educators we also need to reconsider that how we are explaining academic integrity and in particular the influence of social connections on collusion and sharing behaviours in light of the evidence now available on cheating behaviours that have arisen via the global pandemic.

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NB: Two other conference papers blinded for review.

# THE ROLE E-TOOLS PLAY IN SUPPORTING TEACHING AND ASSESSMENTS WITH INTEGRITY DURING THE COVID-19 PANDEMIC

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## KEY WORDS

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assessment design, redesign, technology, smart education, academic integrity, pandemic

The COVID19 pandemic challenged the higher education (HE) teaching and assessment models. This needed constant restructuring of content, method of delivery and incorporating new assessment strategies without affecting student learning experience. Universities soon realised that this was not an easy/swift process (Belini et al, 2020)). Academics had to focus on how to get students engaged, promote active learning in remote teaching and ascertain the learning outcomes were achieved while maintaining academic integrity. This workshop presents a selection of teaching and assessment innovations that have been successfully implemented via online platforms to enhance student engagements, particularly to address concerns around academic integrity in remote teaching environments. Attendees will be able to explore the adaptability of these tools and strategies in different subjects.

Unlike political, natural and environmental calamities of the past where universities have risen to the occasion and moved teaching/learning to the digital platform (Meyer and Wilson, 2011; Creed and Morpeth, 2014; Lieberman, 2017; Lau, 2019; Padermal, 2020), used digital media to broadcast lessons (Manorama, 2020) or even used technology to send, receive and grade assessments (Hodges et al, 2020), this global pandemic was sudden and quick in halting student and staff mobility, accessibility to faculty and other physical resources. All we had was the online platform and whatever teaching

resources we had in our homes. While academia can be considered as the most easily adaptable profession, Covid-19 challenged their adaptability to the maximum. First, in mere days, teachers had to move to the online platform and conduct emergency distance learning; then they had to explore the possibility of assessments online, and finally cancelling assessments all together to rely on student aggregate performance (based on predicted grades).

Research/news published months after the pandemic related lockdowns on the experiences of remote teaching has highlighted the fact that maintaining quality and integrity was a challenge to many universities (Lederman, 2020). A study by Lancaster and Cotarlan (2021) showed an almost 200% increase in the number of students attempting to use essay mill sites. Two major cases among US universities also raised the concern over integrity during remote learning: (1) the Texas A&M university conducted a large scale investigation on online exams when students seemed to complete them faster than expected, tracing the answers to essay mill sites (Morris, 2021); and (2) the West Point Military Academy accused more than 70 cadets of cheating on online exam, calling it a “national security issue...[as the] cadets [would] become senior leaders” (Brook, 2020).

Although addressing academic integrity has always been challenging for educators, this has been compounded further during COVID-19 due to the

fact that the only tools for teaching, learning and assessments were through the Internet. Although there are many technologies available to detect (and therefore dis-incentivise) students' plagiarism (du Rocher, 2020), one of the most effective tools has always been engaging students in the learning and therefore discouraging them from engaging in unethical behaviours (Ellery, 2008). Student engagement often helps them feel more connected to their learning environments and to 'own' their learning processes and outcomes. While this is relatively easier in face-to-face environments, there are a number of online tools that can be used to engage students, that when used meaningfully can be a great way to engage students.

As we continue on this unstable and unexpected journey, this workshop traces the challenges faced by the authors, proposes to engage the audience in discussion to share collective hurdles and then proceeds to present practical examples of ways to use e-tools and innovative teaching methods that have helped them uphold integrity in their classrooms.

The presenters of this workshop have significant experience in effective teaching using active learning strategies, and are particularly competent with online teaching and learning to encourage integrity and proactively dissuade students from misconduct. Although the authors are from different institutions, disciplines and countries, they have come together over shared ideas around ways to address student engagement, and therefore academic integrity challenges. They will be presenting their collective ideas in this workshop, and because of their different disciplines, the ideas are likely to appeal to a wide audience.

The workshop aims to showcase and provide hands-on practical classroom strategies for attendees to apply in their own settings. The authors will present evidence for the effectiveness of methods

used in their classrooms that have contributed to reducing the likelihood of students engaging in misconduct. The workshop will also give the attendees an opportunity to share their own experiences with engaging students in online learning environments that has perhaps worked successfully in reducing the incidences of misconduct. Attendees will be engaged through deliberate, structured and collaborative activities, ideas will be recorded using appropriate platforms like Padlet and will be made available to all participants after the workshops.

It is expected that those who attend the workshop will benefit from the following takeaways:

- Ideas to deploy within own settings to address challenges associated with students engagement and academic integrity in online teaching environments using easily accessible, free or free for student use tools.
- Case study of challenges and barriers faced in classrooms when delivering lessons and conducting assessments, e.g. understanding ways of transforming assessments due to the pandemic and how they may either help or hinder upholding integrity
- Good practice guide using innovative teaching techniques and online tools in remote classrooms that are proactive to help encourage honesty and discourage misconduct, e.g. changing paper-based assessments to online assessments using online tools such as Padlets, Mentimeters, Digital Storybook

We believe the workshop will be beneficial to tertiary education lecturers, tutors, teaching assistants or anyone else involved in organising and delivering content, as well as conducting practical lessons/workshops, particularly within the online/remote/distance learning modes and grappling with issues of misconduct online.

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# DATA MINING OF ONLINE QUIZ LOG FILES: CREATION OF AUTOMATED TOOLS FOR IDENTIFICATION OF POSSIBLE ACADEMIC MISCONDUCT IN LARGE STEM COURSES

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## KEY WORDS

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data mining, academic integrity, academic misconduct, automation, post-secondary, Learning Management System (LMS)

The rapid shift to remote course delivery in March 2020 during the COVID-19 pandemic presented a significant challenge for administering fair and reliable student assessments. Students and instructors who were not specifically trained for an online learning environment were forced to adapt and transition to remote mode of teaching and learning. In most cases,

remote delivery implied reorganization of student assessments to online frameworks. To help with this transition, the University (located in Canada) provided faculty members with the list of the features available in the online learning management system (LMS) to consider when setting up an online assessment.

## STATEMENT OF THE PROBLEM

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For the University of Calgary where the majority of STEM courses and their components had been delivered in person prior to COVID-19, the online tools available were not particularly optimized for the large volumes of student assessment that were moved to online delivery, specifically the final exams of relatively large (800+ student) first- and second-year courses. The problem of practice that informed

our study is that students were using online file-sharing sites to rapidly share test answers. Because our university opted not to use any kind of electronic or remote proctoring software, we wanted to see if we could find a way to identify violations of academic integrity using the tools we had available through existing university resources, namely the LMS.

## LITERATURE REVIEW

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Breaches of academic misconduct are common in higher education. Over more than half a century, repeated studies have shown that upwards of a third of undergraduate students engage in acts of academic misconduct every year, with results being similar in both the United States (Bowers, 1966;

McCabe, 2016) and Canada (Christensen Hughes and McCabe, 2006). In addition, only a small portion of the academic misconduct identified by instructors is reported (Bowers, 1966; Coren, 2012; MacLeod and Eaton, 2020; Nadelson, 2007).



A particular topic of concern in recent years has been contract cheating (Clarke and Lancaster, 2006). Bretag et al. (2019) identified seven types of student academic outsourcing behaviours: (1) buying, selling or trading notes; (2) providing a completed assignment to another student; (3) obtaining a completed assignment from someone else; (4) providing exam assistance; (5) receiving exam assistance; (6) taking an exam for someone else; and (7) arranging for someone else to take one's exam (p. 1839).

Inappropriate or unauthorized student file-sharing has been highlighted by researchers as a growing concern (Rogerson, 2014; Rogerson and Basanta,

2016), with particular concern focused on commercial enterprises who profit from students who pay to download files, which can include completed assignments, notes, and other course materials (Wolverton, 2016). The background discussions for this study included an inquiry into the availability of course content online. We found material directly related to this specific course on four commercial file-sharing sites. We have intentionally opted not to name these companies here, though we wanted to highlight that it was easy for the research team to find copies of course assignments and other assessments online in a matter of minutes.

## STUDY DESIGN

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We collected data generated by the university's learning management system in form of the reports generated from internal log of the system. Each interaction between the student and the D2L Quiz is logged by the internal systems. For example, the entry into the quiz is logged, as are all page navigations. The complete information for all students who took a quiz can be downloaded as a single Excel file. This file contains a column with each student's name, attempt number, date and time stamp of each interaction, and a description of each interaction (event) (for example moving to a next page or saving a response). The last column provides the IP address indicating the location from where the quiz was accessed.) We then used statistical data mining techniques to look for connections between students' individual quiz timings for viewing and

saving of randomized questions. Data mining refers to the process of extracting meaningful information from often vast amounts of raw data (e.g., Coenen, 2011 and references therein). This can be through statistical connections between various pieces of information, or through more advanced artificial intelligence frameworks such as neural networks. In all cases, data (often in very large quantities) is mined for information relevant to specific topics. Data mining techniques are used extensively in research communities that rely on large data sets and are often foundational to observational sciences (those that collect vast quantities of data from distributed sensors) such as environmental science and space science. Our LMS includes an Analytics module that mines student data within its system to provide analytical insights for student success.

## RESULTS

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Within the context of the course described here, rates of academic misconduct showed a dramatic increase from 2018 through 2020. Data from the final assessments (administered in person) from previous years were compared to our findings from online assessments. Our analysis shows that compared to the 2019 course offering, there was a threefold increase in academic misconduct cases. The significance of this work is that, although we make no claims about differentiation between an increase in the rate of detection versus actual misconduct cases, we found that the tools developed in our study here have

dramatically increased our ability to identify and provide evidence for breaches of academic integrity. In the Winter 2020 course offering, there were 33 cases (4% of students enrolled in the course) identified as potential academic misconduct ones because of a student completing the exam in less than 25% of the time and/or answering at least one challenging question (often requiring calculations) correctly in under one minute which was impossible for even a professor to do. All the case were investigated by the Associate Dean and three of them (9%) were dismissed. In the previous three years, the highest



percentage of cases was 2% (mostly associated with using unauthorized material during the final exam) of the enrollment and more than 10% of the cases were dismissed during the investigation by the Associate

Dean. In the Summer 2020 course offering, the case detection rate was 9% and none of the cases was dismissed. We will share the technical details of our results in our presentation.

## SIGNIFICANCE

We believe we have developed a new method of data mining LMS activity logs to identify suspicious activity during exam/quiz administration. We make not claims that suspicious activity on exams equates with misconduct. Instead, through this study we examined variables such as quiz duration, IP addresses, question duration and question order/timing to flag students who performed outside expected norms. In a large (800+) undergraduate course, our data mining flagged ~10% of test takers, half of which

were pursued for formal investigation of academic misconduct. These findings show that data collected by most LMSs can be used to flag student misconduct and can assist in the development of fair and resilient evaluation methods even in an online environment. We wish to share the results of our study so others can replicate it at their own institutions as a viable alternative to paying for surveillance technology such as electronic proctoring software.

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# TRANSITIONING FROM FACE-TO-FACE TO ONLINE EXAMS: DEVISING A COURSE-SPECIFIC STRATEGY TO DETER CHEATING

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In spring 2020, educators across the globe faced unprecedented challenges, as the global pandemic forced them to convert face-to-face courses to an online format. Instructors with often limited experience in online teaching, were tasked – practically overnight – with mastering new software, re-inventing class management techniques and ways of motivating/interacting with their students, and, perhaps hardest of all, maintaining quality standards with regards to academic integrity (Rapanta et al., 2020). In this paper, we focus on the latter topic, exploring conditions and strategies that support assessment quality and safeguard the integrity of written exams. Our underlining principle is that although institutions are responsible for buying tools, providing access to resources and offering support, the instructor plays a primary role in deterring cheating (Chiricov et al. 2020, Gottardello et al. 2020).

Maintaining quality standards in assessment methods is important to University academic leadership, faculty, as well as external stakeholders. The authors maintain the view that the majority of students also value efforts to safeguard assessment methods and the quality of their studies. While the process for face-to-face exams, refined through extensive experience, is well structured and moderated and has been followed for a number of years without incidences, the emerging situation led faculty, administrators and also students alike, into uncharted territory. It should be noted that, while there is considerable experience regarding online programmes of studies, the current situation of “emergency remote teaching” diverges from the careful design of an actual online course; rather, it is a “temporary shift to ... an alternate delivery mode, due to crisis circumstances”, that fails to fully utilise the strengths of the online environment (Hodges et al, 2020). Similarly, while a wealth of

alternative assessment methods exists and could be built by design in an online course, a frequent scenario during the pandemic is for traditional face-to-face exams to be converted to an online version. For an instructor pressed for time, and with limited experience in online teaching, an appealing solution is to keep exams in their familiar format and invigilate the students through a teleconferencing system. E-proctoring software is also available to monitor students in this manner, while also using technology to lock down their computers if needed, and even analyse their behaviour and flag suspicious activity. While in theory e-proctoring software can recreate face-to-face exam conditions at home, past experience shows that there can be many different ways for students to cheat (Bretag et al., 2019), and evidence shows that relying totally and solely on an e-proctoring system may not be the most effective solution (Fuller et al., 2020). Worse yet, inefficient invigilation can lead to students gradually cheating more (Chen et al. 2020, Monteiro et al. 2018); something that can only be expected to aggravate as the initial shock and uncertainty regarding online assessment is wearing off.

While it would be unrealistic to assume that a universal strategy can maintain integrity across different academic fields and modes of exam, a combination of different methods can maximize effectiveness against academic dishonesty (Guangul et al., 2020). We propose that a course-specific strategy should be devised by instructors, taking into account their courses’ specific needs, an assessment of the main threats to the integrity of their exams and of the tools/strategies available to safeguard them. Adding to these, when designing an exam, one should consider their students’ differing sets of abilities and computer literacy. The aim of this work was therefore two-fold: developing a framework

for charting interested stakeholders' concerns; and exploring the various tools and solutions available to help alleviate them.

Prior to our methodology, at the institutional level, a series of focus groups were organised involving faculty, programme administrators and experts on regulations of the national quality assurance accreditation authority, to identify concerns and requirements of involved stakeholders. It soon became clear that there is no singular solution to fit all subject areas. Hence, a general framework was prepared comprising an extensive number of proposed assessment methods and, upon selection of an e-proctoring system to accompany them, was disseminated to faculty. During Phase 1, the available options were discussed at the School/Department or Programme level, to identify common needs between different courses, examine, through secondary research, to what extent the e-proctoring software could support them, and prepare a shortlist of assessment methods to be used. This was deemed necessary, as to minimize the requirement for training among our students. In Phase 2, instructors chose one of the shortlisted exam methods for each of their courses, and exams were organised. Issues arising were troubleshooted and taken into consideration when designing subsequent exams. In Phase 3 we collected feedback through focus groups and interviews, identified common issues and compiled a list of proposed solutions for them. The outcome of the last phase was therefore to supplement the frameworks of written examination options with proposed guidelines and the required parameterization of the exam conditions, in order to avoid common problems and deter cheating. A survey among faculty and students is scheduled to take place at the end of the Spring 2021 semester,

in order to assess the extent to which the proposed solutions address their concerns.

To better illustrate the methodology followed, we provide some practical indicators. Depending on the course material and the mode of exam chosen (e.g. open-book vs closed-book exams) different quality concerns prevailed. For example, when testing students' theoretical knowledge, access to unauthorised materials is a major issue; whereas when solving problems, the main point of concern is collusion. Both e-proctoring software and Learning Management Systems can help alleviate a lot of these issues (e.g. by offering the exam in a locked-down environment, shuffling questions and/or answers so that quick communication between examinees becomes impossible, or offering alternative versions of the same problem to each student); we have identified the required parameterization options and discuss their relative merit. Understanding the options available can also assist in reformulating questions in order to better fit the online environment; for example converting essay questions to more interactive forms, or rephrasing questions in order to avoid offering key words for online searching, or easy descriptions to an outside collaborator.

Having access to a defined framework for online exams enables faculty and University administrators to communicate efficiently to their students what is expected of them, and help them prepare for their exams; but it also allowed us to predict and take measures to prevent the most common problems arising during the exams, so as to maintain their integrity during the transition from face-to-face to online teaching. This is also expected to make online assessment more efficient and less stressful, for both the students and the instructors.

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# **Academic Integrity in Secondary Education**

# DEVELOPING AN ACADEMIC INTEGRITY POLICY WRITING ASSISTANT FOR K12 SCHOOLS

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## KEY WORDS

academic integrity, academic integrity policy, K12 schools, policy assistant

Academic integrity is a core requirement of teaching, learning, and research (Bretag, 2016). It is essential to build educational activities on the fundamental values of academic integrity (honesty, trust, fairness, respect, responsibility, and courage) proposed by the International Center for Academic Integrity (ICAI, 2021). These values can be best maintained by creating a culture of academic integrity throughout the institution. The first step of creating a culture of academic integrity is to develop an institution-specific academic integrity policy because sustainable changes and effective academic integrity strategies can be achieved through designing and implementing academic integrity policies (Morris, 2016). This is especially crucial because students mainly develop their academic identities at the K12 level, and it is essential to do this within a culture of academic integrity. However, writing an academic integrity policy is a challenging process that requires a systematic effort from all stakeholders in the institution. Policy writers may need guidelines to help them develop a practical and functional academic integrity policy.

Within this scope, we set out to develop a tool that guides K12 schools to write their own academic integrity policies. In the first step, we compiled an academic integrity policy corpus comprised of 79 academic integrity policies from K12 schools around the world. In the second step, we conducted a content analysis to identify emerging themes in the policies. We used MAXQDA software for content analysis. As a result of the content analysis, 39 main themes and 151 sub-themes were identified. In the third step, we worked with two academic integrity experts to

transform the emerging themes into sections of an academic integrity policy. In the first round, we sent the list of emerging themes and asked them to add, modify, delete, and combine the themes and translate them into sections. In the second round, we created the draft version of the sections in academic integrity policies based on expert feedback and sent them back for the final revision. In this respect, we transformed the themes into sections after a two-round process. In the fourth step, we created another corpus that includes the extracts of each section in the academic integrity policies. Using this corpus, we conducted a secondary content analysis to determine how these sections were written, which phrases were used, and what the main topics were. We utilized the content analysis results to write instructions for each section of the policy. In the end, we created a website that guides policy writers step-by-step and helps them write their own academic integrity policies. We are planning to ensure the validity and reliability of the policy writing assistant in two ways. First, we are going to send the current version of the website to academic integrity researchers to get expert feedback. Second, we are going to test the usability of the website at a high school. Teachers will use the website to write their school's academic integrity policy, and we will get their feedback regarding the writing process. Based on the feedback of experts and teachers, we are going to improve the policy writing assistant. In addition, we are going to present the first working version of the website and the participants of this session will be encouraged to provide feedback about the tool.

Developing an academic integrity policy is not easy and has many dimensions to consider. Therefore, the academic integrity policy writing assistant offers an easy-to-use, systematic and evidence-based tool for

K12 schools. With the help of the tool, K12 schools will take the first step to create a culture of academic integrity in their settings.

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# HOW TEACHERS CAN STRENGTHEN ACADEMIC INTEGRITY CULTURE: UKRAINIAN PERSPECTIVES ON ACADEMIC INTEGRITY

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Revolution of Dignity in Ukraine became a no-return point in the country's modern history. Ukrainian people have proclaimed their rightful choice to integrate with EU, and Ukrainian authorities had no other choice but to change Ukrainian policies to comply with European vector. With that Ukrainian secondary education system had to change as well. During our presentation we will talk about the changes and challenges that Ukrainian secondary education has had to undergo in terms of academic integrity and how we have addressed those with Seeding Academic Integrity in Secondary Schools Project – SAISS and Academic Integrity and Quality Initiative (Academic IQ) project activities.

In 2015, following the Revolution of Dignity, the Ministry of Education and Science (MOES) declared academic integrity a key priority in education reform. A series of changes in Ukrainian Law have followed.

In 2017 Ukrainian government added Article 42 “Academic Integrity” to Ukrainian Law on Education<sup>1</sup>, thus legally enforcing Ukrainian educational institutions to adhere to academic integrity principles. Later on in 2019 the government added Article 43 “Academic Integrity” to the Law on Secondary Education in Ukraine<sup>2</sup>, thus providing secondary schools with precise list of academic integrity expectations toward all academic process participants, list of violations and responsibilities that may follow.

Though providing a legal basis for creating a culture of academic integrity in Ukrainian secondary schools, schools' administration, teachers, students, and parents have been lacking information and practical tools so as to put the law into practice.

In 2019 the Public Affairs Section of the U.S. Embassy in Kyiv (PAS), and American Councils moved to address the issues of academic integrity in secondary schools through its Seeding Academic Integrity in Secondary Schools Project (SAISS). That was our answer to the challenge of scarcity of academic integrity resources in Ukrainian language. We have continued our efforts to address secondary schools' needs in academic integrity resources withing the second iteration of the project, now called “Academic Integrity and Quality Initiative”

Throughout the two projects we have been taking the best American and European practices on academic integrity, adapting them to Ukrainian realities, and delivering them to all those involved in secondary education process.

During our presentation at European Conference on Academic Integrity and Plagiarism 2021 we will talk about how the focused interviews we have conducted with teachers and parents have helped us to better understand the current state of academic integrity culture in secondary schools, what needs and challenges we have discovered, and how we have later translated our findings into academic integrity resources relevant specifically for Ukrainian school's needs.

We will also present the resources themselves, focusing on their structure, content, and how they meet Ukrainian secondary education needs and challenges we have discovered, including the need to comply with Ukrainian law regulations. Namely, we will take a closer look at our online course “Academic Integrity for Teachers”<sup>3</sup>, lesson plans with integrated

<sup>1</sup>[https://mon.gov.ua/ua/npa/law-education#\\_Toc493603883](https://mon.gov.ua/ua/npa/law-education#_Toc493603883)

<sup>2</sup><https://decentralization.gov.ua/en/news/12399>

<sup>3</sup><https://courses.ed-era.com/courses/course-v1:AmericanCouncils+AcIn101+AcIn2019/about>



academic integrity principles, methodological recommendations on academic integrity for schools' administration and teachers, as well as a School

World Special Issue on Academic Integrity for school administration.

# GATEWAY TO PREPARING K-12 STUDENTS FOR HIGHER EDUCATION – REFLECTIONS ON ORGANIZING AN ACADEMIC INTEGRITY CAMP

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Prior knowledge is expected when students move from school to higher education, and is critical in ensuring student learning, achievement and success (Hailikari, Nevgi and Lindblom-Ylänne, 2007). Lack of prior knowledge can hamper and negatively influence students' ability to learn or apply higher order thinking (Nathanson, Paulhus and Williams, 2004). Issue arises when there is a misalignment between school curricula and courses taught in higher education which often leads to students struggling and confused (Long, 2013).

We focus on “content knowledge” of prior knowledge, particularly “background knowledge” and “subject matter knowledge” (Margana, 2012) for which universities are often seen to offer introductory, developmental or remedial courses that are subject, degree, and/or specialization specific. Introductory courses are offered prior to joining a program, while developmental or remedial ones are offered when students falter or demonstrate lack of understanding during their degree. These courses provide students with opportunities to re-learn concepts that have not been understood (Yolal, Kiziltepe and Seggie; 2019). We found that introductory, developmental, and remedial courses did not necessarily prepare students in higher education on academic writing and integrity policy awareness, but too often focused on subject content and skills like MATH, Economics, and so on (Reed, 2017; Fenton and Gralla, 2020; Cavaliere et al. 2020).

There have been studies that suggest that first year students find themselves committing academic misconduct such as plagiarism (Denisova-Schmidt, 2016). First year students have many reasons to plagiarize as stated in the study by Hawe, Lightfoot and Dixon (2019). Besides reasons such as lack of self-efficacy, self-monitoring and self-regulation, students'

inability to comprehend subject material in order to apply the knowledge they attain have all been posited as reasons for first year students' plagiarising or cheating (Khan and Balasubramanian, 2012; Tayan, 2017; Hawe, Lightfoot and Dixon, 2019; Khan, 2014; CMU Eberly Centre, 2021a).

A search into open-access programs by some universities have yielded very few, if any introductory courses on academic integrity, and some on remedial courses for academic writing (Callahan and Chumney, 2009; Kuiken and Vedder, 2020). Venugopal and Khan (2020) posited how some students who find it difficult to cope with expectations of academic writing and knowledge of academic integrity policies and such in higher education. Similar observations were recorded by Braxley (2005) and Gurel Cennetkusu (2012). In fact, a George Washington University study (2007) reported that school students were often not required to write with synthesis or criticism; similarly, The Chronicle of Higher Education published a study (2006) that said students did not necessarily practice academic writing in school (as qtd in CMU Eberly Centre; 2021b).

Recognising this gap, our research objective was to design and implement a transitional module to school students. Based on Butcher, Davies and Highton (2006; 2020) guidelines on how to develop a module for learning and observations, we designed a nine-hour module for school students to help prepare them for the next level (either secondary to high school; or high school to higher education).

First author conceptualized the learning module to raise their awareness on integrity values, misconduct, and behaviour; and second author developed the module on providing skills in academic writing.

The module was organized for two iterations, once in 2019 with colleagues from the host campus, University of Wollongong in Dubai (which acted as a pilot and trial) and second time in 2021 as a virtual camp with authors and student board members as part of the Centre for Academic Integrity in the UAE initiative to support the community. This proposed presentation focuses on the second iteration from 2021 and its impact (UOWD, 2021).

Feedback of students on Likert scale revealed 37 students responded out of 52. These students ranged from grades 6–12 and had parental consent to attend the module and provide feedback. 94.6% students felt confident about their knowledge regarding academic integrity after the camp. 67% of the participants enjoyed listening to real life experiences and circumstances faced by the facilitators. Students also “enjoyed learning about academic integrity, paraphrasing and citation”, “enjoyed the way everyone collaborated in saying the answers and how the teachers explained us easily with their own experiences”, “enjoyed the breakout room sessions. in which a group of students gathered together and did various activities and debates”, “enjoyed how we were able to learn about Academic Integrity when having fun”.

Students shared specific things they learned from the sessions that they didn’t know before, such as “referencing”, “paraphrasing”, “values of academic integrity”, “what to do and what not to do”.

Overall, about 62.2% rated this camp a five out of five with 32.4% rating four and remaining 5.4% rating a three.

Furthermore, the writing contest acted as a summative assessment of skills in academic writing, and continuous assessments throughout the three days in the form of individual and group work helped gauge students’ level of learning. For instance, an online quiz on “practicing integrity” tested students’ knowledge and understanding. 47 out of 52 students took the test. 6.38% students did not complete the test, 58% got all the answers correct. The question with the least number of correct responses was “I asked to borrow my friend’s homework as my parents had a party and I could not complete my work”. In discussions they said “asked to borrow” did not necessarily mean cheating or copying. This provided a further learning opportunity.

The feedback from attendees, summative and continuous assessments highlighted both student perception of their competencies and how much they did learn in terms of skills on academic integrity and writing. The structure, badging ceremony and ambassador’s roles in raising awareness and inviting more students to join such a module in the future led to greater levels of engagement. We aim to follow up with the attending students annually to track their experience with academic integrity and writing to observe and record if the module had the desired effect of enhancing their “prior knowledge” as they progressed to higher studies.

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# BEYOND THE TEACHERS' GAZE: IMPLICATIONS FOR ACADEMIC INTEGRITY OF SWEDISH PUPILS' SOCIAL STRATEGIES IN BACKSTAGE SPACES

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Informal networks where people share experiences and events in for example Social Medias such as Facebook, Instagram, and Snapchat increase worldwide. Simultaneously there is a development towards an individual focus on the pupil in formal education in many countries (Rizvi and Lingard, 2010) comprising Sweden (Beach and Dovemark, 2011). Summative assessment has gained land in Swedish schools, including an extensive national testing (Lundahl, 2009). It is stated in the Swedish curriculum (Swedish National Agency for Education, 2018) as well as in curricula in many other countries; that pupils are to learn to identify their weaknesses and strengths in order to get accurate help and guidance from both peers and teachers (Harrison and Howard, 2013).

The theoretical point of departure is Goffman's (1959/1990) theater metaphor, in which people's behaviors are considered as being enacted either on the "backstage" or "frontstage" of social life. In the study, the "frontstage" is used for pupils' interaction with teachers in handing in written assignments for assessing or grading. "Backstage" is used for pupils' quiet informal conversations with classmates inside the classroom as well as interaction outside school which take place out of the teachers' gaze, where pupils, learn the "line" for the frontstage encounter with teachers.

The purpose was to explore pupils' applied informal social strategies in "backstage spaces" when dealing with formal individual tasks such as individual written assignment and National Tests. The research questions were:

1. What backstage spaces do pupils use together with peers when dealing with individual written assignment and preparing for National Tests?

2. How can the pupils' activities in backstage spaces be understood?

The ethnographic inspired study, conducted by the author, comprised four months of observations and two weeks of audio-visual recordings in a 8th grade class. One year later, in 9th grade, 18 semi-structured face-to-face interviews with the pupils were carried out. There were 25 pupils in the class and 50% had a foreign background. Two third of the pupils were girls. The discrete staging of the audio-visual devices (Rönn, 2021) rendered possible to record pupils' low-voiced informal conversations between peers during lessons – thus a backstage space inside the classroom. The interviews revealed backstage spaces for pupils' informal social strategies outside the classroom and outside school, too. The Regional Ethical Review Board in Umeå, Sweden, reviewed the study. Pupils and their guardians gave their written consent.

The pupils were willing to assist classmates inside and outside the classroom. Some of the informal social strategies pupils applied backstage were: a) swapping computers with peers behind the teachers' back and writing (or revising) texts for friends, b) logging in to peers' Google classroom accounts and write assignments for them inside or outside the classroom, c) using smartphones to send text messages to classmates after school; asking those who had completed the given assignment to take pictures of their assignment and forward it to the requesting classmates – in order to be rewritten "in their own words" and handed in to teachers for assessment, d) sharing leaked National Tests and/or the teachers' assessing instructions for the National Tests on the class' Snapchat-group.

One finding was that the pupils who tended to supply assistance to peers, in writing for peers and/or

forwarding pictures of completed assignments to be rewritten in the classmates' "own words", put more time and efforts into schoolwork and considered assignments not only as tasks to complete and hand in to teachers, but as a process of learning for future needs. They had a more long-term perspective of schoolwork, which correspond to the teachers' and curriculum's view. Pupils who received assistance tended to have a short-term perspective on schoolwork; focusing on accomplishing assignments with little effort – and handing them in to teachers for assessing and/or grading. These pupils developed a dependence on the pupils with a long-term view of schoolwork – which might render them more vulnerable when it comes to school achievements and later on higher education and working life.

The study identified four different backstage spaces where pupils applied informal social strategies out of the teachers' gaze in producing texts to hand in to teachers. These backstage spaces have different characteristics:

1. A backstage space for synchronous face-to-face interaction at school – mainly inside the classroom – which comprises explaining to peers and swapping computers with peers.
2. A backstage space for synchronous person-to-person interaction outside school, where oral synchronous interactions takes place on the phone between two pupils. This occurs outside the school premises and after the school day – beyond the teachers' gaze.
3. A backstage for asynchronous person-to-person interaction outside school, based on written texts

messages such as SMS to classmates. The delay between the sent message and the reply makes the interaction asynchronous. This is used for request for pictures of completed assignments to reformulate in "own words".

4. A backstage asynchronous person-to-people interaction outside school, which takes place on social media, such as for example the class' Snapchat group where the pupils' shared the leaked National Tests.

The results may be understood as though, pupils move schoolwork backstage to be carried out in informally in collaboration with peers in a school context with enhanced focus on graded individual assignments. In the interviews the pupils said that it was in order to achieve good grades with little efforts that they applied the above social strategies for individual assignments. Girls with a Swedish background tended to gain the most of the system – and boys were partially excluded.

The fact that the strategies accounted for take place backstage and out of the teachers' supervision, renders it difficult for teachers to correctly assess and/or grade some of the pupils' written and handed-in in assignments (mainly the one's with a short-term view of schoolwork). Consequently it becomes problematic to cater for the individual pupil's needs for support and guidance (the where is the pupil, where is (s)he heading, and how is (s)he to get there?). The needs of pupils with short-term view of schoolwork tend to go unnoticed – even though they might achieve good grades.

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# THE DEVELOPMENT OF ACADEMIC INTEGRITY IN NAZARBAYEV INTELLECTUAL SCHOOL IN SEMEY

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## KEY WORDS

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academic honesty, academic honesty policy

The mission of our school is to provide high-quality education and some of our key values are honesty, lifelong learning, and the development of global thinking. Our school has existed for 10 years and we are now at the stage of establishing the school's culture. Reflection of school experience shows that the school has a number of problems, one of which is the development of an honest academic environment. For example, in 2012, the school adopted the Academic Honesty Policy, and in 2015, the NIS AEO developed the "Rules for Academic Honesty for NIS students" dated 02/11/2015. However, the implementation of the existing policy showed that it had a "punitive" character, which does not fundamentally change the culture of the school. There are cases of violation of academic honesty that happen occasionally at school on the part of both teachers, curators, and students. In the 2017-2018 academic year, there was detection of theft concerning term assessment materials on the NIS network in which students were involved. In the same year, the participation of our students in cheating on the international SAT exam was revealed. As a result, the school closed the SAT center. These systematic violations of academic honesty exist in the classroom (cheating, failure to meet deadlines, plagiarism).

The issue of academic integrity development is relevant globally in all countries, especially in high schools and universities. In Kazakhstan, the problem of developing academic honesty in recent years has become openly discussed at the national level, in particular, at Nazarbayev University together with

KazGUU, where a series of conferences on academic honesty were held.

In this regard, a large-scale study was launched examining the culture of academic integrity in the school as part of Action Research, which will last at least three years, from 2018 to 2021. The main goal of the study was to reform the school's policy and develop a culture of academic honesty with the involvement of the entire school community. The main research questions were:

1. What are the causes of Academic Dishonesty at school?
2. How to develop a culture of Academic Integrity at school?

The research process includes a case study and several cycles of Action Research.

When planning the study, the principle of triangulation was applied in the context of the methods used and presence of different perspectives (school employees, parents, and students). The study was focused on a number of areas: understanding, acceptance, manifestation, and personal attitude to the concept of "honesty", in general, and, in particular, "academic honesty"; the relevance of this problem in the context of our school; and recommendations on the Academic Honesty Policy inclusion. In the framework of this study, the following methods were used:

1. Focus group, in the format of a "Socratic seminar" with various subject teachers, curators, and psychologists.
2. The questionnaire, which was conducted anonymously, from February 5 to 8, 2019 using Google

Forms. In total, 805 respondents took part in the survey, including 89 teachers, 273 parents, and 443 students.

3. Interviews with 4 teachers, 4 parents, and 11 students. The interviews with students were conducted by 11-12 grade students.
4. Analysis of documents (in the research group and in the extended group with the participation of teachers, parents, curators, psychologists, educators, administration, and students).

In developing questions for the survey and interview, the typology of academic misconduct developed by Perry (2010) was used. Perry's typology is a two-dimensional model of academic misconduct, in which one dimension measures the degree of understanding of the rules, and the other one dimension measures how accurately these rules are followed (Ireland, 2011). According to the typology, only those students who understand the rules, but do not follow them, are classified as "violators".

Most of the school community has a theoretical understanding of the concept of "honesty". However, there is no correlation between understanding the concept of "academic honesty" and behavior demonstrating the adoption of this concept, the gap among parents is 43%, teachers 32%, and students 26%. It should be noted that the lowest percentage of understanding of the concept itself was demonstrated by students (76%).

The study showed that all participants in the study faced violations of academic integrity in the school. The most relevant are cheating on homework,

plagiarism, and the uneven distribution of workload between students during group tasks.

An analysis of the causes of academic honesty violations showed that the most significant for students is the fear of failure (the priority of assessment over a person, a result-oriented society, an unreasoned assessment system), and pressure from parents and teachers. The provoking factors are the fear of expulsion from school and insufficient scaffolding on the part of teachers and the school administration.

At the same time, the majority of the school community is aware of the academic integrity problem and the need to develop an honest academic environment, and the need to be proactive. The school community is ready to make a certain contribution to the development of academic honesty.

In accordance with the conclusions, regarding the school policy, it is recommended to focus on creating conditions for the development of a culture of academic honesty, which will determine the specific steps and responsibilities of all participants in the school community. The emphasis should be put on the adult's responsibility as a role model of behavior for students and teachers' quality support (teaching citation standards, using references, meeting deadlines, determining the reliability of sources, regulating the student's workload, etc. in the system). The research team has developed a draft of the academic integrity policy. During the next academic year, it is planned to test, further monitor, and revise the policy through research of the development of academic integrity among students, teachers, and parents.

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# **Academic Integrity: Current Research and Other Topics**

# WHEN IT COMES TO MY VALUES – I ACT

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The interest of the global professional and scientific communities for the phenomenon of plagiarism, possible reasons for its appearance as well as actions against it, has been present for decades. However, despite significant efforts by Higher Education Institutions (HEIs) to combat academic misconduct, it seems that students still do not know enough about the notion of plagiarism or understand that resorting to any form of plagiarism is contrary to the rules of academic behavior and honesty (Camara et al., 2017). Previous scholars draw on theory of planned behavior (TPB) when examining students' intention to plagiarize (e.g. Stone et al., 2009; Stowe, 2017; Passow et al., 2006; Pekovic et al., 2020). For instance, Pekovic et al. (2020), working on the sample of Montenegrin students, found that favorable attitudes towards plagiarism, low perceived behavioral control and low moral obligation influence positively students' intentions to plagiarize while subjective norms, academic literacy and computer literacy are not significant determinants of students' intention to plagiarize.

Interesting researches by Alleyne and Phillips (2011) or Ahmadi (2013) etc. show that students are open to cheating and that there is a high percentage of students who believe that plagiarism is socially and ethically acceptable. Therefore, linking ethical behavior to personal and morally relevant conduct and forms of behaviour, as well as relation of every individual with themselves and others implies that individual's value system is a precondition for identifying, regulating, directing, but also evaluating students' reactions and actions. However, as stressed by Flint et al. (2006) students do not recognize the relation between their values and plagiarism. Therefore, the paper will provide an analysis based on the value system through the spectrum of the most dominant personal values, as fundamental inner goals and needs that an individual aspires to. Some of these values are directed towards oneself, i.e. towards achieving the goals and needs that may, although not

necessarily, have a direct influence on the persons around us. On the other hand, some of these values are permanently directed to others, i.e. to achieving the values that have a significant influence on others. Hence, values have a motivational role because they form and direct individual's everyday forms of behaviour in all the spheres of their life, including their attitudes to plagiarism in academic settings.

We base this research on two sources: (1) Ajzen's theory on planned behavior (Ajzen, 1991), which shows that moral obligation refers to a person's feeling of duty to accept or reject a certain behavioral pattern; and (2) Alleyne and Phillips (2011) findings on the level of tolerance towards academic dishonesty. Due, we will investigate the link between personal values of students and their active or passive attitude, as well as interpretation and action against plagiarism of other students.

Our research question is examined in Montenegrin context in which this form of cheating has come into focus only during the last few years, which has led to the adoption of the legislation regulating it on different grounds (Pekovic et al., 2020). More precisely, as reviewed by Pekovic et al. (2021), the first steps in identifying the prerequisites of Montenegrin HEIs associated to academic integrity were performed by the Council of Europe's ETINED platform. Furthermore, the authors list several actions that Montenegro implemented in order to strength academic integrity such as the adoption of the Law on Academic Integrity (adopted in March 2019), the appointed of the National Ethics Board and acquisition of plagiarism-detection software for all HEIs in the country. In parallel, the University of Montenegro (UoM), as only and the largest public university in the country counting around 20, 000 students, also focus extensively on academic integrity by strengthening institutional and educational capacities to combat academic misconduct.

For the purpose of this study, we collect information from UoM's students form all 19 faculty units.

The main survey was preceded by a pilot research when all the instruments for collecting data were tested and it included 100 students which led to a

change of some questions. The final sample included 774 students at all level of studies.

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# SELF-REPORT OF ACADEMIC MISCONDUCT PRACTICES AMONG UNIVERSITY STUDENTS

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## INTRODUCTION

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Academic misconduct refers to a group of reprehensible behaviors committed by students. According to Sierra and Hyman (1), these conducts may be defined as the conscious action of applying aids or prohibited information during a test or a written assignment and may also involve illegal actions such as borrowing a written work to present it as their own or using phrases or sections without citation (2). Furthermore, academic misconduct may also be described as any action that gives an unearned or undeserved advantage to a student over another (3, 4). Moreover, others (5) assume academic misconduct as the intent or execution of actions, using illegal or unauthorized means, for the attainment of potentially better academic results, considering it of two types: active, which includes actions to increase one's grade, and passive, involving collaboration to improve another student's grade.

Despite the existence of shared elements between the referred definitions, a universally accepted definition does not exist, therefore, what is considered academic misconduct may vary (6). Analysis of the prevalence evolution of these negative behaviors is therefore difficult (7), especially considering that most studies are self-reports and students may identify misconduct practices differently, if they have been given information on the topic (8). In any case, independently of the followed criteria, the numbers are worrying. McCabe et al (6) report a prevalence near 2/3 or above throughout the years (up to 2010). International Center for Academic Integrity presents survey results (9) on more than 70000 undergraduate students (2002–2015) with a similar prevalence. To the best of the authors knowledge, no such data exists for Portuguese Universities.

## AIMS

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Thus, this study mainly intended to assess Portuguese university students' behaviors related to academic misconduct, evaluating its prevalence and main types, and the reasons for engaging in them.

Additionally, participants were also asked about consequences, all with the purpose of assessing university students' perception and posture.

## METHODS

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Data were obtained from an anonymous online survey carried out during February and March 2021, the

participants being students from several Universities in the North of Portugal.

## RESULTS AND DISCUSSION

Two hundred and thirty-one students answered, mostly females ( $n = 190$ , 82.3%) and aged between 18 and 21 years ( $n = 130$ , 56.3%).

Regarding prevalence, 80.1% of the students reported they believe in general everybody has committed academic fraud at least once. As for their personal experiences, about half stated they have seen ( $n = 114$ , 49.4%) or committed ( $n = 133$ , 57.6%) academic misconduct, with no statistically significant differences between sexes ( $p = 0.17$ ,  $p = 0.78$ , respectively); results about this issue are contradictory in literature (10, 11).

Considering the perception about misconduct types, 40.2% believe that cheating during tests/exams happens in the majority. Cheating seems to be an assumed and accepted behavior, since 55.4% stated that they would cheat if they were not caught. Submitting an essay made by other person is a much less prevalent and accepted action with almost every student (99.1%) denied doing it. Additionally, the majority (56.3%) stated that if asked, they would not allow somebody to submit an essay they made as their own.

As for the reasons to engage in practicing academic misconduct and its consequences, although most

(76.6%) believe that is a natural outcome of the competitive society we live in, students also stated that immediate and negative consequences should be enforced both on students as well as on the teaching staff who allow it, as long as themselves are not involved. In fact, some (39.8%) would disapprove if a professor did not prevent cheating during a test and the majority (57.2%) indicated that professors accepting these behaviors should be sanctioned. Nevertheless, 39.0% of the participants stated that if in the future, as professors, they were faced with academic misconduct, they would not expel the student. So, misconduct is perceived as wrong, however not wrong enough to be denounced within classmates (85.7% would not denounce academic misconduct) or not to be practiced, especially if there are no consequences. Feelings of loyalty towards students may explain the major option for not denouncing a fraudulent behavior.

For the majority, consequences of academic misconduct mostly apply to those who engage in these behaviors, but also to other students who in fact study, and to Society as a whole. To a lesser degree, consequences are recognized to the teacher and to the Institution.

## CONCLUSIONS

The results herein presented are quite alarming, as they point to a high level of academic misconduct (independently from the student's sex), either testified or performed. Thus, the obtained data reflects the urgent need to develop and apply action measures for overcoming academic misconduct or, at least, to

reduce it significantly. The existence of Codes of Conduct, which may also include strong disciplinary sanctions, is probably one of the keys. Approval of statewide punitive legislation, including sanctions over companies selling services to produce academic works, is another important approach.

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# ACADEMIC INTEGRITY STRATEGIES: POSITIVE, PREVENTATIVE AND PUNITIVE

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## KEY WORDS

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academic integrity, contract cheating, student success, strategies, student survey

Our presentation will focus on the key findings from our Academic Integrity Fellowship which took place in 2020. We presented our initial findings at the 2020 ENAI conference and we are now returning a year later to present our final findings. Our presentation will report key findings concerning the three strands of our project – positive, preventative and punitive strategies.

Our first strand centred on developing a positive environment which encourages students in Higher Education to study with integrity. This is necessary to ensure that students understand what is meant by ‘academic integrity’ and ‘good practice’ and to foster a sense of pride in being able to demonstrate this at undergraduate and postgraduate level. Looking at recent research (Bretag et al, 2019; Harper et al 2018; Alin, 2020; Amigud and Lancaster 2020), we examined positive teaching strategies to enhance good practice and promote student success. Part of the research for this strand involved the use of small focus groups which were run by our student researchers. While some of the questions asked were similar to those in the main student survey, these focus groups enabled us to probe more deeply regarding key aspects. These findings have also informed our recommendations in terms of teaching and learning, to further support student success.

Our second strand involved ensuring preventative strategies as the sector tries to keep pace with the rise in contract cheating and develop measures to counter it by being explicit to students about the inherent risks of using these services (Gullifer and Tyson, 2014; Medway et al, 2018; Morris 2018). In this part of the presentation we will share key insights from the Academic Integrity student survey which we ran in November to December 2020 at the

University of Leeds. Through a systematic literature and policy review undertaken in the preparatory stages of our project, we identified several key areas that we wished to investigate with the students. Having examined the survey undertaken by Bretag and Harper (2018), we included similar questions to enable some comparison with the situation in Australia, but we made several changes so that we could best examine the situation at the University of Leeds. The survey was designed so that the data can be examined in a variety of ways including (but not limited to) UG/PG, year of study, School/Faculty, Home/International students and Gender. Being able to analyse the responses in this level of detail has allowed us to make a series of recommendations at School/Faculty and University level. The results have clarified students’ attitudes to academic integrity and made us aware of the work that is required in order to further develop their understanding of academic integrity and how this might be delivered, for example using a drip-feed approach, making more guidance, discussion and practice available. It has led to a review of the role of the Academic Personal Tutor.

Our third strand focused on punitive strategies not only for the student who has plagiarized but also in combating the existence of external agencies which threaten the positive behaviours that we wish to foster. We have evaluated the key issues raised by QAA Academic Integrity Charter and our recommendations (QAA 2020). In our presentation we will discuss examples of best practice currently undertaken at the University of Leeds and also our recommendations to senior management in order to further embed a culture of academic integrity.



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# DEGREES OF DECEIT RESEARCH PROJECT: PRELIMINARY FINDINGS

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## KEY WORDS

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academic integrity, admission fraud, fake credentials, topic modeling, web-mining

We plan to outline our preliminary findings for the Degrees of Deceit research project in this presentation, which began in summer 2020. This project materialized due to a collaboration on a webinar about admissions fraud and fake credentials within higher education in Canada. In researching for this event, we became aware of the lack of academic literature on this topic despite its appearance in early literature dating back to 1883. The notion of diploma mills or “the sheepskin shop” was highlighted as tainting education (Thompson, 1883, pg. 256). However, diploma mills frequently appear in the media as organizations that manufacture qualifications for a price. This discovery was the starting point for the project. This presentation, specifically, will focus on two data sets collected to further understand the problem through the distribution of a survey; and web-mining.

A survey was distributed to professionals working in admissions and registrarial services within post-secondary institutions and academics participating in hiring committees. A hundred respondents, primarily from Canada, responded to the survey. There was one respondent from outside of Canada (Afghanistan). Nine out of the thirteen provinces and territories were represented, which provides a data sample from coast to coast within Canada. This sample revealed the inner workings of the processes that govern admission services, transcripts, and hiring. Moreover, it highlighted gaps, pain points (e.g., workload issues), and reflections on where respondents believe this sector is moving in the next five to ten years.

The most startling trends uncovered were that only 45.3% felt confident detecting fake documents,

even though 67.7% received training, and 87.1% do not use an evaluation service to verify documents. Workload issues were reported for 90% of respondents, and 79.4% felt that additional resources would help. “Admissions change” was frequently discussed amongst peers (83.7%). This question intended to measure whether this topic was discussed amongst the collective versus a personal view. The notion of change could be applied to digital solutions, the need for refined processes, or government regulation. Digitalization was earmarked as the way forward in subsequent questions. However, it needs to be accessible and affordable so that these tools can cross the globe consistently and impact change for the entire process. Adoption was indicated as a barrier in the pursuit of a technical solution in the survey results.

Information on hiring practices was also captured, and 63.6% check the credentials of those they are hiring. Attewell and Domina (2011) reported that people who fabricate credentials have often attended the post-secondary institution in which they are claiming to have the degree. Nevertheless, for whatever reason, they did not succeed at completing all the requirements for their program (Attewell and Domina, 2011).

Alternatively, while the first data set examines our internal processes and responses to admissions fraud and fake documents, the second; explores thirty websites that sell fake degrees and credentials online. These websites were found by searching “buy fake degree” on Google. This search query was not meant to quantify the number of services available but rather to use as a filter to isolate a subset

of sites to analyze. Data was scraped from the various layers of the website, from the elements to order the fake degree, the policies that police the business transaction, to how the service is justified or marketed to potential buyers. The data is used to build a topic model that brings semantic patterns to the surface using unsupervised machine learning (Blei, Ng and Jordan, 2003). Early results of this modeling will be presented.

These websites are accessible and affordable based on our in-depth examination of thirty websites. A four-year degree for an international student could cost upwards of \$160,000 in Canada. However, a made-to-order degree can cost anywhere between \$150 to 200 US dollars online. The same attributes of

accessibility and affordability were gaps that surfaced in the survey with the prospect of technology to combat fake credentials. Our objective in collecting this data was to learn about such services in order to compare them with currently applied solutions or those being considered for the future.

In summary, our research confirms the vulnerability to admissions fraud and fake credentials within higher education in Canada as the services available are manufacturing machines. The preliminary findings of this research will be of interest to higher education, government, those developing software to circumvent credential fraud, and researchers working in the area of academic integrity.

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# UNIVERSITY OMBUDSMEN ANNUAL REPORTS AS A BAROMETER OF THE INCIDENCE OF STUDENTS' ACADEMIC DISHONESTY ON CAMPUSES

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## KEY WORDS

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ombudsmen, academic dishonesty, policies, conflict resolution

The use and implementation of internal dispute and conflict resolution mechanisms is a growing organizational phenomenon since the middle of the last century (Sutton, et al., 1994). The emergence and implementation of these elements of conflict arbitration within organizations are considered to be linked to: increases in litigation, activism and the requirements imposed by the regulations of each country (Shubert and Folger, 1986). Currently, internal dispute resolution devices can be found in organizations such as public administration bodies, universities, prisons, banks, healthcare organizations, and large corporations (Ziegenfuss and O'Rourke, 2014).

In Spain, the country where the study was carried out, the figure of the university ombudsman (UO) is regulated by Organic Law 6/2001 (LOU, 2001) and has the following characteristics (Ballesteros, 2020):

- They enjoy autonomy and independence, within the framework of their actions, within the organizational framework of the university
- They have attributes of inviolability and immunity in their performance
- No cause or litigation concerning the rights and freedoms of the members of the university is alien to them.
- Must accommodate the specific legislation of each University
- Their actions are established and safeguarded by the principle of confidentiality

One of the main tasks of UO is related to the arbitration of issues and disputes pertaining to research integrity, academic integrity and fraud in evaluation processes (Denisova-Schmidt, 2020). The present study<sup>1</sup> advocates an innovative approach for the analysis of academic integrity and misconduct strictly related to students' assessment: the content analysis of the annual reports of the Spanish UO.

## RESEARCH QUESTIONS

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1. To what extent does the subject of academic fraud (dishonesty in evaluations by students) reach the Spanish UO?
2. What are the issues of dishonesty/fraud in student evaluations dealt with by the UO?
3. What decision have the UO made regarding these cases? What recommendations do they establish?

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<sup>1</sup>Results of this study are part of an article been reviewed to be published in an academic journal.

## METHODOLOGY

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Content analysis is a discrete research method that tries to examine documents or communicative elements to understand how a certain person or organization constructs their reality (Ceresola, 2019).

In practice, the investigation began with an online search to obtain the annual reports of the Spanish UO that would be the object of the analysis. For this, the total number of university defenders assigned to the State Conference of University Defenders (<https://cedu.es/>) was established as an initial sam-

ple, who, at the time of fieldwork (April-May 2020), were 54. For each UO, the list of reports published on the internet was accessed and the last 3 annual reports published with a maximum age of 5 years were downloaded; In the cases in which three reports were not available, 1 or 2 were downloaded and in 5 cases no report or annual report could be accessed, so the final sample of reviewed reports is made up of 136 documents from 49 Spanish UO.

## RESULTS

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Actions related to dishonest behaviour by students rarely exceed 5% of the total number of proceedings carried out annually by Spanish UO. If data is analysed from a global perspective, we find that the percentage of interventions associated with issues related to the academic integrity of the students, reported in the analysed reports, is very low (less than 0.6% of the total actions carried out).

Data collected show that the greater volume of interventions carried out by UO, related to dishonest behaviour among students in their assessment and evaluation activities, are connected with malpractices during evaluation tests or exams. Regarding the interventions described in the annual reports of the Spanish UO that are linked to misconduct in

the elaboration of essays (both undergraduate and graduate), plagiarism stands out far above the rest.

A total of 16 recommendations, made by the UO in the reports analysed, have been identified around the following thematic categories:

- Exercise extreme precautions in mass examinations
- Act legally against fraud in evaluation processes
- Apply anti-plagiarism systems and programs. Take precautions when dealing with the subject
- Consider plagiarism in the evaluation regulations
- Elaborate guides of good practices of the students. Train students and faculty staff
- Have clear protocols to act in cases of dishonesty in evaluations

## CONCLUSIONS

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From the analysis carried out, the first thing that stands out is the low frequency of actions and demands that reach the Spanish UO related to dishonest practices carried out by students (less than 1% of the whole litigation processes). Of the actions and lawsuits related to dishonesty in the evaluation processes that have reached the UO, the practices related to academic plagiarism and copying during evaluation tests stand out, far above the rest. On this point we would like to draw attention to the non-existence or low presence of actions and lawsuits related to other dishonest behaviours that have experienced a significant boom in recent years such as: contract cheating, the impersonation in

evaluation processes, the "fabrication" or invention of data and information in essays.

In the annual reports analysed, it is very clear that Spanish UO emphasize the existence of a context of legal uncertainty when solving some of the conflicts they have to face related to fraud in the evaluation processes. Resolving this question is of great importance since the existence of clear institutional regulations and policies, agreed upon and known by the members of the university community, acts as a containment dam for dishonest behaviour by students (LoSchiavo and Shatz, 2011).

In addition, UO suggest the adoption and improvement of certain strategies aimed at reducing dishon-

est behaviour by students, highlighting above all: improvements in the teaching-learning and teaching processes, the implementation of detection systems and control of improper conduct and carry out

training activities aimed at students and teachers on the subject of academic integrity in evaluation processes.

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# ETHICAL AND PRIVACY CONSIDERATIONS OF THE MARKETING TACTICS USED BY SOME ACADEMIC ASSIGNMENT PROVIDERS: A CASE-STUDY

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## KEY WORDS

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contract-cheating, essay mill, academic assignment provider, ethics, confidentiality, privacy

## INTRODUCTION

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In May-June 2019, Nabanita Das, a journalist writing for Nottingham Trent University and the Leicester Mercury newspaper in the UK, reported on the self-styled ‘UK’s Best Assignment Service at Affordable Prices’ namely the academic assignment provider (‘essay mill’) help4assignment.co.uk (Das, 2019ab). Those articles highlighted help4assignment’s marketing practice of posing as young women when contacting students in attempts to secure their (i.e. students’) custom. Despite the ‘co.uk’ website address, help4assignment is based in India.

In a statement on their landing page, help4assignment (2021) states under the heading ‘We value privacy’, and note the questionable grammar and use of English, that pervade the website:

*‘The best thing with help4assignment is that we are good at keeping all our customer’s basic information confidential. As our privacy policy, we never disclose any single information or data without your approval, unless it required or permitted to do so by law such as to fulfill with a call, email, SMS or similar legal process.’*

However, social-media messages from help4assignment provided to the authors by student recipients and Students Union representatives at the University of Northampton during January-March 2021 indicate that, in practice, privacy is far from being at the top of help4assignment’s priorities. We outline the major concerns and will illustrate these in our presentation with appropriately redacted versions of marketing materials sent to students by help4assignment.

## MARKETING MATERIALS

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The students were contacted via social media by employees of, or agents/facilitators/influencers working on behalf of, help4assignment with a modus operandi unchanged from that described in the 2019 newspaper articles. Posing as students they access student social media groups (figure 1a), only revealing their true nature once accepted (figure 1b). Genuine

recipient information has been redacted. There is no current or former University of Northampton student with the name ‘Chhavi Gupta’ and, therefore, this is a fabricated ID.

Thus, even within the deceptive ‘industry’ of providing ghost-written assignments for students, there is the further deception of the initial posing as



current students to gain access to bona-fide student social media groups. When challenged by one of the students who contacted us, help4assignment responded:

*‘Yes we know [it’s illegal], Universities don’t allow [...] takes disciplinary action against students in this matter.*

*But still it safe using our service as we don’t disclose identity of our clients and provide solution with plagiarism below 5%.’*

Statements such as this are probably familiar to colleagues working to promote academic integrity, whether those statements are made on provider websites or via social media, but what followed is highly alarming and of major concern of all of us.

Not content to let go of communication with a student who’d clearly indicated their intention not to

commission assignments, help4assignment persisted and on two occasions has sent marketing materials that, due to cursory redaction, makes identification of previous student customers relatively easy. An example implicating a previous Northampton student is shown in Figure 2 (further redacted to protect students’ IDs).

Current Northampton students have also received screenshot ‘testimonials’ as provided to help4assignment by (former) students at other UK universities, identical to those reported in the Nottingham Trent University article (Das, 2019a). This indicates that help4assignment has been using such ‘testimonials’, many of which contain significant unredacted information, without regard to the confidentiality of either individuals or institutions over an extended period.

## CONCLUSIONS: ACADEMIC INTEGRITY POLICY CONSIDERATIONS

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It is unlikely that help4assignment is the only provider that is negligent in its marketing materials and (potentially) identifying previous student customers, but it is the one currently being reported by students at the University of Northampton and presenting us with this case-study.

Very little can be done to prevent providers from contacting students via social media. In our experience, the majority of students ignore such approaches, regarding them as a tiresome consequence of otherwise beneficial social media usage. Institutions can warn their students but it’s not an aspect of the global contract-cheating industry that can be addressed by measures such as IP blocking or spam-filtering on institutional networks. This type of marketing activity raises major policy questions for institutions. For example:

- How should institutions respond to students who admit essay-mill agents posing as students to social media groups? → Support and advice, or disciplinary action if other students’ privacy is compromised?
- How should institutions regard staff who admit essay-mill agents posing as students to institutionally approved/organised social media groups? → Disciplinary action, noting staff should be

aware of GDPR (in UK/EU) etc. considerations and institutional privacy/confidentiality policies, or support and advice?

- How should institutions regard students who otherwise provide online and social media contact details of their fellow students? → Disciplinary action? Support and advice?
- How should institutions deal with students who’ve previously commissioned work and who are then exposed at a later point via negligent and duplicitous marketing materials? → Penalty and/or rehabilitation if, indeed, rehabilitation is possible in any given individual circumstances?
- With regard to the wider community of HE institutions, how to communicate with another institution implicated by marketing materials sent to one of your institution’s students. → Is there need for a formal inter-university policy, national or international, possibly with a staffed ‘clearing house’, or should this be left informal and, by implication, discretionary?

Our presentation will address such questions with illustrations from recent policy revisions introduced at the University of Northampton. We intend to make a fuller presentation/article available in due course as the investigation develops.



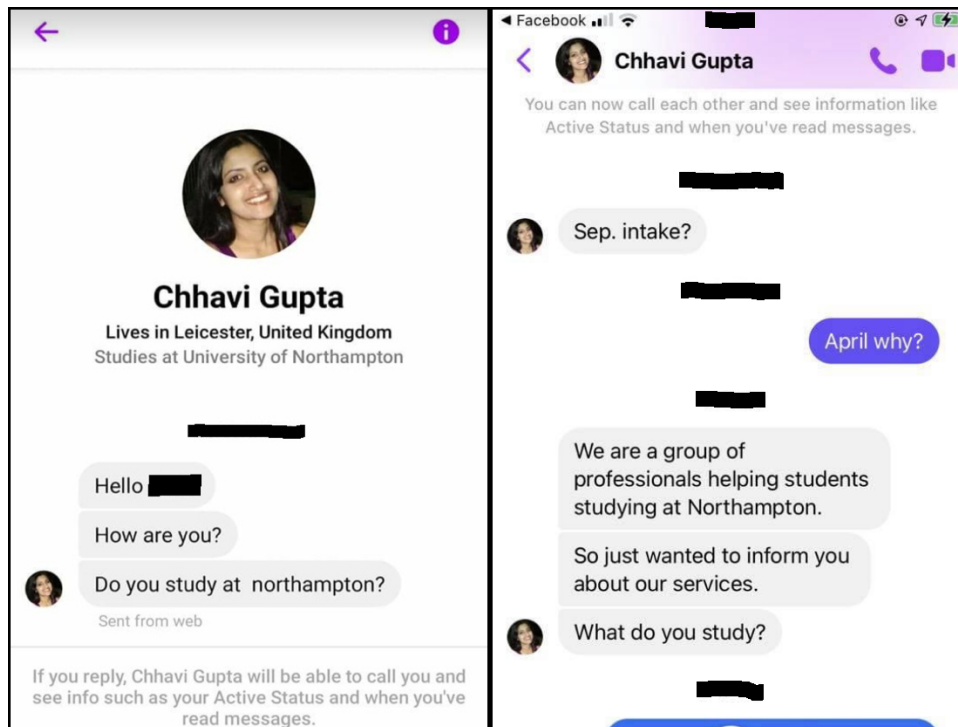


Fig. 1: Typical initial messaging when gaining admission to social media group (1a, left) and typical next-stage messaging following admission to social media group (1b, right).

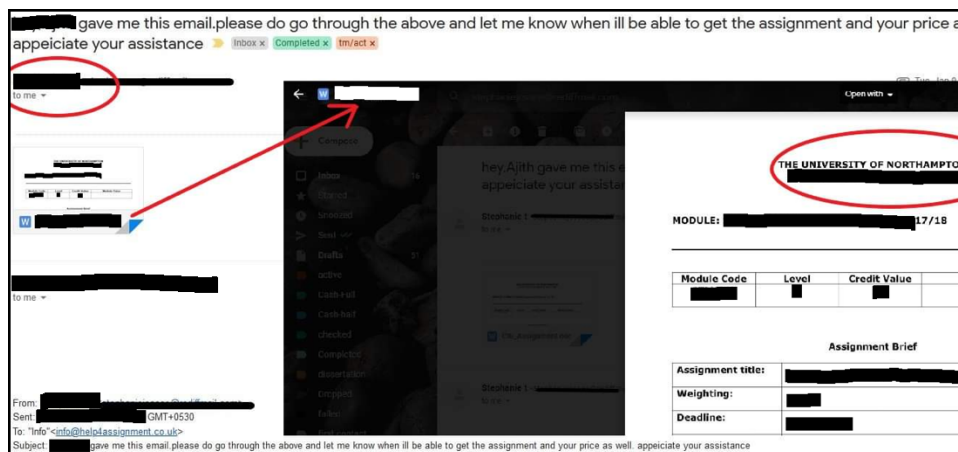


Fig. 2: Screenshot image sent to a current University of Northampton student, showing a former student's commissioning of an assignment in a previous academic year.

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# RAISING AWARENESS OF INCLUSIVE PRACTICE IN ACADEMIC INTEGRITY

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## KEY WORDS

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academic integrity, inclusion, inclusive practice

This session will report from a UK-based investigation into inclusive practice in academic integrity in HE. Recently, there has been a greatly increased focus on inclusive policies in universities as an essential element of the Equality Diversity and Inclusion (EDI) agenda, in particular related to inclusive teaching and learning (Thomas and May, 2010), with principles suggested for ensuring all learners' needs are considered (Larkin, Nihill and Devlin, 2014) and recommendations for 'levelling the playing field' by designing inclusive assessment (Carroll and Ryan, 2005, p.8).

However, so far, the inclusive agenda has not been applied specifically to university practices concerned with academic integrity, including teaching, support and dealing with academic integrity problems. There are many academic integrity issues that connect with inclusion, such as: the continued over-representation of students from certain ethnic groups, including international students, in academic conduct investigations (Gray, 2020; Pecorari, 2016); the opinion of some staff that plagiarism is an international students' problem (Carroll and Ryan, 2005; Mott-Smith, Tomaš and Kostka, 2017); the difficulties some student groups experience with understanding academic conduct regulations and good academic practice (Morris, 2018; Tauginienė et al., 2019); non-native speaker students' misinterpretation of Turnitin results when studying without sufficient support (Kaktiņš, 2019); academic literacy teaching being available to some students and not others (Wingate, 2015).

Research and practice of inclusion highlight different groups who may be excluded or marginalised in their access and experience of learning. Thomas

and May (2010) describe these different groups as diversity dimensions in terms of education (prior qualifications), disposition (learning styles or beliefs), circumstances (age, disability, financial background) and culture (language, ethnicity, country of origin). However, rather than categorising students, this research aligns to the definition from Thomas and May (2010, p.50) that inclusion is a means of making Higher Education 'accessible, relevant and engaging to all students'. Furthermore, as argued by ICAI (2014) 'creating equitable and inclusive approaches to learning supports the values of academic integrity', therefore I contend that inclusive practice for all contemporary students needs to be part of an effective approach to academic integrity.

The aim of this session is to raise awareness of inclusion issues through discussing new research into the teaching, support, guidance and processes involved with academic integrity at a UK university. Results will be presented from three sources of data gathered by the researcher at her own institution: an analysis of guidance documents about academic integrity provided to students, using the Universal Design for Learning (UDL) guidelines for comprehension to test inclusive practice (CAST, 2018); interviews with 10 key staff selected for their roles in academic integrity (investigation of academic conduct, support for referrals, teaching academic integrity, management of inclusion and assessment) who provided their views about how academic integrity is taught, how students are supported with academic integrity, and how academic integrity problems are processed within the institution; interviews with 5 students who experienced the academic conduct referral process. The interviews

were carried out with an awareness that academic integrity issues may be sensitive and a readiness to refer interviewees to appropriate channels of support if needed. Results indicate that although there are positive intentions within the guidance, teaching and support of academic integrity, there is an insufficient focus on inclusion issues and more efforts are needed to make a coherent inclusion strategy that is embedded into all academic integrity practices.

The session presents recommendations for inclusive academic integrity, in which principles of inclusive

education can be effectively applied to the teaching of academic integrity and dealing with academic integrity issues. Participants will be encouraged to reflect on and discuss the degree to which their own context of academic integrity promotes inclusive practice. The session presents original research about a neglected area of academic integrity as a contribution of interest to global academic integrity educators concerned about inclusion, and thus aligns with the conference theme of 'Academic Integrity: Current Research'.

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# PROMOTING AND MAINTAINING A CULTURE OF ACADEMIC INTEGRITY IN INSTITUTIONS OF HIGHER EDUCATION: KEY FINDINGS AND RECOMMENDATIONS FROM THIRTY YEARS OF AUSTRALIAN RESEARCH (1991–2021)

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There is no doubt that maintaining and promoting academic integrity in institutions of higher education is a crucial process and even more so in the current COVID-19 environment where some universities rushed to adopt online learning technologies to deliver their courses. Further, the threat from contract cheating sites makes the pursuit of academic integrity even more challenging for students, academics and institutions alike. In Australia, cuts to our universities, their staff and research means that we are operating with less of everything to maintain the requisite standards of quality and integrity.

This paper presents a systematic review of the literature on academic integrity in Australia from 1991 to 2021. It will summarise the key findings from studies undertaken by researchers in this region over the past three decades. This paper will show that in the 1990s, little was known about academic integrity in the region as evidenced by a lack of studies on plagiarism, cheating and other forms of academic misconduct in Australia as compared to other countries like the US, UK and Europe where many researchers had been investigating the issue for many years (eg. McCabe and Trevino, 1995, 1993). However, in the 2000s, many studies on academic integrity began to be published by Australian researchers such as the well-known Tracey Bretag and her colleagues (2018a, 2016, 2011) and others who were also interested in this area of research (eg. Sutherland Smith, 2008; McGowan, 2005). The increase in such studies was probably due to funding of academic integrity projects by the Australian government which, sadly, has been

substantially reduced. Despite a lack of resources, studies continue through to the present day with research on, for example, students' and academics' perceptions and responses to academic misconduct (AUTHORS, 2020; Harper et al., 2018b), the role of emotions (Prentice, 2018; Curtis and Clare, 2017), and the use of assessment practices to reduce incidences of academic misconduct (Dawson, 2020; Rogerson, 2017) being added to the literature.

Findings from these studies will be presented. These suggest that students, academics and higher education institutions need to stay up to date with current knowledge and practices and remain vigilant when it comes to maintaining and promoting academic integrity.

Strategies and recommendations that have resulted from thirty years of Australian studies on academic integrity will also be outlined. These strategies include developing academic integrity modules for both students and staff to gain a better understanding of the issue, utilising educative rather than punitive approaches to academic misconduct, revisiting assessment tasks to ensure academic integrity and having exemplary academic integrity policies and procedures in place. In addition, the introduction of contract cheating legislation in Australia will be mentioned as another strategy that could be effective.

The paper will end with a call for continued work to be done in the field to convince everyone of the importance of promoting and maintaining a culture of academic integrity in higher education, and more so in our post-pandemic world.

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# ARE HONOR CODES THE EXAMPLE OF 'AMERICAN EXCEPTIONALISM'? THE COMPARISON BETWEEN THE US AND EUROPEAN HONOR CODES IN HIGHER EDUCATION INSTITUTIONS

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Preventing academic dishonesty has become one of the central concerns of the modern higher education (Pekovic et al., 2020). Accordingly, higher education actors from all around the world have joined the 'academic integrity movement' (Gallant and Drinan, 2006). Consequently, higher education institutions (HEIs) have implemented similar mechanisms and policies (e.g. honor codes, disciplinary measures, academic integrity tutorials, text-matching software, etc.) in order to attain the same goal – combat the academic dishonesty.

Previous literature has paid special attention to honor codes since they are assessed as a very useful tool for preventing academic dishonesty (May and Lloyd, 1993; McCabe and Trevino, 1993; 1996; Schwartz et al., 2013; Ely et al., 2013; Tatum and Schwartz, 2017). The first academic honor code in the US originated in the early 19th century (Beasley, 1987; DiMatteo and Wiesner, 1994). The code also found its place in Europe, where a large number of HEIs codify ethical standards of behavior and define principles of ethical misconduct (Anohina-Naumeca et al., 2011; Tauginienė, 2016; Foltýnek et al., 2018). Therefore, honor codes have become an essential part of the global academic setting.

The principles of academic integrity in the US and Europe are similar since they are based on the same values (Tauginienė et al., 2019). However, as indicated by Fishman (2016), the US approaches to academic integrity differ considerably from the European ones mainly because the US education system is based on equality, opportunity, and liberty. For instance, the author explains that the US universities strived to assure access to students from

wide range of backgrounds while at the same time want to maintain high ethical standards in order to preserve their reputation, relevance, and survival. Also, the difference between the academic integrity approach in the US and Europe is identified in Grimes (2004)'s analysis which demonstrated that the US students apply a higher standard of honesty in their behavior compared to the European students (i.e. Albania, Belarus, Croatia, Latvia, Lithuania, and Russia). In the same vein, Lupton et al. (2000) provide evidence that the Central European students have different attitudes, beliefs, and definitions of cheating compared to their US counterparts. Comparing the US and Western German students, Evans et al. (1993) report that Western German students recognize fewer types of behaviors as cheating than the US students. Accordingly, it could be expected that procedures for identifying honor code violations and punishing offenders may also vary between the two cultures. Moreover, the US education system is more reliant on honor codes than other countries (Iovacchini et al., 1989; Park, 2003). Accordingly, Clarke and Aiello (2007) confirm that UK students perceive honor codes 'too American'. This has led us to wonder whether, after all, the use of honor codes could be understood as an example of 'American exceptionalism'. Shafer (1999, pp. 446) explains that 'American exceptionalism is thus the notion that the United States was born in, and continues to embody, qualitative differences from other nations'.

Given the importance of honor codes for promoting academic integrity, the purpose of this study is to investigate the differences between honor codes in the US and European HEIs. Particularly, we will



examine whether non-toleration clauses (obligation of students to report an incident of cheating) are present or not in the European honor codes by analyzing more than 50 honor codes implemented in leading European universities. Previous scholars did not analyze the context of honor codes in the European HEIs, but it is well-recognized that the US universities underline individual responsibility in their honor codes (Fishman, 2016). In other words, the US HEIs rely on students to hold each other responsible for academic misconduct and to create a strong academic integrity system (Roberts-Cady, 2008). Therefore, the first step in establishing such a system is peer reporting and, consequently, changing attitudes to peer reporting (Rettinger and Searcy, 2012). In the US context, peer reporting was an essential part of the honor code setting for a long time (Beasley, 1987) and despite various changes of the educational system throughout the years, it remained present in the code. What more, non-toleration clause is still part of the honor code system in almost 50% of the US top hundred law schools (Manuel, 2020).

Furthermore, it is not clear whether students' engagement in academic integrity, as a significant factor for creating a culture that fosters academic honesty (McCabe et al., 2001; Aaron and Roche, 2013), exists in the European honor codes. Some of the research findings confirm that there is a negative attitude to the implementation of non-toleration clause in the UK (Yakovchuk et al., 2011). Therefore, considering that 'traditional' honor codes based on unproctored exams, honesty pledges, and student-

run judicial processes help the US HEIs in deterring academic dishonesty (McCabe et al., 2002; Schwartz et al., 2013; Ely et al., 2013; Tatum and Schwartz, 2017), if not implemented, the European HEIs should reconsider their honor codes to additionally focus its basis on the students' engagement. This is further supported by the findings provided by Dix et al. (2014) who demonstrate that increasing students' engagement in the honor code could reduce student cheating. Consequently, reinforcing the honor code is significant for creating an environment that supports academic honesty (Pauli et al., 2014). Overall, providing the evidence that the European honor codes do not dispose of non-toleration clause, we may argue that the US honor codes could be considered as an example of their 'exceptionalism'. In order to do so, we will select the first 50 US and European universities based on the Times Higher Education Supplement (THES) system and the system run by the Shanghai Jiao Tong University's Institute of Higher Education considered as two best-known international ranking systems (Taylor and Braddock, 2007). Furthermore, we will investigate honor codes of the selected universities in order to identify the main differences between honor codes in the US and European universities. In particular, we will focus on the non-toleration clause of the honor codes to verify whether the non-toleration clause is important feature characterizing mainly honor codes in the US HEIs. Accordingly, the analysis will shed light on whether the honor code in the US could be considered as the indicator of 'American Exceptionalism'.

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# PUBLISHING HIGH QUALITY ACADEMIC INTEGRITY RESEARCH: INSIGHTS FROM THE EDITORIAL BOARD OF THE INTERNATIONAL JOURNAL FOR EDUCATIONAL INTEGRITY

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## PROPOSAL

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Join us for an interactive workshop on how to publish your academic integrity research. This session is offered by editorial board members of the International

Journal for Educational Integrity, all of whom have extensive publishing experience.

## LEARNING OUTCOMES / TAKEAWAYS

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In this session, engaged participants will:

- Understand what makes excellent quality academic integrity research; what is publishable in a high-quality peer reviewed journal and what is not;
- Understand how to prepare a manuscript for submission to a peer-reviewed scholarly journal;
- Learn how the journals scope and submission guidelines are important for prospective authors;
- Discuss pitfalls of the publication process and how to avoid them; and
- Gain insights into what double-blind peer review is and how it works.

## TARGET AUDIENCE

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This workshop is ideal for academics and researchers interested in publishing their current or future research in the area of academic integrity in scholarly journals.

This workshop is divided into these sections:

1. Information about the journal (including origins, scope and aim). We will offer a brief overview of the journal's origins and purpose. We will highlight why it is important for prospective authors to align their submissions with the scope of the journal.

EATON, Sarah Elaine, FOLTÝNEK, Tomáš, GLENDINNING, Irene, KHAN, Zeenath Reza, LANCASTER, Thomas, ORIM, Stella-Maris, PICARD, Michelle, and ROGERSON, Ann. 2021. Publishing High Quality Academic Integrity Research: Insights from the Editorial Board of the International Journal for Educational Integrity. In *European Conference on Academic Integrity and Plagiarism 2021: Book of abstracts*, pp. 97–98. Mendel University in Brno.

2. Submission types (original research, book reviews, etc.). We outline what types of submissions are suitable for a peer-reviewed journal and IJEI in particular. We highlight what types of research are publishable in a scholarly journal (e.g., quantitative, qualitative, mixed methods, etc.). We discuss the types of submissions that are likely to get rejected (e.g., commentaries without a theoretical foundation; event reports, etc.) We point out ways that emerging scholars can learn about the publication process in a gentler way (e.g., by starting with a book review).
  3. Manuscript preparation We outline how and why it is important to align your manuscript with the journal submission guidelines. We offer advice on how to craft an article title, the importance of keywords and how to structure and organize your manuscript.
  4. Peer review process We discuss how to approach blind peer reviewer feedback in productive ways. We offer insights into why manuscripts get rejected. We also address why and when reviewers would recommend major or minor revisions. We outline how to prepare a response to reviewers and submit a revised manuscript.
  5. Post publication We discuss the importance of sharing news of your publication among colleagues and how to leverage social media to do this.
- We offer ample time for questions and answers. This is designed to be an engaging and interactive session. If breakout rooms are available, we would like to provide the opportunity to interact with participants in a small group format. If the conference technology is more of a live stream, we are prepared to adapt to the technological parameters of the conference.
- Our objective is to provide practical and helpful advice for novice and aspiring academic researchers, though experienced academics might also find value in this session.

## DISCLOSURE

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This workshop is a variation of a similar one the team presented at the International Center for Academic Integrity (ICAI) conference in March 2021.

# RESEARCHING ACADEMIC INTEGRITY: WAYS TO HELP RESEARCH PARTICIPANTS GIVE GENUINE RESPONSES

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Irene Glendinning<sup>5</sup>, Stella-Maris Orim<sup>5</sup>, Salim Razi<sup>6</sup>, Zeenath Reza Khan<sup>7</sup>, Laura Ribeiro<sup>8</sup>,  
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## KEY WORDS

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survey design, academic integrity, research ethics, asking sensitive questions

Whether attempting a qualitative or quantitative study, scientific research depends on the appropriate methodology to identify the target population, collect and analyse information that ensures the validity of the study and reliability of its results. Flawed research methodologies result in measurement error which is considered as the difference between the actual value and the measured one. Although it is difficult to avoid random errors, any systematic errors (e.g., invalid and/or unreliable instrument) should be avoided. However, certain areas largely depend on self-reporting by participants and researchers are left with very little option but to rely on the respondents to honestly and completely answer the questions asked. When conducting research about academic integrity, questions may deal with sensitive topics and honest answers may be self-incriminating for participants. This may be the case in most areas of study in the field of academic integrity, resulting in measurement error.

Surveys on academic integrity often include questions on academic dishonesty. They touch both upon the respondents' perceptions of others as well as their

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personal dispositions and behaviour. In this regard, academic integrity and academic dishonesty can be seen as normative behaviour (e.g., like voting or exercising); thus, being more prone to a social desirability bias even when applying self-administered survey modes (Brenner and DeLamater, 2016). Moreover, self-reporting can add inherent bias depending on the respondent's mood, behaviour, attitude, honesty and many other variables that cannot be controlled (Kreitchmann et al., 2019). Sources of response bias in self-reporting can be both conscious and unconscious, including the respondent's concerns about confidentiality of answers, willingness to "help" researchers, (mis)understanding a question, memory (i.e. ability to recall), etc. (e.g. Latkin et al., 2016; Althubaiti, 2016). Similarly, response rates can vary depending on who administers surveys, the geographical location, length of the surveys and so on which can further tarnish the reliability and validity of the results (Fincham, 2008). Bearing in mind these questions on academic integrity or dishonesty are inherently linked to an institutional environment to which respondents belong, there can be additional

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pressures when self-reporting. There is additional tension for participants when the research is being conducted within their own institutional environment. Therefore, there is a need to develop indirect or unobtrusive measurement procedures (e.g., Brenner and DeLamater, 2016; Vésteinsdóttir et al., 2019) and look into alternative methods that could be efficiently applied in academic integrity research, e.g., interview methods (Heath et al., 2018).

Where participation is voluntary, results may be biased and unrepresentative of the population if people holding particular views of the research topic are more likely to respond than those with other experiences or opinions. Guidance notes for participants in research about sensitive topics will usually include statements about confidentiality and anonymity, but prospective participants may not be fully convinced by this reassurance and may choose to selectively answer, give neutral responses or opt not to participate, through fear of identification. In any survey, truthful answers could be withheld for personal reasons or to avoid reputational damage to colleagues or the participant's company or institution.

Furthermore, not all research proposals and survey designs undergo rigorous ethical checking and approval. Some institutions do not have an ethical approval process and others only require approval for certain categories of research. Such limitations can

lead to surveys being administered that have badly worded questions, ambiguities and lack of information for participants. The participant responses from poorly designed surveys are difficult, perhaps impossible, to interpret fairly and accurately, potentially wasting funding, participants' contributions and opportunities to advance knowledge. Even though local ethical approval processes may differ, or not be required, the onus is on researchers to carry out their research according to an internationally acceptable code of conduct, for example, the Singapore Statement (WCRIF, 2010).

Based on our collective experience in conducting research on academic integrity (e.g. Foltýnek et al., 2017; Glendinning, 2015; Waddington and Campbell, 2020) and developing academic integrity self-evaluation tools (Gaižauskaitė et al., 2020), we propose this workshop as a platform to highlight the challenges of academic integrity surveys and collaboratively look for potential solutions. s

The workshop aims to develop a shared understanding of observed limitations of survey responses, strategies to mitigate these limitations, share experiences with other methods and techniques of data collection and how they can be implemented.

During the workshop, the participants will have the opportunity to engage in discussions of different topics in smaller groups.

## WORKSHOP TAKEAWAYS

- Develop an understanding of observed limitations of survey responses.
- Develop an appreciation of experiences with alternative methods of data collection: focus group discussions, individual (qualitative) interviews, document analysis and others.
- Develop an understanding of the importance of the ethical approval process, confidentiality and informed consent when human participants are involved in academic integrity research.

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# COMPARISON OF INSTITUTIONAL STRATEGIES FOR ACADEMIC INTEGRITY IN EUROPE AND EURASIA

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## KEY WORDS

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academic integrity strategy, policies and procedures, higher education, Europe, Eurasia

Publications about strategies and policies for academic integrity often refer to a “western” approach, but all the research on this topic confirms that there are great disparities in how academic integrity and academic conduct are perceived and managed, not just between countries, but often between higher education institutions within one country and sometimes across different parts of the same institution (Glendinning 2016; Foltýnek et al 2017; Tennant and Duggan 2008; Tennant and Rowell 2010).

The observed differences reflect varying perceptions about what constitutes acceptable and unacceptable academic conduct and practice. This also impacts on differences in how students are supported and guided, what and how sanctions are levied and decided, which, in turn influences how graduates perceive ethical and unethical conduct in their personal and professional lives. As access to higher education has expanded substantially over the last twenty years throughout the world, the role of higher education in shaping values of integrity and ethics in public and private life has never been more important.

In this workshop we will explore a range of different evidence about policies and procedures for managing student conduct in higher education institutions in Europe and Eurasia. The newly analysed data we will use as the basis for the workshop have been collected during the last decade during three research projects and most of the data used in this new study have not been published or presented before.

Few people would argue that maintaining fairness, proportionality and consistency, of both the experi-

ence and the outcomes for students, is fundamental to the process of managing allegations of academic misconduct. The available evidence suggests that this basic requirement is not always achieved.

The outcomes for students are affected by whether the appropriate procedures are followed, who makes the decision on whether to raise an allegation, who decides whether the evidence supports the allegation and how any sanctions are decided and the nature of the sanctions. If the required procedures are unduly onerous for academic staff or if the outcomes for students are seen as overly draconian, an academic may take the option of by-passing the formal procedures and imposing their own sanctions or ignoring the problem altogether. If due process is not followed, then there is the risk of a range of consequences, including: unfairness of outcomes, the student not receiving the necessary support and guidance, the student gaining from cheating, or having strong grounds to appeal against informal sanctions.

An institutional strategy for academic integrity should include deterrence measures, training and education on good practice for both students and staff and, ideally, a holistic approach towards monitoring and enhancement of quality, standards and integrity. The research results show huge variations on whether, how and when this is achieved.

Participants will be asked to weigh advantages and disadvantages of different approaches, also drawing on their own experiences and factoring in different educational and political contexts. We will consider the range of threats to academic standards and

quality that we currently face, whether the learning takes place online, face to face or blended. To understand how to address these threats, we will examine evidence about the underlying reasons that drive students to breach rules for academic conduct and how these vary in different countries.

The ultimate aim of the workshop is to determine common characteristics shared by all effective and

workable strategies, policies and procedures for building and maintaining academic integrity in higher education institutions.

An earlier version of this workshop, using just one set of data, was run by the author at the ICAI conference in Athens in September 2016.

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# CHANGES IN ACADEMIC MISCONDUCT RELATED TO THE COVID-19 PANDEMIC

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## RATIONALE

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Over the last two months, scholarly articles about the effect of the COVID-19 pandemic have exploded. For example, an Education Resource Information Center (ERIC) search two months ago found ten articles, and a search at the time of this writing found 635. However, only four of those articles addressed cheating, and those four do not collect data directly from

students. Other sources, such as the blog posts of the International Center for Academic Integrity, also raise concern about increases in academic misconduct related to the pandemic, based on the experiences of administrators working in Students Conduct offices, but do not offer empirical and generalizable evidence or evidence derived from students.

## PURPOSE

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The purpose of the study presented in this proposal is to investigate the beliefs and experiences of students

in higher education regarding academic misconduct before and after the beginning of the pandemic.

## METHODS

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Our participants were post-secondary students from five of the stronger universities in Romania ( $N = 480$ ) and 11 universities and colleges in the United States ( $N = 414$ ). The sample included 119 first year students, 213 second year students, 214 third year students, 120 fourth year students, and 121 graduate students. Participants reported their gender identities as 255 male, 627 female, and 28 other. Specialties/majors included Generic 6, Education 110, Arts/Humanities 73, Social Sciences 175, Business 188, Natural Sciences 75, Information Tech 22, Engineering 139, Agriculture 22, Health/welfare 84, and Services 8. Participants completed a single survey that required about 15 minutes of their time. We asked participants three questions about their beliefs and experiences regarding three different types of academic misconduct. The three different types of academic misconduct were cheating on examinations

in class, cheating on assignments outside of class, and plagiarism. The three questions about beliefs and experiences asked what percent of their peers they believed were engaging in each of three types of academic misconduct, how many times they had witnessed a peer engaging in each of three types of academic misconduct, and how many times they had engaged in each of three types of academic misconduct themselves. Using a retrospective pretest design, we asked each of these questions twice – once with respect to the year before the beginning of the COVID-19 pandemic, and once with respect to the year since the beginning of the COVID-19 pandemic. In other words, we asked a total of 18 questions about student beliefs and experiences: 3 types of misconduct X 3 beliefs or experiences X before and after beginning of the pandemic = 18 questions.

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## RESULTS

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Differences between mean scores across countries were analyzed using ANOVA. Before and after the beginning of the COVID-19 pandemic, mean responses from Romanian students were significantly higher than mean responses for US students across all three questions and all three types of academic misconduct, with a few exceptions. Comparisons between mean reported scores before and after the pandemic were analyzed using paired sample t-tests. Almost all of these means were greater during the

past year than they were during the year before the pandemic. More interestingly, Romanians reported a reduction in cheating on assignments since the start of the pandemic, while US students reported an increase in cheating on assignments. Students from both countries reported a decrease in plagiarism since the beginning of the pandemic, with a greater drop reported by the Romanian students. Results are discussed in terms of effect size measures.

# IT HAPPENS TO EVERYONE: WHY DO HIGH-PERFORMING STUDENTS ALSO PLAGIARIZE?

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As one of the major global challenges of contemporary higher education landscape, plagiarism has entered mainstream scholarly debates years ago. For the last several decades, scholars have been seeking to provide a comprehensive analysis of the main motivating factors which drive students to plagiarize. Amongst the most frequently quoted reasons, one may find the lack of understanding of what constitutes plagiarism (Belter and du Pré, 2009); students' laziness (Batane, 2010); lack of skills and time restrictions (Rets and Ilya, 2018); ease of copying using ICT (Sprajc et al., 2017); desire to get a good grade (Goh, 2015; Jones, 2011); different types of pressure and pride reasons (Jereb et al., 2018); convenience and academic ambition (McCabe, 2005); fear of failure (Goh, 2015; Underwood and Szabo, 2004); lack of deterrence (Davis and Ludvigson, 1995); efficiency gain (Park, 2003), etc. In addition, cognitive ability is also considered to be as an important factor that is associated to plagiarism (Honing and Bedi, 2012). However, previous literature exploring the relationship between students' cognitive ability in terms of grade point average (GPA) and their intention to plagiarize is rather scarce and provides the opposing findings. Noteworthy, in order to build our theoretical framework, we will not only review the analyses on plagiarism, but also on wider notion of cheating, which is a complementary form of academic misconduct. We assume that in our study of plagiarism similar challenges, conceptualizations and empirical results may arise as in the existing analyses of correlation between GPA and cheating.

One group of scholars confirm that students with lower grade point average (GPA) scores are more likely to engage in plagiarism than those with higher GPAs (e.g. McCabe and Treviño, 1997; Straw, 2002; Teixeira and Rocha, 2010; Elias, 2017; Ramberg and Modin, 2019) as they have less to lose

(Nowell and Laufer, 1997). For instance, Teixeira and Rocha (2010) empirically confirmed that the students' academic performance influences negatively the students' propensity of cheating. Similarly, Elias (2017) concluded that students with higher GPA were more likely to perceive cheating as more unethical. The same is obtained by Ramberg and Modin (2019) who suggest that students' tendency to cheat increases when their grades are low.

Contrary, Moeck (2002) suggests that high-performing students may feel pressure to maintain high GPA which can drive them to engage in unethical behavior. In the same vein, Strangfeld (2019) provides an example where student did not want to sacrifice his GPA due to the time constraint. Based on experimental data, Yaniv et al. (2017) conclude that high-performing students have stronger motivation to sustain their achievement which directly influences their probability of cheating if there is an opportunity to do so. Anderman and Midgley (1997) observed that a relatively higher performance-oriented classroom climate increases cheating behavior; while a higher mastery-oriented classroom climate decreases cheating behavior. In other words, the effort of achieving high GPA may explain high-performing students' attitude and behavior towards cheating (Geddes, 2011). Thus, plagiarism, as a type of academic misconduct, is in no way a behavior characteristic for low-performing students and there is no clear evidence that high-performing students plagiarize less than their peers with lower grades. Therefore, academic ambition, pressure to score high grades, high expectations of parents, peer influence, etc. may even be stronger incentives for high achievers compared to the lower-performing students.

Motivated by the fact that research related to academic dishonesty among low/high-performing

students provides contradicting findings, in this paper, we aim to address this particular phenomenon by analyzing perception and drivers of plagiarism amongst students with both high and low average grade. Using a sample of over 500 students of University of Montenegro, we analyze whether there is a significant difference in perception and frequency of plagiarism between high and low-performing students. Furthermore, we also interrogate if there is a difference in main motives for plagiarizing reported by the students with high and those with low

GPA. The analysis sheds light on this underexplored paradox and should enhance our understanding of the logic of plagiarism amongst excellent students and suggest the mechanisms for preventing this group of students from practicing dishonest behaviors. It may contribute to both the scholarly field of academic integrity and the policy-making by explaining whether different set of policies and preventive mechanisms should be used to address the issue of plagiarism amongst high-performing students.

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# DEVELOPING A CENTRALISED ONLINE CASE MANAGEMENT SYSTEM TO SUPPORT ACADEMIC INTEGRITY BREACHES AT AN AUSTRALIAN UNIVERSITY

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Academic integrity continues to be an important priority for higher education institutions. However, one perennial challenge for is the extent to which universities successfully implement rules, policies, and procedures that are adequately resourced to support it on an operational level. In mid-2019 Edith Cowan University (ECU), a mid-sized Australian university with approximately 30,000 enrolled students, implemented a revised set of policies closely aligned to requirements set out by the Australian Tertiary Education Quality and Standards Agency (TEQSA). These policies introduced the centralised management of academic integrity breaches to the Centre for Learning and Teaching. To support the day-to-day operational workflow, an online academic integrity management system was built in-house, using Microsoft 365® Apps. Designed around the documented steps of managing an academic integrity breach, the system was built to include embedded staff guidance at each step. The introduction of an additional online dashboard also provides additional operational support for the timely management of the breach caseload and ease of sourcing reportable data. In other words, it has served as a ‘a one-stop-shop’ for qualitative and quantitative data collection that meets ECU’s robust internal and external reporting requirements. This includes the tracking of the caseload by severity and outcomes applied. Overall, the aim of developing such a system was to ensure a consistent and transparent approach when enacting university policies and procedures.

In preparation for these policies and processes a scoping review of the literature (along with a benchmarking project) was conducted, which identified challenges in implementing processes that were adequately resourced to support day-to-day operations.

For example, a recent multi-institutional study into contract cheating concluded that in an Australian context, most staff view institutional factors as important for supporting academic integrity but that some processes were failing to engage and inform staff about the management and outcomes of academic integrity breaches (Harper et al., 2019). In addition, a study by Walker and White (2014) reported that the high probability of an outcome of an academic breach being overturned by appeal also undermined staff faith in academic integrity processes. This highlighted the need for a robust online system that captured all relevant case information and could produce appropriate reports at an individual as well as institutional level.

ECU’s online system has been operational for 18 months and continues to evolve to meet the ongoing operational needs of the University, such as an unexpectedly large increase in case submissions during 2020 (approximately 50%). At least in part, this is credited to an increase in staff engagement, as they have been provided with clarity in their roles within the process and see consistency in the outcomes applied. This is achieved by breaking the case management process into six distinct steps. Each step includes clear guidance on the action required. It also aims to ensure all recorded information is captured, and in so doing, improves the experience for users and reduces the likelihood of student appeals. In 2020, for instance, there was a noticeable increase in the number of academic integrity investigations; largely due to the impact of COVID-19 on students and respective teaching arrangements. Despite that increase, the number of variation of outcomes applied and total number of appeals significantly reduced. Consistency in the qualitative and quantitative data

collected within the system has resulted in an improvement in annual reporting, with an ability to integrate data with other university systems for trend analysis. In the future, this will provide opportunities to enhance teaching quality and drive improved academic integrity support for staff and students.

This presentation will explore the steps ECU took in 2019 when implementing its revised set of policies and procedures. It will also explore critical data insights, the features of ECU's online case management system, and how it supports academic integrity at the institution. Key discussion points will include how:

- Research findings and benchmarking process provided a starting point and the decision to centralise oversight of the rules, policy, and procedures;

- Staff at all entry and exit points of the academic misconduct process are supported and informed of case decisions and outcomes to be applied;
- Use of the dashboard has improved staff engagement and promoted the use regular ongoing reporting at all levels;
- A consistent and transparent approach has helped build student awareness of the importance of academic integrity.

Through showcasing how one Australian university integrated the findings of a scoping review of the literature and a benchmarking exercise to develop an online academic integrity management system, it is hoped that it will provide a blueprint for other institutions to adopt when enacting revised academic integrity policies or processes.

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# MANAGING ACADEMIC INTEGRITY IN PRIMARY SCHOOL ASSESSMENTS BY MANAGING PARENTAL INVOLVEMENT

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## KEY WORDS

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pre-service teacher, contract cheating, parental engagement, K-12, teacher training

K-12 teachers have been challenged beyond measure during the COVID19 pandemic, not only because they had to rise to the occasion and deliver lessons remotely with little to no prior training, but they have had to face and deal with parents who have also been “in their classrooms”, something that wasn’t necessarily addressed in their pre-service training.

We have observed within K-12 sector in a Middle Eastern country that primary teachers grapple with the involvement of parents whether in a traditional classroom setting or during virtual lessons when assessing student work. While parents are crucial to the success of a primary student’s learning journey (Cooper, 2001; Pattal et al, 2008; van Voorhis, 2011), they can go beyond the point of acceptable support where they do the homework, the project and effectively are being assessed, rather than their child’s ability (Pomerantz, Ang and Ng, 2005; Hill and Tyson, 2009). Wei et al (2019) posited that such parental involvement and engagement is more prevalent in primary/elementary schools. Moreover, studies have shown that this kind of support from parents can hamper student growth as independent learners and impact their understanding of acceptable support when completing assessments (Pattal et al, 2008; Hill and Tyson, 2009).

This is a complex issue. When parents do the assessment for the children and then encourage them to present the work as their own, they are effectively teaching the children to accept others’ work as their own, to submit that work and get graded for it. This may very well be the basis for behaviour that in later

academic life will be termed as ‘contract cheating’. Moreover, teachers are faced with the dilemma of how to address this issue with school management, how to fairly grade such assessments and how to manage such parents.

This study carried forward the pilot case study by Khan and Mulani (2020) that highlighted how assessments sent to be completed at home garnered more contributions from parents while those completed at school were better tools to assess students’ learning.

Through review of open access higher education programs offered on teacher training in the country, we identified seven accredited university-programs that included topics such as discussing assessment designs, curriculum design, methods of consistency of judgement, feedback, even classroom management, leadership etc.

However, when we looked at primary schools in a Middle Eastern country and acquired teacher feedback to understand the barriers and challenges faced by teachers, the issues revolved around setting up and grading assessments that can ‘authentically’ assess student learning. The problems recorded ranged in areas such as assessment design, grading rubric, parents challenging projects done by parents and graded low.

Studies have shed light on the importance of teacher education that encompasses instruction and classroom management, particularly teachers’ professional development (Berliner, 1994; Feiman-Nemser, 2001; Conway and Clark, 2003). However, we found that ‘classroom management’ does not necessarily



include managing parents, parents' expectations nor child's expectations with reference to parental involvement. The Singapore National Institute of Education's includes "service to the profession and community" as pillar of 21st century teacher attribute, however, does not include parents or parental involvement explicitly (UNESCO, 2021). Researchers have in fact posited the need for frameworks that extend beyond teachers to include stakeholders such as parents (Kirschner and Selinger, 2003).

Based on teacher feedback that help us understand the depth of the issues faced in the classroom, authors then propose a holistic framework as part of pre-service teacher training to help student teachers develop rubrics and clear instructions for 'authentic' assessment appropriate to student grade level in a manner that dissuades parental overt involvement, prepares pre-service teachers to manage student and parental expectations from assessments and most importantly to educate parents on the importance of independent learning of their children.

Through review of existing frameworks and informed by studies such as (1) Lim, Chai and Churchill

(2011) who propose a framework to pre-service teachers' competencies in using technologies, (2) National Board of Professional Teaching Standards (1999) that highlights importance of teachers to reflect about their practice and experience, (3) the study by Manasia, Ianos and Chicioteanu (2019) that provides a readiness model to prepare pre-service teachers for sustainable development and others, this study proposes a framework for pre-service teacher training based on strategic dimensions such as:

- Rethinking Assessment Instructions and Rubrics
- Recognising Parents as Integral Cogs of Student Development
- Managing Boundaries of Parental Involvement in Student Assessments
- Developing Communication and Partnership with Parents and Students
- Reflecting on Practice

The proposed framework aims to provide clear guidelines and examples from classroom scenarios to help pre-service teachers develop the required skills needed to establish and maintain integrity in primary classrooms in partnership with parents.

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# MAKING ACADEMIC INTEGRITY ACCESSIBLE THE OUTREACH WAY

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Academic integrity, as we all know, is the foundation upon which education stands. Whether in schools, colleges or universities, values of integrity are expected in teaching, learning and assessing practices. However, accessibility to understanding of values, support material, training and such can often hamper the inclusivity of all in being exposed to the right values, thus creating a barrier to what many may consider as quality education that can lead to repercussions for the society. Within this perspective, this session will mainly focus on providing answers to these two questions:

- As a community of academics, researchers and students passionate about academic integrity, how can we reach out to members of this community and provide necessary support?
- Who do we collaborate with to bring academic integrity to the conversation at every step when defining quality education?

Academic integrity can, and should, broaden its horizons in several directions: towards other fields within the academia such as academic writing skills development or higher education pedagogics, in regard to earlier stages of education such as secondary schools, or focusing on life beyond academia such as business ethics or ethics of the citizen science, to give just a few examples. And there are also different collaborative opportunities with other organizations that are working for ethics in higher education and in the society at large.

This workshop proposes to discuss specific examples of work initiated such as the work of the Council of Europe on the Recommendation relating to 'Education Fraud' and capacity building; the work of the QAA Academic Integrity Group - the Institutional Charter for AI and the worrying trend of cheating services moving into schools to groom pupils and normalise cheating behaviours; and other collaborative initiatives launched by the workshop facilitators.

The workshop proposes to involve the participants in discussions surrounding outreach and partnership initiatives and identify possible future avenues of work and collaborations, and their benefit to the whole community. The workshop will begin with an introductory presentation on the topic, followed by break out session discussions with participants on areas of outreach which will then be brought back for general discussion with the audience.

Workshop take-home message for participants:

- Understand impact of partnership in raising awareness and providing support of academic integrity.
- Discover how partnerships and collaborations can be forged beyond immediate ENAI membership.
- Develop community of practice (Wenger, 1988) in partnering and collaborating.
- Understand the importance of student education on different areas linking to academic integrity.

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# PERCEPTIONS AND ILLUSIONS OF STUDENTS REGARDING PRESUMABLY UNDETECTED CHEATING DURING THE COVID-19 PANDEMIC IN GREECE

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## KEY WORDS

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academic integrity, Covid-19, exam cheating, contract cheating

The COVID-19 pandemic forced a violent readjustment of educational practice, with higher education institutions globally adopting a hybrid mode of education. Our case study focuses on Greece, as in this country, only a single institution among all Greek universities had been offering e-learning education programs in place prior to the advent of the pandemic.

This lack in infrastructure and experience on how to plan and implement assessment of students who followed online or hybrid courses led to egregious instances of breaches of academic integrity (Abukari, 2016). During all exam periods in 2020 and 2021, systematic attempts of students to cheat have been identified ranging from inventive ways to gain access to course content to posts in social media ads asking for private tutors who would be willing to impersonate students in the exams and take them in their stead. An attempt has been made to examine the extent and impact of such actions as well as to document student perceptions on issues of academic integrity and scientific/research ethics.

Literature suggests that student perceptions on what constitutes breaches of academic integrity may differ according to their educational background and progress in their studies (Amigud et al, 2019). Violations of academic integrity – i.e. students cheating on exams in the context of a sudden transition from live to remote education – constitute a grave issue

and reveal a failure on behalf of faculty to impart scientific principles to students (Stella-Maris et al, 2017).

Recent publications suggest that breaches of academic integrity have seen an increase in universities of both developed and developing countries – certainly a salient finding, as it highlights the causes which recently led to an increase in attempted exam cheating or contract cheating in technologically advanced countries like Greece (Ellis et al, 2018).

Given that in order to address any issue, one needs to fully comprehend its nature, the present study focuses on how a sample of Greek students interprets academic integrity. There are significant differences not only across disciplines and institutions, but also in the ways individual students and members of faculty understand and employ basic terms as well as in the actions they take towards preventive or corrective measures, or the excessive quotation of source texts. To this end, we designed an original questionnaire, taking into consideration the most common instances of academic integrity violations. The survey revealed a marked discrepancy on the one hand between expectations set by universities and faculty, and on the other hand the manner in which students perceive what constitutes proper academic conduct of their studies. Students' perceptions as well as their illusions are highlighted and discussed.

The topic examined in this context, although it focuses on findings from data analysis from a specific area, is actually relevant to academic settings in many other countries (Khomami, 2017; Marsh, 2017). The research presented focuses on the analysis of breaches of academic integrity during exams from the perspective of students. The main research objectives are listed below:

1. Collect data relevant to breaches of academic integrity in higher education in Greece during the pandemic period.
2. Identify possible factors motivating students to breach academic integrity.

3. Compare findings in relation to other similar surveys.

Our methodological approach is based on qualitative research (qualitative and non-numerical data) as well as quantitative research (quantitative or numerical data). Therefore for this study, the methodology chosen is that of the mixed method – we designed a survey that would collect data for both quantitative and qualitative study. The survey was conducted based on a questionnaire to make a systematic investigation of the characteristics, opinions and the relationship between the variables of the questionnaire. The sampling method chosen is group sampling, with a minimum of 120 students.

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# ACADEMIC INTEGRITY IN THE AGE OF COVID-19: THE CASE OF THE TERTIARY EDUCATION SYSTEM IN GREECE

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## KEY WORDS

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academic integrity, tertiary education system, Covid-19, online education, contract cheating

The COVID-19 pandemic has forced a major readjustment on university educational practices through employment of online mode for the delivery of courses, assessment of students' assignments and supervision of final exams (Yorke et al, 2020). The case of Greece is of particular interest given that out of its 26 universities in total, only one provided online courses on a bachelor level prior to the pandemic.

Effectively, this resulted in an unprecedented situation when almost 20,000 faculty members together with a considerable number of adjunct faculty members were called upon to organize and hold online courses, assignments and exams on practically every single subject matter. As a result, many of the weaknesses of this forced transition from live to online education came to light. This paper focuses on the processes followed and the tools used for online exams. A number of incidents of deviant behavior, both attempted and successful, during the exams has been isolated.

During the winter semester exam period of 2020, faculty members in various Universities were already aware of this practice, announcing countermeasures and promising more complex exams in order to discourage cheating. At the institutional level, the Statistics Section of the Department of Mathematics at the University of Athens called for a postponement of the exams. In a similar vein, the School of Economics at the University of Athens decided to hold mathematics exams at the very end of the exam

period, while it is still undecided whether the exams will be held for all students or solely for those pending graduation (Harper et al, 2021). This is due to the fact that more than 1,200 students have applied for the exam; this number is unprecedentedly high, and faculty members are wary that students have devised new ways of cheating (Dawson et al, 2020).

The Greek government and the Ministry of Education have taken measures as well. In January 2021, a new disciplinary action law was submitted in a bill proposed by the Ministry of Education concerning changes in higher education. The bill contained provisions for disciplinary action in instances of cheating and damages to university property. Penalties range from exclusion from exams and suspension of student status to permanent expulsion and withdrawal of student status (Comas-Forgas et al, 2020).

This study will at first present findings from a survey conducted among faculty members of Greek universities to assess their views on the issue of cheating in exams, both prior to and in the wake of the COVID-19 pandemic. Secondly, it will present an analysis of structured interviews conducted with faculty members and administrators in academia, including program coordinators and Heads of Departments, thus covering a wide range of scholarly disciplines.

Interview findings are revealing, demonstrating the difficulties faced by faculty members regardless of subject. The interviews outline the means employed

by students who attempted to cheat in the exams. Furthermore, the interviews illustrate the various types of cheating in addition to the ways in which informal institutions (namely providers of private tutoring for students, known in Greek as “frontistiria”) provided contract cheating services to students – and how the academic community attempted to deal with this practice.

The topic examined in this context, despite focusing on findings from data analysis from a specific area, is actually relevant to academic settings in many other countries (Khomami, 2017; Marsh, 2017). The research presented focuses on the analysis of breaches of academic integrity during exams from the perspective of faculty. The main research objectives are listed below:

1. Collect data relevant to breaches of academic integrity in higher education in Greece during the pandemic period.

2. Identify possible factors motivating students to breach academic integrity.
3. Compare findings in relation to other similar surveys.
4. Assess teachers’ views on the issue of cheating in the context of e-learning modules.
5. Attempt to find out whether exam cheating saw an increase during the pandemic.

Our methodological approach is based on qualitative research (qualitative and non-numerical data) as well as quantitative research (quantitative or numerical data). Therefore for this study, the methodology chosen is that of the mixed method – we designed a survey that would collect data for both quantitative and qualitative study. The survey was conducted based on a questionnaire to make a systematic investigation of the characteristics, opinions and the relationship between the variables of the questionnaire. The sampling method chosen is group sampling, with a minimum of 76 teachers.

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# ACADEMIC GHOST WRITING AND CONTRACT CHEATING PROVISION OBSERVED ON A FREELANCING WEBSITE

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This paper and accompanying presentation will explore the use of Freelancer.com for academic writing provision. The focus is on an analysis of quantitative data collected from the site, focusing specifically on contract cheating related to writing tasks. The resulting presentation will consider both the projects being requested and the providers who are offering to complete work from the students.

The paper builds upon previous studies in the field. The earliest study about contract cheating examined the use of Rentacoder.com by students. Freelancer.com is the natural successor of Rentacoder, having come about through a series of re-brands and mergers. Unlike the first study, which found the majority of requests on Rentacoder were for computer programming assignments, this new study sees a substantial body of requests for writing services across a variety of disciplines. It does not consider contract cheating requests outside of the writing domain.

The paper considers Freelancer projects tagged with the terms “academic writing”, “essay writing” or both. These tags were introduced in the week starting 7 August 2017, removing the idea that Freelancer did not knowingly allow writing services for student work. A data set collected over the period 7 August 2017 to 9 September 2019 saw 4,353 projects posted on Freelancer.com that included one or both tags.

Notably, not all of these projects represented contract cheating, as some requesters seemed to have used multiple tags in an attempt to increase the visibility of their posts. A logistic regression machine learning model trained on 738 projects correctly classified 85.6

Some initial observations from the data set are of interest.

The top five countries from which contract cheating requests were made were: (1) India, (2) United States, (3) United Kingdom, (4) Australia, (5) Pakistan. These countries covered 54.77

For 1,231 requests, the country of the provider hired to complete the project was visible (in many cases customers choose to hide this information). The top five countries providing contract cheating services were: (1) Kenya, (2) Pakistan, (3) India, (4) United Kingdom, (5) United States. These countries covered 76.0% of all bid winning providers.

On average, each project received 27.61 bids from providers offering to complete the work.

The data set saw 696 projects which showed the final price paid using the USD currency. This average price point was \$71.53 USD per project. Assuming this is consistent across all 4,353 projects, this means that \$132,354 USD of contract cheating business goes through Freelancer.com each year for the stated categories alone. That number may well be an underestimate, since the amount paid also seems to differ by currency, with workers paid in Euros receiving a premium.

The presentation will provide more detail about the data set, the types of ghost writing contract cheating projects requested on Freelancer.com and the trends observed. But this is just one more site outside of essay mills which students can use to get their done for them and which instructors should be aware of.



# CONTRACT CHEATING AND UNAUTHORISED HOMEWORK ASSISTANCE THROUGH REDDIT COMMUNITIES

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The use of the Reddit collection of online communities provide opportunities for people to enter into discussions and come to financial agreements, often with a degree of anonymity. Some of those discussions relate to contract cheating, where customers ask to have work completed for them or providers offer to complete work for customers (Clarke and Lancaster, 2006). Although Reddit is known to be a rule breaking community (Thompson, 2014) the use of Reddit for contract cheating has not been widely explored in the academic integrity literature.

Previous papers have reviewed how students are using file sharing sites such as Chegg for homework help (Rogerson and Basanta 2016, Lancaster and Cotarlan 2021). This involves the payment of a subscription fee. The Reddit approach to homework help differs as there is no charge made for support through several of the subreddit communities, although that is dependent on the goodwill and support of other members of that community.

This presentation and accompanying paper will review the operation of Reddit from both the perspectives of homework help provision and contract cheating solicitation.

Reddit provides an Application Programming Interface (API) to allow access to information about posts on the site. Quantitative data was collected programmatically from Reddit in September 2020 using the API. As Reddit users have pseudonyms, information identifying individuals is not usually available. The quantitative data will be explored in the presentation, along with examples of how Reddit appears to be being misused by students.

The homework help section of the presentation will focus on the r/HomeworkHelp subreddit, which has over 130,000 subscribers.

A data set of 141,136 Reddit posts was collected from r/HomeworkHelp and analysed. These posts

covered the period 1 January 2016 to 13 August 2020. The classification of request types provided by posters was examined. 28% (39,619 out of 141,136 posts) were created by high school students, the rest by college students. Requests for Maths support formed about 60% of the data set.

Figure 1 illustrates the distribution of posts over the period examined. This shows spikes in requests corresponding to typical examination periods in Western countries and a reduction in requests during vacation periods. There were no substantial differences seen between weekdays and weekends over the period.

r/HomeworkHelp is not the only subreddit allowing students to seek unauthorised answers. Another example is the r/CheatAtMathHomework, with around 53,000 subscribers. The use of the word “cheat” in the subreddit name suggests that students make little attempt to hide why they are accessing these communities.

The r/HomeworkHelp and r/CheatAtMathHomework subreddits are not strictly providing contract cheating services. Indeed r/HomeworkHelp has a policy against contract cheating. But students are still receiving private offers for contract cheating once they access those subreddits.

A smaller group of Reddit communities are of greater concern, as these exist solely for contract cheating purposes. Examples include r/domyhomework, with 5,527 subscribers, r/domyhomeworkforme with 8,173 subscribers and r/writemyessay, with 1,565 subscribers (all numbers correct as of 7 September 2020). These are emerging options that students can use for contract cheating which instructors need to be aware of.

The presentation will also consider the subreddits used for contract cheating, where discussions are often taken to Discord to allude tracing. The use

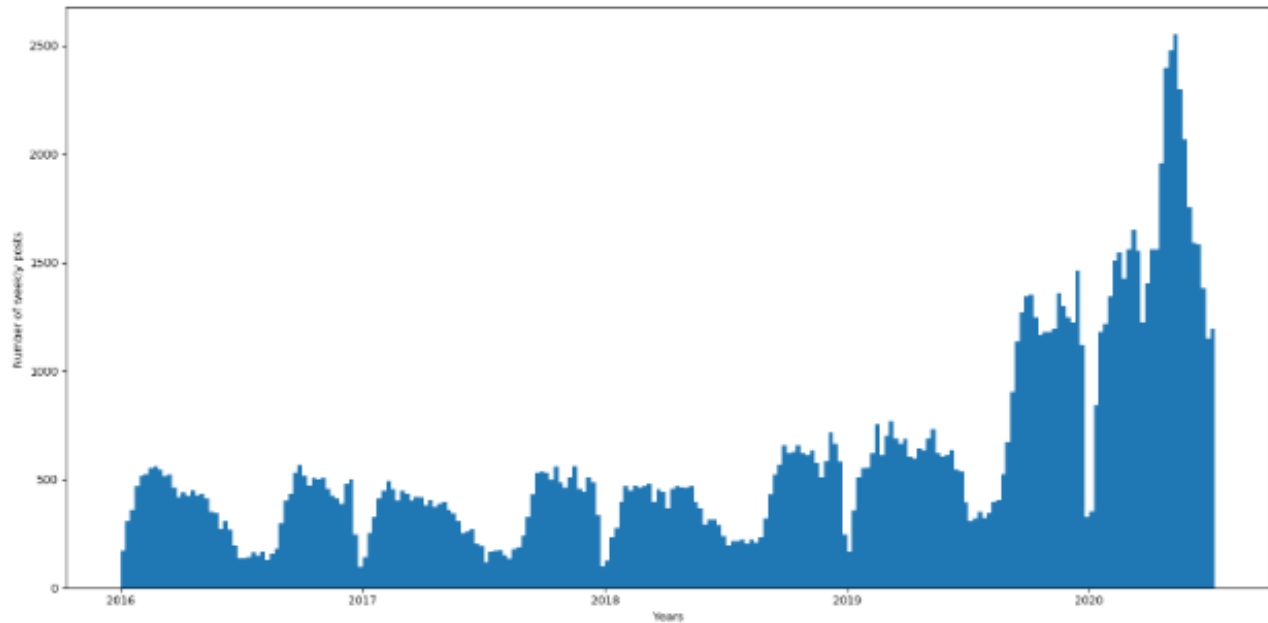


Fig. 1: Posts on r/homeworkhelp

of Reddit for contract cheating is not without its risks to both students and providers. The issue of Reddit contract cheating scams will also be explored

and is something that can be used to pose a warning to students about the dangers of outsourcing their assessments.

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# EXPLORING MODELS OF ONLINE LEARNING COMMUNITIES TO EXPAND ACADEMIC INTEGRITY UNDERSTANDINGS IN CHILEAN HIGHER EDUCATION

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## INTRODUCTION

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Covid-19 became the most significant health crisis of the last century and quickly transformed society, including teaching and learning processes in higher education institutions (Mishra et al., 2020). As face-to-face interactions were restricted to protect citizens' health, universities led a swift transition to emergency remote teaching, facing unprecedented challenges (Hodges et al., 2020), which deepened

higher education systems' vulnerabilities (Brown and Salmi, 2020). One example was the safekeeping of academic integrity (Lancaster and Cotarlan, 2021). Hence, in this paper, we approach Online Learning Communities as a potential strategy to promote academic integrity understandings. We develop a conceptual exploratory inquiry by analyzing two Online Learning Community (OLC) models.

## PROBLEM STATEMENT

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Faculty assessment practices worldwide remained mostly unaltered during emergency remote teaching. Therefore, the implementation of traditional remote assessments and the increases in university students' stress levels complicated the teaching and learning processes (Eaton, 2020a). Slade (2020) suggested that the pandemic posed a stern test to curriculum development and online assessment design.

These problems were also present in Chilean Higher Education. Moreover, university authorities and Faculty perceived that academic misconduct cases rose at an alarming and unprecedented level (Díaz, 2020; Sánchez, 2020). These leaders also made strong calls for action to raise awareness of emergency remote teaching challenges concerning AI.

Many Chilean institutions offered AI educational development. Most of these activities aimed to help Faculty understand the AI tenets, promote good practices in assessment design, and enhance capacities to use IT resources to support integrity (Pontificia Universidad Católica de Chile, 2020; Pontificia Universidad Católica de Valparaíso, 2020; Universidad de Chile, 2020).

Keeping in mind Chilean higher education response and the stakeholders' interest in building academic integrity cultures, we identify a need to weave initiatives where Chilean universities' stakeholders can interact with AI to sustain organizational change.

## BACKGROUND AND LITERATURE REVIEW

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In Chile, some contextual factors were most salient, such as emergent academic integrity policy and the characteristics of current educational development for Faculty.

Regarding policy, among the forty-six accredited universities in Chile (MINEDUC, 2020), only six of them had Academic Integrity policy disseminated online before the pandemic began. These universities were Pontificia Universidad Católica de Chile, Universidad Andrés Bello, Universidad de Chile, Universidad de las Américas, Universidad de Viña del Mar, and Universidad Finis Terrae.

In other universities, specific academic misconduct situations are placed under specific universities' regulations. From a general perspective, under these regulations, the Faculty is generally responsible for detection and sanction, with higher authorities' participation for severe cases.

With CoVID-19, Chilean universities readily offered AI educational development for their Faculty; these instances aimed to explain the tenets of AI, promoted good practices in assessment design, and used IT resources to support integrity (Pontificia Universidad Católica de Chile, 2020; Pontificia Universidad Católica de Valparaíso, 2020; Universidad de Chile, 2020).

There is currently an active online community called "Integrity Hour" in Canada. When the pan-

demically started, Canadian scholars, educators, higher education professionals, and administrators from different Canadian provinces and institutions started participating in this informal, participant-driven online community (Eaton, 2020b).

The Integrity Hour experience becomes significant in the Chilean context because universities are currently undergoing an adaptation process, pushing the advancement of technology (Contreras, 2020; Sepúlveda, 2020). Moreover, Chilean universities' Presidents foresee that the current circumstances might act as a springboard for more active use of blended teaching and learning (Contreras, 2020).

Inspired by the Chilean academic integrity issues, the challenges set by Covid-19, the "Integrity Hour" experience, and the current trends in Chilean universities, we identify that Online Learning Communities (OLC) are an alternative to develop AI understanding.

OLCs are virtual knowledge-sharing spaces that facilitate peer-to-peer learning (Cegarra-Sánchez et al., 2018) organized by shared purposes (Lau, 2020). OLCs facilitate members' connection with relevant stakeholders unavailable in offline and local environments (Lau, 2020). Moreover, OLCs provide flexibility regarding personal and work commitments (Cegarra-Sánchez et al., 2018).

## CONCEPTUAL FRAMEWORK

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This paper uses a conceptual exploratory inquiry to analyze two Online Learning Community (OLCs) Models: the Community of Inquiry Framework and the Fully Online Learning Communities. To carry out this conceptual exploratory inquiry, we draw from Kenny et al.'s (2016) framework for supporting the Scholarship of Teaching and Learning (SoTL). This framework addresses shifts in organizational culture in the context of higher education (Kenny et al., 2016). Specifically, we focus on the guidelines

for integrated networks for sustained development, which is recognized as one of the catalysts of this framework. Following Kenny et al. (2016), one of the most challenging aspects is to sustain social networks. The authors pose that these networks become involved in meaning-making, decision-making, and action, and change. Using Kenny et al.'s (2016) perspective, we explore how these models could contribute to these processes in the Chilean Higher Education context.

## IMPLICATIONS AND CONCLUSIONS

The implications of this conceptual exploratory inquiry are twofold. First, we aim to explore OLC models, based on the literature and their connections to the Chilean higher education context, to share insights for future Chilean educational development programs designed and implemented to promote academic integrity understandings. Second, we seek to bridge opportunities for AI OLCs in the Chilean context.

Regarding the conclusions, the exploration of the Community of Inquiry (CoI) and the Fully Online Learning (FOLC) models show that they could contribute to meaning-making and decision-making processes as they build from the notions of cognitive and social presence. The differences lie

in implementing these processes; as FOLC literature suggests, learners become more empowered. In FOLC, students could be co-creators and designers of the learning process, whereas, in COI, the facilitator oversees design. Moreover, both offer opportunities for action and change; however, FOLC literature seems to have a more in-depth development of the notion of digital space. Therefore, the actions of the group members can potentially transcend the social and cognitive presence outside the boundaries of the community. The Chilean higher education could benefit from both models; however, we see opportunities in FOLC for a more democratized learning process.

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# PROMOTING ACADEMIC INTEGRITY AMONG STUDENTS AND STAFF: THE EXPERIENCE OF AN IRISH UNIVERSITY IN RUNNING “PROMOTING ACADEMIC INTEGRITY WEEK 2020”

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This contribution will share the experiences of Dublin City University (DCU) in running “Promoting Academic Integrity Week 2020”. The week-long campaign sought to raise awareness of academic integrity among students and staff. The contribution will share the rationale for the campaign, how it was planned and implemented, the findings from its evaluation and plans for the future. Feedback from conference attendees will be sought as to how to enhance this initiative and opportunities for collaboration with other institutions are also sought.

Academic Integrity has been defined by the International Center for Academic Integrity (ICAI) as a commitment ‘to six fundamental values; honesty, trust, fairness, respect, responsibility and courage’ (Fishman, 2014). Poor academic integrity ‘...ultimately affects not only the students and academic staff but also the reputation of the institution itself and the integrity of its awards’ (De Maoi, 2019, p.1131). Egan (2017), draws on the work of Dick et al (2002, p.172-173) who highlight the risk of ‘graduating incompetent professionals...[as they] may produce work that fails or is even dangerous to human life’. Jones (2011, p.142) supports this proposition and points to a correlation between ‘academic honesty and workplace ethics’.

The Teaching Enhancement Unit (TEU) in DCU has focused on academic integrity as an area of work for some time now, commissioning a literature review into the area (Egan, 2018), designing a suite of principles for embedding academic integrity in assessment design, developing and launching an Academic Integrity Hub for DCU staff to learn more about the issue, and running various pro-

fessional development events internally and externally to DCU. The resources were developed primarily as part of an Erasmus+ project and are all available under creative commons license at <https://teuintegrityproject.wordpress.com/>.

As part of DCU’s commitment to promoting academic integrity, they were one of the first Irish universities to become a member of the International Center for Academic Integrity (ICAI) in October 2019. Taking influence from the ICAI Integrity Day of Action, the TEU ran an academic integrity awareness campaign over the course of a week. This was repeated in 2020, and with the support of DCU Library, Students Union, and academic staff, TEU ran an enhanced campaign during 19 - 23 October 2020. This week-long initiative comprised a number of synchronous and asynchronous online events for students and staff to prompt them to think about academic integrity, understand its importance, and learn about how they can uphold it (full programme on TEU website linked here). Some of the highlights of the week include over 1,500 students engaged in both academic integrity and library challenges. Almost 350 students pledged their commitment to academic integrity in the collaborative declaration bank (some examples of student declarations can be found on the TEU website linked here). Almost 100 staff and students took part in the spotlight panel webinar to discuss the ethics of academic integrity.

In an effort to ascertain the impact of this awareness campaign the TEU is conducting research with those who participated in the awareness campaign’s events in 2020. The story of “Promoting Academic Integrity Week” will be shared with the



European academic integrity community during this

contribution, including preliminary findings from the research.

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# FROM ACADEMIC AND RESEARCH INTEGRITY TOWARDS INTEGRITY IN BUSINESS AND SOCIETY

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This presentation aims to explore two sub outputs of the first intellectual output of the project Bridging Integrity in Higher Education, Business and Society (BRIDGE). Erasmus+ Strategic Partnership project (2020-1-SE01-KA203-077973) involves six partners from five countries and seeks to reveal the connections (“Bridges”) between academic integrity, research integrity, integrity in business and integrity in citizen science in order to make the transition between these fields easier for master and doctoral students as well as for their supervisors.

While academic integrity targets teaching staff and students at all levels of education, research integrity aims at doctoral and postdoctoral researchers, scientific staff and technical staff involved in research. By focusing on the master and PhD level, the bridge between academic and research integrity will therefore create a smooth transition between those two fields within academia. The bridge between academic integrity, research integrity, and integrity in business will facilitate transition from the academic enterprise to the business enterprise by highlighting common ground for integrity in both fields. The bridge between academic integrity, research integrity, and society will prepare master and doctoral students to participate and lead citizen science (CS) projects in which scientist-supervised citizens participate in research and develop opportunities for social and civic engagement through formal or non-formal learning activities.

First part of the presentation conveys the findings of the desk research conducted in partner countries about background information on the national aspects of business ethics and citizen science: definitions in national documents (or discourses) and evidences such as initiatives, research projects,

sources that are found in countries regarding academic integrity, research integrity, and integrity in business and/or citizen science.

Second part of the presentation reflects on whether and to what extent academic and research integrity is taught in business and citizen science related courses in higher education institutions. Therefore, the desk research of the descriptions of the courses related to business ethics and citizen science of higher education institutions was conducted.

Third part of the presentation reveals how values of academic integrity and research integrity are reflected in research papers related to business ethics and citizen science. The research aimed to find in scientific literature definitions of the concepts of business ethics and citizen science, as well as if/ to what extent main academic integrity values are included into academic literature related to business ethics and citizen science.

The result of the desk research has indicated the areas of possible improvement of the connection between academic integrity in business and citizen science in order to interconnect the ethical aspects of these fields and provide a smoother transition for students and early career researchers between them. However, we have also found areas where interconnectedness exists although not always highlighted. The findings provided insights that will be used to create recommendations for early career researchers (master and doctoral students) and their supervisors, and raise awareness about the ways integrity (both academic and research) practices lead to the development of the transferable ethical skills in the field of citizen ethics, business ethics, as well as to a more sustainable society.

# TEACHING THE TEACHERS: DO PRESERVICE TEACHERS CHEAT AND PLAGIARIZE?

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*This abstract is taken and adapted from a chapter submitted in 2021 by the three authors for the book *Academic Integrity in Canada*, directed by Sarah Eaton and Julia Christensen Hughes.*

According to many researchers, cheating and plagiarism is rampant in universities all over the world. However, there is little known about these phenomena when it comes to preservice teachers. This study focused more specifically on examining academic misconduct in preservice teachers, a topic that has not been explored very much in the province of Quebec, nor in Canada. The goal of this research

with this specific group of university students was to obtain an overall picture of the amount of reported propensity for plagiarism in written assignments and cheating on exams and the reasons behind it.

It is particularly important to study preservice teachers during their university training because they are going to be the model for future generations, influencing the primary and high school experiences, and what students come to consider as acceptable. Preservice teachers' values and habits when assessing assignments and proctoring exams will be passed down to their own students.

## METHOD

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We used a questionnaire developed to explore the propensity to cheat among preservice teachers in five universities in the province of Quebec, Canada. Students were asked what they perceived to be the best ways to cheat or plagiarize which can indicate

how they might do it or how they think others might cheat or plagiarize. A total of 573 students (486 females; 86 males; 1 other) completed the questionnaire.

## RESULTS AND DISCUSSION

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A general profile of preservice teachers' declared preferred methods of cheating was established from the frequency of responses selected by all participants. Respondents indicated that they perceived cheaters as someone that spend little time studying (49.2%). They also believe that cheaters of today were cheaters in the past (46.9%).

When asked about the best ways to cheat on an exam, the preferred methods by preservice teachers are hiding notes. Frequent cheaters in high school hid their notes in the material but once at university, chose to hide their notes outside the classroom. There is also an element of preparedness to consider. This

brings up the question of intent to cheat which can be linked according to De Bruin and Rudnick (2007, p. 153) to "a lack of effort and a need for high excitement seeking".

Our results indicate that the three preferred methods of plagiarizing are to buy an assignment, to reuse one of their own assignments or to copy and paste from the Internet. This can be linked very clearly to the amount of effort, and time put into an assignment by the students. Buying a paper and reusing one do not necessitate much effort, or as Amigud and Lancaster (2019, p. 106) explain, the students feel that the assignment is not "worthy of

their efforts". On the other hand, copying and pasting from the Internet demands a web search and then some reformulating on the part of the student (Peters and Gervais, 2016) . Many researchers (Bretag et al., 2019; Lancaster, 2020; Medway et al., 2018) have shown in last few years the rise of essay mills and it seems that preservice teachers are not an exception though they seem to contract cheat less than other students (Lancaster, 2020).

Preservice teachers' characteristics explain some of the reasons why our participants mentioned they would cheat. One reason is linked to their need to succeed. Preservice teachers will cheat when they do not think they will pass the exam. In that situation, their sense of self-confidence might be low when they are used to excelling in school and they wish to continue to have good grades. Decker and Rimm-Kaufman (2008, p. 58) explain it very well in their study on preservice teachers' characteristics: "Pre-service teachers educating themselves in such competitive settings may be more likely to experience feelings of stress and inferiority while competing with so many other high performing individuals".

A contextual factor, working and studying at the same time might also explain why some preservice teachers make bad choices. Students who reported working more than 15 hours a week while studying were in fact more likely to cheat because they reported running out of time. Trying to hold down a job and study at the same time can cause fatigue, stress, lack of preparedness for classes, all factors that can lead to poor decisions and academic

dishonesty. Lack of time management skills was also a factor blamed for plagiarizing in Heckler and Forde's research (2015). The students in their study acknowledged that their own failings brought them to plagiarize.

Preservice teachers will cheat when they know the chances of getting caught are low. This is consistent with Christensen Hughes and McCabe's survey (2006, p. 16) who found that "the perceived low risk of being caught or penalized may lead students to conclude that a positive cost-benefit exists". It is possible that the preservice teachers in this study are aware of the low chances of getting caught and the relatively benign consequences, and this is why they are willing to take a risk. Our results also show that the cheating culture in universities has consequences for occasional cheaters who said that they were more likely to cheat if their peers were doing it.

One last reason why preservice teacher will cheat is perturbing. Our participants suggested that they would cheat because they have cheated in the past. This is perturbing because it indicates a pattern of bad behaviour in the preservice teachers. Has cheating become a habit for these students and will it continue to be a habit all through the program and into their professional life? Akbaşı et al. (2019) in their study also found that preservice teachers who had a higher academic dishonesty tendency score would more often cheat on exams or plagiarize on assignments.

## CONCLUSION

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It is imperative for our preservice teachers to follow their program of studies with integrity in order to show a high standard of integrity to their future students. Their role as future educators who will influence and model for the next generations has to be emphasized during their teacher education

program. The responsibilities and the ethic code of a teacher must be presented to the preservice teachers. They need to understand how studying with integrity is a habit to cultivate in themselves and their own students. Only then will we be able to establish an integrity culture in schools and higher education.

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# MARKER DETECTION OF CONTRACT CHEATING: AN INVESTIGATIVE CORPUS LINGUISTIC APPROACH

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## INTRODUCTION

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An increased focus on detection rather than prevention of contract cheating [1] has placed assessment markers in the frontline to preserve academic integrity. Consequently, tools are needed that can increase detection during the marking process. Text-based approaches have shown potential. [2] demonstrated that marker detection efforts can be improved through exposure to linguistic reports generated by Turnitin's Authorship Investigate software; [3] demonstrates that stylometric analysis can be used to verify authorship. Whilst both tools can provide further evidence after suspicions have already been raised by an individual student submission, such tools are not designed for use during routine marking.

What if commercial essay writing has distinctive linguistic features? Markers could look for signs of commercial essay writing while marking; assessments

could potentially be designed to hinder commercial essay writers. In this paper, a multi-discipline analysis of student and commercial essays, using the most comprehensive set of linguistic features deployed in academic integrity research to date, provides proof-of-concept for linguistics-based detection of outsourced writing

Linguistics-based approaches have been used to detect deception and disinformation in online news, consumer reviews and social media. Commercial essay writing is a form of deception comparable to fake review writing; both use 'gig economy' professional writers recruited through third-party websites. This research deploys investigative corpus linguistic techniques used in the detection of fake news and fake online reviews.

## RESEARCH QUESTION AND HYPOTHESIS

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Specifically this paper presentation tests the following hypotheses:

- that commercial and student essays will differ systematically on a range of linguistic features.

- that a predictive model can be built to classify student and commercial texts at a rate significantly above chance.

## DATA

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Linguistic deception detection uses text classification to build predictive statistical models trained on text data labelled for veracity. Clever data collection is key to the investigative corpus linguistic approach. Purchasing sufficient essays to build a text classi-

fication model, whilst replicating the way students engage with these third-party websites, would be limited by financial and ethical issues. Instead, this research uses investigative corpus linguistic

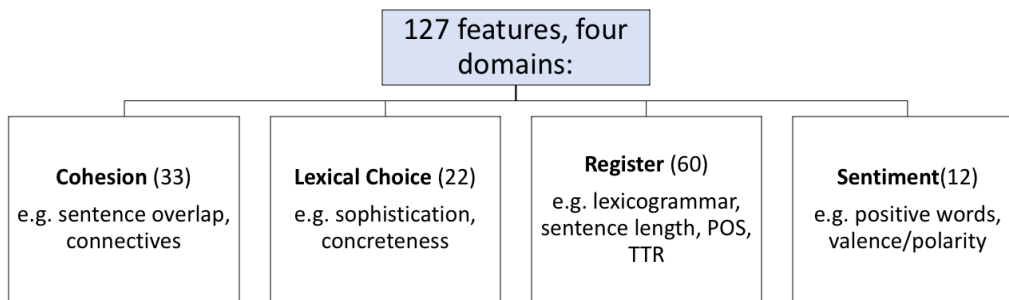


Fig. 1: Linguistic categories and example features

techniques to compile the ‘Cheat-AI’ corpus of commercial and student essays.

investigative techniques are characterised by their use of real-world data. The essays in this research were harvested from the internet using the Bootstrapping Corpora and Terms technique [4]. This process involves iteratively querying search engines with seed terms designed to find the required data. Investigative research identified phrases such as “expert writer” “sample essay” “plagiarism free essay” “student essay” as well as names of popular third- party websites as productive terms for finding student and commercial essays. Although commercial essays were far harder to find, a sufficient number were retrieved for discipline-level analysis. In total, 12347 student essays and 508 commercial essays were harvested in 30 subjects (Table 1).

## LINGUISTIC FEATURES

Significantly expanding the stylometric approach used for authorship analysis in [3]. 127 linguistic features were extracted in four domains to provide a comprehensive and holistic representation of the cognitive, functional and emotional aspects of the writing process (see Figure 1). The Suite of Automatic Linguistic Analysis Tools [5] was used to extract 67 features related to cohesion, lexical choice and sentiment; 60 features related to linguistic register and style were extracted using MAT Tagger [6].

These 127 features were then fed into a binary logistic regression with essay veracity as the dependent variable (Commercial = 1; Student = 0) in order to

Tab. 1: Cheat-AI corpus: 508 commercial essays

Subject	Number of essays
Business	79
Law	50
Nursing	45
Health	30
Education	25
Other Business Cognate disciplines	98
Other Humanities and Social Sciences	128
STEMM	54

This paper reports on the results of the application of this approach to the three most common commercial essay subjects: Business, Law and Nursing essays.

produce a predictive model. The model achieved 82% overall accuracy with a binary logistic regression text classification (Table 2).

To aid interpretation and facilitate assessment of the relative contribution of each domain to the model, Principal Components Analysis was conducted reduce the to identify components in the four domains separately. 30 components were detected across the four domains (Table 3). These components were also fed into a binary logistic regression; a loss of accuracy of less than 5% indicates that this set of components is a reliable representation of the linguistic data.



Tab. 2: Logistic Regression Classification Model (127 features)

	Predicted STUDENT	Predicted COMMERCIAL	%Correct	
Actual STUDENT (1643)	1412	231	85.9%	
Actual COMMERCIAL (698)	192	506	72.5%	
Nagelke R <sup>2</sup> =.513; Hosmer Lemshow = .362			<b>Overall percentage</b>	<b>81.9%</b>
			<b>Majority class baseline</b>	<b>70.0%</b>

Tab. 3: 30 linguistic factors in 4 categories identified by Principal Component Analysis

Component Categories	<i>Cohesion (Coh)</i> (71.1% variance; KMO 0.68)	<i>Lexical Choice (LexC)</i> (79.2% variance; KMO= .60)	<i>Sentiment (Sent)</i> (82.5%; KMO=.51)	<i>Register (Reg)</i> (32.5% variance; KMO=.48)
Component number				
1	Lexicosemantic overlap (16.7%,)	Lexical Sophistication (26.7%)	Positive Emotion (45.6%)	Citation (6.6%)
2	Additive connectives (13.2%,	Lexical Diversity (14.3%)	Confident (16.1%)	Negative statements
3	Unspecified reference (12.6%,	Lexical Sparsity (11.8%)	Positive evaluation (8.6%)	Speculation 3.8%)
4	Reason/Logical Connectives (7.1%,	Lexical concreteness (9.9%)	Agitated (6.6%)	Description (predicative adjectives)(
5	Contradiction/Contrast (5.5%,	Semantic similarity (7.0%)	Positive events (5.8%)	Present tense (3.2%)
6	Disjunction/Negation (4.8%,	(4.9%) Sentence length		Informality
7	Causation (4.2%,	Lexical stance (4.6%)		(2.6%) Transitions
8	Temporal (3.6%,			(2.5%) Perfect aspect
9	Shell nouns 3.5%,			Subordination (2.4%)

Tab. 4: Linguistic features of commercial vs. student essay writing

Component description	Sig	Exp(B)	Component No.	
Lexical Sophistication	.02	2.217	Lex1	Commercial essay features
Ambiguous reference	.03	1.695	Coh3	
Transition	.03	1.605	Reg7	
Shell nouns	.04	1.353	Coh9	
Sparsity	.04	1.243	Lex3	
Lexicosemantic overlap	.05	1.199	Coh1	
Informality	.02	.489	Reg6	Student essay features
Negative statements	.03	.639	Coh4	
Additive Connectives	.04	.753	Coh2	
Positive evaluation	.04	.759	Sent3	
Lexical Concreteness	.04	.764	Lex4	

## DISCUSSION

Commercial writing has a superficial quality – a conventional academic writing style and sophisticated vocabulary. It is also defective, due to its repetitiveness, high levels of redundancy and verbosity – all signs of a general padding strategy likely in response to the parameters of commercial writing such as word count and time constraints.

Specifically, the commercial writing features that generalised across Business, Law and Nursing essays were:

- Formal academic writing style (e.g. use of transitions, shell nouns).
- Combination of lexical sophistication and sparsity, indicating sesquipedalian prose style where

writers sprinkle big words amongst circuitous language.

- Ambiguity due to unspecified reference words ('this', 'it')
- Repetition of content words and use of synonyms across adjacent sentences indicating sentence similarity and thesaurus use.

Markers could use the significant components as a checklist (Table 4) to flag suspicious submissions. The linguistic regression model could also be used in assessment security measures as an alternative to random sampling of cohort submissions.

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# PATTERNS OF DEFINING ACADEMIC INTEGRITY AMONG BA STUDENTS AND THE RELATION WITH DYNAMICS OF THE FACULTY, UNIVERSITY, AND FIELD OF STUDY

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In recent decades, academic integrity has risen to the top of the agenda throughout higher education in most countries in Europe. The unprecedented expansion of university education (Lucas, 2001; Voicu et al, 2010) comes with a vivid debate surrounding tendencies to cheat (Jones, 2011; McCabe et al., 2001; Simkin and McLeod, 2010;), plagiarize (Park, 2003; Glazer, 2013; Weber-Wulff, 2014), fraudulent scientific results (Goodstein, 1991; Eisner, 2018), and influence peddling within universities (McCabe and Pavela, 1997), etc.

It becomes a matter of interest to understand how understanding upon academic integrity is perceived at the level of university students. This paper investigates the way in which students conceive academic integrity. The objective is to understand to which extent such definitions depend on the recent expansion of the department, discipline, and university, seen as potential drivers for a culture of academic integrity, that can experience dissolution under the fast increase of the number of students.

Previous studies were mainly conducted in societies less permissive to academic fraud and were mainly focused on the practices of the faculty, not students. We exploit the need to comprehend how such understanding are consistent with the current definitions of integrity, how they differ across fields of study, and how they depend on the expansion of higher education, understood as relatively fast increases in numbers of students and access to university studies. Expansion refers to the universities and individual department's discipline level, and we argue that a quick expansion creates more space for misunderstandings with respect to integrity.

To answer our research questions, we employ an original sample of Romanian BA students in three Romanian universities, covering nine academic disciplines. We inspect their representations and predict them in logical cross-classified, multi-level models. The findings reveal that expansion seems harmful only when it comes to the university, but a larger department means more precise knowledge on integrity. The resulting interplay can be fruitfully explored by policy makers to point out success stories that can be replicated in other departments/universities.

The novelty of our approach is given by the inspection of what academic integrity means for students, an issue that was to our best knowledge never investigated in a societal context of widespread corruption, such as Romania. Corruption Perception Index for 2018 (Transparency International) indicated a value for 44 out of 100 in case of Romania, 100 meaning no corruption at all, and 0 standing for extremely corrupt; within the European Union, only Bulgaria – 43, and Hungary – 44, scored as low. Second, the embeddedness of representations on integrity into the context of university expansion provide guidelines to academic leaders and policy makers to act in such instances, as explained in the conclusion of the paper.

Students from three major Romanian universities, divided into nine departments for each university were asked to define academic integrity. We explain variation in the definitions by the size of the department and the recent history of the department and of the university. We find a lot of confusion in the definitions related to academic integrity, with some responses completely unable to define the

concept. There is no difference across fields of study; however, the data suggests universities that experienced recent growth are less likely to pay attention to academic integrity. Size of department plays a buffering role, through the inertia of organizational culture. Increases in the size of department regarding knowledge of academic integrity. Implications for policy and potential for generalization of findings to other universities and societies are discussed in the conclusive section.

Bouville (2008) discusses the negative consequences of plagiarism, the most important being

related with the readers: they will not be able to differentiate between the original and copied work and their trust may be jeopardized. Through extension, a similar impact may raise from inability to reinforce academic integrity. With vague definitions among students, this becomes a problem for the entire university system. According to our findings, regulators and academic management may be interested in focusing their efforts to promote integrity in those universities that experienced a rapid growth.

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# CONTRACT CHEATING INCIDENTS IN SCHOOLS AND TERTIARY LEARNING INSTITUTIONS IN THE UAE FROM A SOCIAL LENS

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## KEY WORDS

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contract cheating, essay mills, social license to operate, social marketing, unwholesome demand and transformatory Consumer Research (TCR)

Contract cheating has been on the rise globally among college and university students and dismally also among research scholars (contract cheating benefactors-CCBs) due to various factors such as the proliferation of websites and social media usage (Ortiz-Ospina, 2019), ease of conducting commerce online (Vasic, Kilibarda and Kaurin, 2019), globalization of education sector (Gupta, 2017) and other unexplored reasons. Given the onset of COVID19 pandemic, recent publications have also pointed to the drastic jump in the use of such services by CCBs (Mckie, 2020; Lancaster and Cotarlan, 2021), the aggressive marketing by the essay mills (contract cheating service providers-CCSP) and the resulting growth of contract cheating (Beecham, 2018).

The challenge of understanding why the CCBs use CCSPs is perhaps rooted in the concept of Social License to Operate (SLO), defined as “the perceptions of local stakeholders that a project, a company, or an industry that operates in a given area or region is socially acceptable or legitimate” (Raufflet et al., 2013, p.1). Strong pressure from education industry on governments in certain countries to ban essay mills (McKie, 2018) suggest the removal of SLO for contract cheating.

The challenge then becomes understanding why students and researchers (CCBs) continue to use CCSPs when it might seem obviously wrong and detested. At the same time, it is also crucial to understand the reasons behind why some of the students and researchers are not resorting to contract cheating (contract cheating avoiders – CCAs).

Studies have shown that there could be some latent drivers behind contract cheating behaviour such as time-management issues, fear of poor performance, lack of prior knowledge and others (Khan, 2014). Given this moot point, the current authors posit that a deeper investigation is called for. Such an analysis comes within the fold of an important area of consumer behaviour, ‘transformatory consumer research’ (TCR). TCR is a “movement...that seeks to encourage, support and publicize research that benefits consumer welfare and quality of life for all beings affected by consumption across the world” (Glen et al. (2012), in TACR, 2021).

The proposed exploratory and review study derives its inspiration from a TCR perspective (Davis and Ozanne, 2019), trying to adopt an interpretivist approach of exploring the factors that drive the CCBs towards the unwholesome demand for contract cheating generated by CCSPs (Scauso, 2020).

Using Khan et al (2020)’s positioning of contract cheating as a social issue, the present authors look at contract cheating from a social lens. Unwholesome demand is one where the “consumers may be attracted to products that have undesirable social consequences” (Kotler et al, 2012, p9), a demand where the consumer “badly wants the product but shouldn’t desire or take the decision to buy it... such as alcohol, cigarette, pirated movies, games” (Lapaas, 2019). Social issues such as video game addiction, social media addiction or substance addiction have been recognised as addictive and compulsive disorders by researchers (Griffiths, 2014; Ramesh and Igor,

2016; Hull, 2020) and can have dire effects, such as on physical health (Ayenigbara, 2018; Grinspoon, 2020), mental health (Walton, 2017), academic performance (Azizi, Soroush and Khatony, 2019) and even climate crisis (Gordon, 2020). The present authors posit contract cheating as leading to an unwholesome demand and an addictive behaviour. However, this study does not talk about any addictive behaviour other than contract cheating.

Contract cheating unlike other academic dishonesty exercises, is a bought service (at an affordable price and hence easily amenable for repurchase). Hence contract cheating throws a greater opportunity to be repurchased later period when the CCBs can buy the same at different levels of their education path ranging from school to tertiary education and beyond, thus paving way for an addictive consumption and dependence.

Apter's new theory of psychological reversals (1982) talk about the crucial aspects of addictive behaviors including the phenomenon of relapse, psychological dependence, and the experience of loss of control, all of which apply for contract cheating.

Becker (1992) notes that addiction may possibly be a strong habit, and further indicates that if a habit is beneficial for an individual, it indicates that present consumption raises future utility. The first ill-gotten benefit from contract cheating raises the

possibility of the services being used again. Addictive consumption, for that matter, is an offshoot of an existing culture collapsing in an emerging free-market society (Alexander, 2012). Thus, contract cheating can be posited as an aspect of addictive consumption.

This way of viewing contract cheating can help understand the drivers and ramifications of such an addiction on the CCB and may also explain why CCAs have stayed away from the same. Addiction to contract cheating can have further ramifications such as impact on institution's reputation, question on student knowledge, revoking of degrees and more (Rigby et al, 2015). Contract cheating may lead to a 'treasure hunt effect', a term coined by the present authors, to define the 'ripple effect' of such an addictive behaviour, where the ill-gotten success from the first contract cheating effort can very well go beyond one assessment or one classroom to feature in the student's education career, ultimately into workplace.

In conclusion, all activities that come under SLO cannot be deemed an outright ethical practice. Seeing from a social lens, contract cheating has unfortunately been passed on as given the SLO and needs a deeper introspection. This study explores the drivers behind those who resort to contract cheating and those who don't, thus shedding more light on the same.

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# ACADEMIC MISCONDUCT IN MEDICAL STUDENTS: DO PSYCHOLOGICAL WELL-BEING TRAITS PLAY A ROLE?

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## KEY WORDS

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academic integrity, academic misconduct, medical students, psychological well-being

## BACKGROUND

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Medical education strives to develop high technical and ethical standards in future physicians (Birden et al., 2014; Frenk et al., 2010). However, worldwide evidence (Abdulghani et al., 2018; Desalegn and Berhan, 2014; Hrabak et al., 2004; Monteiro et al., 2018; Rennie and Crosby, 2001) suggests that medical students still report compromising ethics and academic integrity by engaging in academic misconduct. Academic integrity is a broad concept which entails compliance with ethical norms, principles and values, such as honesty, fairness, trust, responsibility and respect for others, within the teaching-learning process and/or research (ICAI, 2014; Tauginienė et al., 2018). Medical students who breach academic integrity may not only fail to develop core professional technical, ethical and humanistic qualities (Abdulghani et al., 2018), but are also likely to perpetuate such dishonest behaviour during professional practice, undermining public health and safety

(Papadakis et al., 2005). Academic misconduct is a pervasive and multifaceted phenomenon, nurtured by cheating-permissive cultural and academic contexts, but also linked to student individual characteristics (Desalegn and Berhan, 2014; McCabe et al., 2001; Whitley, 1998), including personality traits (Giluk and Postlethwaite, 2015; Lee et al., 2020; Zhang et al., 2018). Although, while some psychological facets have been extensively studied, the role of psychological well-being traits is still underexplored. Attributes such as autonomy to make independent decisions, environmental mastery to manage life challenges, sense of purpose in life and personal growth, self-acceptance and the ability to establish positive relationships, portray desirable qualities and useful resources (Bowman, 2010; Ryff, 2014) which might offer a protective shield against student involvement in academic misconduct.

## OBJECTIVES

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This study aimed to explore associations between academic misconduct and psychological well-being traits in medical students.

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## METHODS

A cross-sectional study was conducted on 591 Portuguese students attending the first, third and fifth years at the Faculty of Medicine of University of Porto (FMUP), during the same academic year. Data was collected using paper questionnaires with multiple-choice questions on sociodemographic characteristics (e.g., sex, academic year), psychological attributes, using the Portuguese version (Novo et al.,

1997) of Ryff's Psychological Well-Being Scales (Ryff and Keyes, 1995), and cheating-related perceptions (peer fraud, severity of penalty) and behaviour (cheating during exams, prior exams, in academic work, attendance sheets, and plagiarism) by applying a newly developed Academic Integrity Questionnaire ( $\alpha = 0.60\text{--}0.88$ ).

## RESULTS AND DISCUSSION

Of the 591 students, 44.5% were attending first year, 37.6% third year and 17.9% fifth year of medical school, 66.7% were female, with a mean age of 20.4 (SD = 3.2). Prevalence of cheating was around 95%, with plagiarism (85%) taking the lead over the other forms of cheating (~60%). These findings are concerning and probably reflect the permissive culture of cheating in the Portuguese context (Almeida et al., 2015; Monteiro et al., 2018). Signature forgery in attendance sheets significantly increased during the medical course. Fifth-year students not only disclosed more cheating than their peers, but also reported engaging in more severe behaviours, such as both forms of exam cheating, which is in line with other evidence (Hrabak et al., 2004; Monteiro et al., 2018).

Psychological well-being (PWB) traits exhibited weak associations with cheating. Autonomy inversely correlated with plagiarism, while having positive relations with others was positively associated with cheating in academic work and attendance sheets ( $p < 0.05$ ). Students with lower autonomy may lack the ability to perform academic tasks independently (Whitley, 1998) and/or to regulate their behaviour (Blachnio, 2019), thus resorting to plagiarism more often. Conversely, students who report more positive relations may be prone to engage in academic cheating to help a friend (Monteiro et al., 2018;

Zhang et al., 2018), justifying it as selflessness (Rettinger and Kramer, 2009). Dimensions of PWB related to environmental mastery, purpose in life, personal growth and self-acceptance were not significantly correlated with academic misconduct ( $p > 0.05$ ). Other evidence also reported no significant associations of self-esteem (linked to self-acceptance) (Tijdink et al., 2016) and openness to experience (a common trait of individuals with personal growth) (Giluk and Postlethwaite, 2015; Zhang et al., 2018) with cheating. Alternatively, students who perceive less ability to cope with environmental demands (Cochran, 2017) and lower expectations for the future (Korn and Davidovitch, 2016) were found to be more likely to engage in academic misconduct compared to those with higher sense of environmental mastery and life purpose, respectively.

No differences were observed in academic misconduct according to sex and previous participation in research ( $p > 0.05$ ). Grade point average (GPA), only applicable for third and fifth-year students, was positively correlated with cheating prior exams ( $p < 0.05$ ). Similar to other studies (Desalegn and Berhan, 2014; Hrabak et al., 2004; McCabe et al., 2001), cheating associated positively with perceived peer fraud and negatively with severity of penalty ( $p < 0.01$ ).

## CONCLUSION AND RECOMMENDATIONS

PWB traits exhibited poor associations with academic misconduct, yet this is the first study found to explore that, thus further studies with more diverse samples and instruments are recommended. Nonetheless, results suggest that promoting medical

students' autonomy (e.g., encouraging participation in decision-making) (Oz et al., 2016) may be useful in countering plagiarism, especially considering current Portuguese medical curricula emphasis on self-regulated learning (Patricio et al., 2012). Results also

offer some insight into the social structure around cheating, linked to positive relations and perceived peer fraud, increasing with academic year. Overall, fostering ethically responsible future physicians is

paramount, as in a cheating-permissive culture, medical students who disclosed dishonest behaviour are likely to perpetuate it during professional practice, undermining patient care (Papadakis et al., 2005).

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# TALKING TO A WALL: THE RESPONSE OF UNIVERSITIES TO DOCUMENTATIONS OF PLAGIARISM IN DOCTORAL THESES

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The German VroniPlag Wiki group of plagiarism researchers has been documenting plagiarism in doctoral dissertations and other academic works since 2011. Currently, 211 documentations have been published on the web site. Although the press generally only reports on cases involving prominent persons, in particular politicians, only 18 cases have affected people from this group. Much more troubling are the 55 cases that involve people who are or were active as researchers or academics.

When a documentation is published with the author's name, a report is generated and sent along to the university in question. 185 of the cases affect German universities and 26 are from other European countries. The response of the universities has been extremely varied, as the author has previously reported (Dannemann and Weber-Wulff, 2015; Dannemann et al 2018; Weber-Wulff 2012; Weber-Wulff 2014). There have been some rays of light in the darkness, but unfortunately not too many.

There do exist German universities that are able to follow their own, published rules. They acknowledge receipt of a case, keep the informant in the loop about the progress the case has made, and let the informant know how the case has been decided. They also inform the scientific community that the dissertation is problematic by publishing a notice in library catalogues. But there are very few universities that follow through on all of these steps.

At some universities, not even the courtesy of an acknowledgment of receipt is extended. The person notifying the university must ask and re-ask if the report arrived. In one case, the report was printed (in color) and sent registered mail, as no acknowledgement was forthcoming from the university in question. Although generally specified in the statutes of the universities, the person informing the university is often not notified of the final decision. At times, it has been forgotten that

there were even complaints lodged. Unfortunately for those registering complaints, it is impossible to tell the difference between cases that have been forgotten and those that are still being deliberated. Some universities drag the process out over quite a number of years, something that is not good for the author waiting in limbo to see what the university decides.

If the universities do decide to rescind the doctorate and the affected person takes the university to court, the German courts do tend to side with the universities if they were able to follow their own rules during the process. There are now many precedents in law in Germany making clear that plagiarism is grounds for rescinding a doctorate—and for being named.

The process does not end with a legal withdrawal of the doctoral degree. In Germany, doctoral theses must be published and thus may be on the shelves of numerous libraries. Researchers must be informed that the thesis is plagiarized so that they do not base their own work on tainted scholarship. Universities generally have no process to follow in such a case, or if they do, no quality assurance is in place to make sure that the process is followed. Additionally, since a doctorate can be included on state-issued identity cards, there should be a process whereby the university informs the local authorities of the withdrawal.

Very seldom does a university in Germany go through all of the steps required to inform the research world and the civil society of the change of status. This may be caused by the misconceived notion that their job is to protect the former student instead of the integrity of science.

As part of an on-going research endeavor, all universities with open plagiarism cases are being asked about the current state of the investigations. The current status will be presented at the conference.

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# **Bridging Academic Integrity and Research Ethics**



# BRIDGING ACADEMIC INTEGRITY, RESEARCH AND INTEGRITY IN BUSINESS AND SOCIETY

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Bridging Integrity in Higher Education, Business and Society (BRIDGE) is a new Erasmus+ Strategic Partnership project (2020-1-SE01-KA203-077973) scheduled for 2020-2023. The project is coordinated from Uppsala University (Sweden) and includes five more partners from four other countries: Kherson National Technical University (Ukraine), Lithuanian Social Research Centre (Lithuania), Mendel University in Brno (Czech Republic), Office of the Ombudsperson for Academic Ethics and Procedures (Lithuania), South East European University (North Macedonia).

Academic integrity, research integrity, integrity in business, and integrity in society are usually conceptualized as separate fields. In this holistic project, we seek to explore the place inbetween these fields and create bridges between them in order to reach a broader understanding of interrelated aspects of integrity within these areas as well as to drawing attention to interrelated skills and qualifications needed to act in accordance with academic integrity values. The target group of the project are early career researchers – master and doctoral students – and their supervisors.

The aim of the project is to prevent academic misconduct in research, business and society by establishing standard guidelines to better ensure academic and research integrity in practice and by development of the innovative flexible open educational resources including gamified cases that would make the guidelines more accessible for the target group.

In this presentation, we will give an overall presentation of the project and our intended outcomes. The presentation aims also to discuss the results of the first suboutput, a national report on the relationship between academic and research integrity on the institutional and the national level in the

partner countries as well as in the EU as a whole. The report also explores to what extent the concepts of academic and research integrity and ethics are used and addressed in national procedures, policies or guidelines. Within this study, different aspects of the concepts are elaborated as a building block for related intellectual outputs in the project.

The initial stage of design for national reports was based on desk research of existing documents, strategies, policies, and guidelines in relation to the national context of connection between academic integrity and research integrity. The focus of the desk research was the identification of national aspects of academic and research integrity, in order to develop the guidelines for standardization of the national report structure. The research study questions were three-dimensional as they were discussed in the context of the academic integrity, research integrity, and the connection between these two fields. Main research questions attempted to investigate how academic and research integrity are defined within national practices, whether these definitions include positive or negative dimensions, and if the practices proposed are using preventive, reactive, or punitive strategies. Additionally, national resources such as guidelines and policies were investigated to draw a line on how academic integrity is connected to research integrity.

The reports from the partner countries indicate that academic and research integrity are either vaguely defined or definitions are very limited in scope. The summary of the main conclusions drawn from the results of desk research in partner countries is provided below:

- In the last few years, the awareness of academic and research integrity rises and the concepts have gained importance in all countries. Desk research shows that despite the lack of strategy and

documentation of academic integrity and research integrity at national levels, there are widespread initiatives in institutional level to document academic and research integrity concepts and procedures, as well as to develop educational programs to raise the awareness of academic integrity (e.g. Sweden).

- Neither academic integrity, nor research integrity are clearly defined in national documents and the content of these concepts is vague. The concepts of academic or research integrity in national or institutional documents are mentioned together with principles of integrity, trust, honesty, truth, respect, transparency etc. as well as plagiarism prevention and the breaches of academic or research integrity.
- The desk research results show that there is still strong orientation towards negative detection and reaction strategies in most project countries, e.g. punitive disciplinary measures are frequently used in national and institutional documents. Breaches of academic or research integrity are related to sanctions and penalties in most cases and rarely related to education.
- Positive prevention measures used in project countries are guidelines, recommendations, codes of ethics, plagiarism prevention measures, accreditation of educational programs, education and information measures, etc. with plagiarism prevention being one of the most commonly used positive preventive strategies in the field of academic integrity.

# WHAT CAN INSTITUTIONS DO TO MAKE RESEARCH INTEGRITY EDUCATION A CORE RESPONSIBILITY? POLICY GUIDELINES FOR RESEARCH INSTITUTIONS

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## BACKGROUND

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Research integrity (RI) is crucial for producing research of high quality. It is increasingly acknowledged that research institutions have a responsibility to support researchers in engaging in responsible practices. One crucial way that institutions can foster RI is by providing RI education and training. While there is increasing emphasis on providing

RI education by institutions globally, existing RI training programs are fragmented and there is a lack of guidance available on how to develop an institutional RI education and training policy. Such guidance is necessary to ensure that institutional RI education and training policies are coherent, comprehensive and sound.

## AIM

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In this study, we aimed to co-create institutional RI education and training guidelines together with various research stakeholders.

## METHODS

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We conducted four co-creation workshops with RI officers, policy makers, institutional leaders and researchers – from various parts of Europe – online. Each workshop was held with 4-5 participants and lasted 3-3.5 hours. In the first set of workshops, we asked participants to generate ideas about what should be included in RI education and training guidelines targeted at 1) pre-doctorate students (e.g. PhD and master students), 2) post-doctorate researchers (ranging from postdocs to full professors), and 3) RI personnel and teachers. After the first two workshops, we used inductive thematic analysis

of the visual outputs generated by participants and the workshop transcripts to interpret the data and merge insights from the two workshops. We presented a first version of the guidelines to the participants in the second set of workshops and asked them to refine the guidelines as well as to provide us with some considerations that are important for the implementation of the guidelines. We used deductive thematic analysis – using themes generated in the earlier workshops – to analyze the data from the second set of workshops, and create a second version of the RI education and training guidelines.

## RESULTS

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Our participants highlighted the importance of integrating RI training as a mandatory part of the research curriculum as early as possible – already at the bachelor level. For PhD students, they agreed that a combination of training formats would be suitable to provide RI training that addresses students' daily practice sufficiently, including standalone courses on RI basics, specialized RI courses (e.g. on data management), as well as informal meetings to discuss RI. Participants also agreed that mandatory RI training was necessary for post-doctorate researchers starting new positions across

seniority levels. However, they acknowledged the difficulty in motivating senior researchers to undergo RI training. Although not all participants agreed that the word 'training' is appropriate for this target group, they all stressed that providing intradepartmental meeting moments between personnel from various parts of the institution would be helpful for RI staff to discuss their roles and responsibilities regarding RI. Participants acknowledged that such a comprehensive education policy would require a strong institutional commitment to RI.

## CONCLUSIONS

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Together with various research stakeholders, we co-created three institutional guidelines on RI education and training of 1) pre-doctorate students, 2) post-doctorate researchers, and 3) RI personnel and teachers. These guidelines combined provide a comprehensive list of issues that institutions can address when developing RI education and training policies.

Institutions that already provide some RI training can use the guidelines to further develop and refine their policies on RI education, while those without existing training programs can use the guidelines to implement RI education over time. Further research might be required to help institutions prioritize which recommendations in the guidelines to begin with.

# BLOCKCHAIN BASED “PROOF OF EXECUTION”

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The computational science field is growing rapidly multidisciplinary. It already spans across numerous disciplines such as archaeology, biology, chemistry, material sciences, economics, engineering, finance, forensics, history, informatics, intelligence, law, linguistics, mathematics, mechanics, physics, sociology, statistics.

As the scientific process integrates various computational tasks, most of the time they run inside third party environments, using shared resources. Technically the datacenter operators have full access to examine, and tamper with potentially sensitive data during the entire computational process. Mechanisms have been put into place to prevent such situations, however they require very high operational overhead. The auditing of these mechanisms is complex and few people possess the skills required to effectively carry out such auditing. .

The main challenge in this situation is how to easily identify with accuracy and certify the first computational tasks that led to a discovery beyond state of art. To solve this challenge someone must use technical means to ensure high data integrity and confidentiality during the process of the computational task’s execution. Moreover, ensuring programmability of the process similar to the Infrastructure as Code model is desired to be easily deployable with minimal operational costs.

The “Proof of eXecution” method covers all the technical requirements to solve this challenge. It established the grounds for validating with ease and a high degree of accuracy the execution of computational tasks part of a scientific experiment. The main set of metadata that can be validated comprises of the following: the owner of the task, the timestamp when the task execution was requested, hashes of the executable software applying a specific scientific method for data processing, hashes of the dataset(s), the processor of the task, the timestamp when the task execution ended and the result was generated, hashes of the results. Additional metadata

can be added to server purposes such as data and process cataloging or hardware resource usage statistics.

The solution proposes usage of two main technologies which handle the core requirements for executing computation tasks in a transparent and privacy aware manner.

The first technology is the blockchain, which has various applications in data integrity, certification, and validations. Bloxberg ( <https://bloxberg.org> ), a consortium of more than 50 international research organizations, created a public decentralized infrastructure to foster integrity in research. Validator nodes ran only by vetted research organizations provide a public blockchain with a high degree of trust for all the research and academic organizations around the world. One of the tools provided by the consortium is a certification API that allows a researcher to certify the existence of a piece of data at one point in time. Afterwards, validation of the certification can be performed with ease by anyone at any time.

Widespread technologies that handle research data management right now include repositories which enforce data integrity through hashing. While this works well with repositories that are mutually trusted, sometimes research collaboration is hindered by finding a common trustworthy repository. Using Bloxberg, the blockchain can be used as a central place for storing the hashes to aid the integrity checks during data processing. This covers one important aspect of the requirements of the solution to solve the challenge – the high integrity of the data.

The second technology proposed by the solution is using a trusted execution environment (TEE) enclave. This environment is provided by chip manufacturers as an isolated area for executing binary code inside modern chipsets. The important features of this environment are that it prevents the hardware operators from reading/tampering with the memory space while the tasks are executed, even

if they have physical access to the hardware. The environment requires the binaries to be provided unencrypted but supports introduction of secrets inside the execution environment as parameters. The aim of the solution is to use openly certified binaries to be ran as tasks inside the TEE. Confidential datasets would be passed as secrets to the trusted execution environment. Because of the way the TEE works, if the binary is modified, the secrets will not be decrypted, therefore this ensures no one can modify the process or read/modify the datasets during execution. This covers the second requirement - data confidentiality.

Using various diagrams and explanations, the presentation shows the workflows to maintain the integrity and the confidentiality of the data during the whole process. There are two actors involved in the process: the researcher, also referenced as the data owner, and the datacenter operator, also referenced as the data processor. The workflow of a task execution is handled by blockchain transactions using a smart contract.

First the data owner submits a blockchain transaction describing the task that will be executed which includes all the required metadata. The data itself is uploaded to a shared location. The hashes of the data are saved inside the transaction metadata.

Part of the shared data is the task itself which ideally is a programmable way of generating a binary fileset, such as a docker container or similar. This covers the third requirement of the method to provide a viable solution - tasks programmability. The container would be publicly available so anyone, including the data processor, can examine the method of processing the data. The confidential dataset is encrypted and uploaded.

The open binary fileset includes several methods to integrate the TEE execution with the blockchain. One method is checking whether the execution occurs within the TEE. Another method parses a secret file which includes a location and credentials on how

to reach the full dataset, and where to upload the results. Another method checks the hashes of the downloaded files against the blockchain information. A method that handles results is executed inside the TEE. The results are hashed, and the metadata is sent within a blockchain transaction. Lastly, a core method defined inside the open binary fileset is the upload of the files to the location specified inside the secret file.

The data processor sends a blockchain transaction advertising its availability of resources. A match between the data owner request and the data processor request occurs through a blockchain transaction. Then the task is approved for execution by the counterparty, as well as through a blockchain transaction.

The data processor then executes the task as defined in the request. Going through the methods defined in the open binary fileset, a result transaction is generated. After the execution is finished, the TEE enclave is automatically destroyed.

The data owner can now prove how and when the execution took place by having anyone examine the blockchain. This examination can be performed by dApp which is outside the scope of the presentation. This method greatly discourages plagiarism and fraud as somebody can easily prove they ran a specific task at a specific point in time.

When it comes to ethics and transparency in academia and research is important to maintain a clear audit trail in various processes which then can easily aid in proving the data processing took place, even publicly where it makes sense, without exposing the actual data. Then the owners of the data and the processes, as well as auditors can very easily verify and validate such processes. This method can have multiple various applications ranging from managing confidential data such as student grades to complex scenarios which involve compiling statistics that require a high degree of transparency for the process that generated them.

# DO STUDENTS TRANSITIONING TO UNIVERSITY JUSTIFY THEIR SCIENTIFIC PRACTICE IN A DIFFERENT WAY THAN ESTABLISHED STUDENTS AT UNIVERSITIES? A QUANTITATIVE STUDY ON JUSTIFICATION PATTERNS IN RESEARCH INTEGRITY

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## PROPOSAL INFORMATION

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The well-being of our society relies on reliable research results. Fostering Research Integrity and Responsible Conduct of Research (RI/RCR) is essential for our society's ecological, political, economic, medical, social, cultural, and ethical contexts. However, although numerous RI/RCR educational programmes have emerged in higher education in recent years, we observe misconduct [1, 2] up to increased violations [3] in research. For this reason, it is of utmost importance to improve these educational endeavours and start to collect basic information about students and their RCR training in higher education institutions.

Some studies show that RCR training fosters RI [4, 5, 6]. In contrast, others outline that RCR training does not always lead to the desired promotion of research integrity [7, 8, 9]. Watts et al. [10] emphasise that the RCR programme's effectiveness depends on how trainers instruct their students. Trainers refined and adapted such instructional approaches to affect RCR programmes in the last few years positively. In 2017, Watts et al. [11] confirmed an improvement but no significant breakthrough driven by these instructional alterations.

Results from other areas of education show that students' (mis-)conceptions play an important role in how effective programmes can be. How do students decide for and justify scientific practice? What ideas,

better say, what patterns do students use to justify their own and others scientific practice?

Uncovering these patterns can be a promising way towards effective RCR training. Moreover, uncovering these patterns on different levels of qualification in higher education can show if other factors such as students' institutional socialisation, their research experience, and being mentored influence students' patterns.

Based on the data collection from the European Horizon 2020 project Path2Integrity, this study answers the following research question: Do HEIs influence students' justification pattern that students use the common scientific sense to justify (their) scientific practice? To answer this question, we use Zollitsch et al.'s [in press, 12] eight justification patterns for scientific practice: common scientific sense, hierarchy structure, community benefits, equal treatment of everyone/everything, duty to act this way, orientation on others, quantitative majority decisions and rejection of binding codes.

The study evaluates the following hypothesis: Students transitioning to university (ST) justify their scientific practice less by using common scientific sense than established students at universities (ES). Because ES have experienced more training and experience in a research context in which RI is promoted, we predict that the justification pattern "common scientific sense" will be significantly higher



in the ES group than in the ST group. Europeans HEI's widespread RCR training and the impact of other European promotional strategies (such as establishing codes of conduct, preventing hyper-

competition, formalising procedures that protect both whistle-blowers and those accused of misconduct etc. [1]) support this prediction.

## METHODOLOGY

We follow the principle of preregistration and have not yet analysed the data. To avoid any data misinterpretation, to enable replication studies and to receive objective and transparent results, we only analyse the data when the above- described research questions and following analysis plan is accepted. If we receive positive review feedback from ENAI, we will analyse the data three weeks before the ENAI conference and present the results.

Participants are/will be 600 international students voluntarily attending the non- randomised Path2Integrity evaluation. They do and will not receive any credit for their participation. The participants are reached through the extensive Path2Integrity community. Standard demographic statistics of these groups will be included in the presentation.

Students' qualification level: Following the Framework for Qualifications of the European Higher Education Area, we group the participants by their qualification level, country and age into a) European secondary school students older than 16 and European bachelor students, b) European master students and European PhD students.

The first group represents students transitioning to university. The influence of HEIs research integrity promotion on this group is low. The second group represents established students at universities. The influence of HEIs research integrity promotion on this group is high.

Justification patterns for scientific practice: Selected subscales from the P2I questionnaire (Zollitsch et al.) will be used. The subscale of interest for this study is the third-tier justification pattern and fourth-tier confidence interval. The measure of justification patterns for scientific practice consists of six items. An example item is: "Sam's decision is in line with good research practices because ...

Choose one of the following answers

- it is Sam's duty.
- it protects the reputation of his organisation.
- it ensures reliable research results.
- it ensures an equal treatment of all misconduct cases."

Participants choose and indicate to what extent they endorse their answer with a 0–100 scale (0=no confidence, 100=confident). After reverse coding the appropriate items, the scale will be created by averaging across items. We will evaluate the internal consistency of the scale for our sample.

In particular, the study will develop appropriate graphical representations for the groups mentioned above ES and ST. We will present the results in two-dimensional raincloud and as 3D plots, representing how HEIs research integrity promotion influences the justification patterns for scientific practice.

A non-parametric significance test (*t*-test) will be performed to test the hypothesis with  $P < 0.005$ .

## CONCLUSION, INTENDED FOLLOW-UP STUDIES

As explained above, we follow the idea of preregistration and do not yet know the results of the study. However, if the test confirms a significant relationship, we document that ES more often use common scientific sense than ST to justify (their) scientific practice. Therefore, we show

1. that ES and ST have different justification patterns when they start their RCR training

2. that HEIs can positively influence students through training and other research integrity promotions (code of conducts, change of incentives etc.).

If we confirm a significant relationship between student's qualification level and their justification patterns for scientific practice examining appropriate educational programmes for these different target

groups and keeping up the established ways of promoting RI in HEI would be in order.

If there is no significant relationship between justification patterns for scientific practice and student's

qualification level, further explanatory studies on justification patterns in RI and HEIs influence on students RI conceptions needed to be provided.

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# COMPARATIVE STUDY OF OPENLY ACCESSIBLE ETHICAL POLICIES AND PROCESSES ACROSS FOUR UNIVERSITIES TO UNDERSTAND THEIR DISCIPLINARY LEVEL FOCUS

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## KEY WORDS

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ethical policies, higher education, review panels, guidance

Institutions around the world are being encouraged to establish regulations and structures to enforce ethical conduct in research. In many countries, universities are expected to implement ethical training in the responsible conduct of research. In order to do this, it is imperative to have established policies within the institutions. However, the question is whether the policies are discipline-specific (in other words each discipline should have their own policies) or should there be one institutional level ethical policy? Do these policies help the students to 'own' ethical behaviour? With reference to the Nuremberg Code which is known as the first attempt to regulate human research ethics for the prevention of research ethics violations, many academics argue research ethics should be the same in any field. No matter how different the disciplines are, the aim of providing ethical guidance should be based on the four cardinal principles namely (a) Maximizing benefits (beneficence), (b) respecting dignity and individual rights, (c) conduct competent research with honesty and accountability, and (d) deliver/report outcomes with integrity and merit.

Is this really possible in reality?

This paper is an attempt by the authors to review existing open-access policies and ethical guidelines of four institutions from three countries (Turkey, UAE and UK) to understand the procedures, principles and expectations of institutions towards conducting academic research in an ethical manner. These insti-

tutions are specifically selected as they are pioneers in promoting academic ethics/integrity in their local areas. The main objective of the research study is to explore commonalities between the policies laid out by the institutions to develop an understanding of expectations across varied backgrounds and disciplines which may pave a way for answering the question posed by the authors above. During the course of the study, the authors collected the policies and procedures from open-access documents. These were then reviewed based on the following criteria to identify similarity and differences:

- Area/discipline coverage
- Panel chosen for approval
- Degree level (UG/PG/PhD/Academics)

Initial analysis suggests that all four universities have well-established policies for research ethics in alignment with either local or international policies (such as WHO's ethical advisory guidelines, 2009). All policies have well defined terminologies, with clear expectation that all academic research that includes human participants must acquire ethics approval from the committees before engaging in such studies.

Most importantly, we have noticed a common practice of giving importance for establishing an ethical culture/behaviour on impactful research directions (such as PhD, post-doctoral and independent research). Among the differences, the approach of

handling the ethical reviews and providing guidance were found to be different. Whilst one institution has separated the ethical applications for “invasive” and “non-invasive” research, others tried to offer a common application format divided by separate sections. Another noted-difference was found to be in the selection of the ethical review panels and their memberships.

It is also noted that all four universities focused on using members from a variety of discipline areas to make the committee/panel for approval, however we were not able to see consistency in using representations from the community (i.e. lay-person membership). Based on the body of literature, we find this to be, in our opinion, it is essential to provide unbiased advice by critically analysing the impacts of the methodology and procedures that might affect the participants (Ciulei 2019; Benčin et al., 2015; Vanclay et al., 2013; Kolthoff, Erakovich, a Lasthuizen 2010). The review also found less focus was given to the research carried out at undergraduate or postgraduate (Masters) levels. At least one institution has separated the ethical application review processes of UG-/MSc-level investigations from impactful research. Interestingly the ethical

considerations/applications and advice of the former is handled at the supervisory level without involving the college or university-wide ethics committees. This could lead to concerns of disparity that can result in some questionable practice and/or potential ethical dilemmas within UG-/Masters level research. We will discuss some of these issues in our presentation.

In summary, this independent study was conducted as an initial exploration to understand similarities and differences in existing ethical review and guideline policies and procedures across four universities to see if a universal policy can be proposed. Our investigation has suggested, although there may be different approaches to the actual ethical review process, target of those reviews and procedures or membership contributions in providing ethical guidance, the sample universities have followed fundamental principles for establishing ethical policies. Despite the fact that this is an initial study, our analysis suggests, it may in fact be possible to develop a universal ethical policy that is suited to different HE institutions.

Future scope of this study needs international collaborations involving all interested parties.

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# UNDERSTANDING THE BARRIERS AND ENABLERS OF ETHICAL GUIDANCE AND REVIEW FOR ACADEMIC RESEARCH: A PRACTICAL WORKSHOP

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## KEY WORDS

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ethical review, ethical guidelines, ethical approvals, academic research

For effective management of research ethics there should be clear guidance and a properly designed procedure with identified responsibilities. Well-established ethical guidelines can provide the fundamental scaffolding to improve and enhance research quality. This would allow any researcher to adopt and abide by the guidance with respect for the underlying principles. Therefore, ethical considerations and guidance on how to conduct investigations should form the basis of research and training in any field.

It is a social responsibility to teach early career scientists to own and abide by the research principles from the beginning of their graduate level training. However, ethical policies/guidance and review processes are different from institution to institution, also from country to country. In some institutions the ethics policies are not implemented for undergraduate students, but only from a postgraduate level. Other researchers have highlighted inconsistencies in institutional guidelines which in turn hindered the predicted research progress (Desmond and Dierickx 2021; Alba et al., 2020; Dellaportas et al., 2014; Speight 2016). These inconsistencies may be linked to the requirements, perceptions/expectations of individual institutions and/or local legislations passed by different governments with pre-empting contextual

conditions. Whilst areas such as medical research have well established/accepted universal ethical guidelines, other fields, though they may emphasise the importance of ethical practice, may have less defined universal guidelines. Yet, we identified freely available guidance from two organisations that are independent of the medical/biomedical disciplines: COPE (Committee of Publication Ethics) and AL-LEA (All European Academics); both organisations provide support for maintaining research ethics. The former mainly focuses on publication ethics and therefore indirectly influences ethical behaviour in research, while the latter provides a framework for self-regulation across all scientific/scholarly disciplines and for all research settings.

Medical research usually involves human participants and animal models. The former group is protected by international treaties, which have been mostly ratified by individual governments. Due to this, there are internationally accepted guidelines for the participants in line with this treaty obligations and duties. As for animal welfare, international organisations such as the World Organization for Animal Health (WOAH), and International Convention for the Protection of Animals (ICPA) provide guidance on animal welfare in research. This has resulted in the development of well-established guidance for



human/animal welfare and institutions are giving precedence to formulate ethical guidance based on medical research. However, is this “one size fit all” type approach appropriate for all disciplines? What are the barriers for establishing either institution-wide or subject-specific ethical guidance? How can these barriers be transformed into enablers to develop these policies?

In summary, we are particularly interested in inclusivity outside the STEM subject areas. For example, in disciplines such as social sciences, education and/or art and design where there are no need to deal with the conventional issues that are evident in science and medicine. As for barriers and enablers, based on our initial literature survey (Desmond and Dierickx, 2021; Huybers, Green, and Rohr 2020; Ethical Guidelines for Educational Research, 2018), we have identified four common themes that might impose both. We have classified them as (a) organisational, (b) individual/team based, (c) research type related and (d) collaborative influences. Organisational enablers include the institutional desire to recognise/promote ethical behaviour in research by providing the infrastructure and assistance. In contrast, ambiguity in operational expectations, lack of measures for implementation or failing to identify/address problems (or making reasonable adjustments), not reflecting on and learning from failures can all be barriers at the organisational level. Likewise, individuals can provide a positive and proactive influence to produce ethical guidance. By clearly communicating their research protocol,

and expected outcomes, they can enable the developments and/or reasonable adjustments. This information would assist in improving ethical guidance, especially in an institutional approach to address research in all subject areas/fields. A comparative understanding of different research methodologies would also help to establish research guidance. For example, the methodologies and the forms of data acquisition are different between invasive types of research (where interventions may physically or psychologically affect the participants) and non-invasive research (including questionnaires, meta-analysis, informatics etc.). Finally, the enablers for collaborative cross-institutional ethical policies include common/national guidance, level of importance and properly designed legal requirements. In fact, an understanding of the common goals and how the methodologies may affect different participating organisations is essential in cross-institutional collaborative research.

In this workshop, authors propose to first present a summary of findings from their primary research based on information gathered relating to the barriers and enablers of forming ethical guidance. The workshop participants will then be moved into small discipline-specific sub-groups to discuss ethical approval procedures within each particular field.

This will be followed by a plenary discussion for all participants in order to prepare the participants for the issues that might occur in research, especially when working in an interdisciplinary field.

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Target audience Academic researchers Early career researchers PhD students PG students Research Method Teachers Workshop Takeaways Develop appreciation for the importance of ethical guidance and the review process. Develop an understanding of the barriers and enablers to forming good ethical guidance. Relate with peers to identify discipline-specific issues in existing ethical guidance and expectations.



# **Integrity in Academic Writing**

# DO HIJACKED JOURNALS ATTRACT DISHONEST AUTHORS?

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Hijacked journals represent a type of cyber-crime. Fraudulent individuals clone legitimate journals and exploit their titles and ISSNs to cheat potential authors (Lukić 2014; Bohannon 2015; Jalalian and Dadkhah 2015). There is evidence of the continued proliferation of fraudulent publishers and hijacked journals (Dadkhah and Borchardt 2016; Abalkina 2021).

The goal of the current research project in progress is to study academic misconduct in papers submitted to hijacked journals. There is a common belief that naïve authors who are not able to distinguish between legitimate and fraudulent publishers submit their papers to hijacked journals (Watson 2015; Dadkhah and Borchardt 2016). However, this hypothesis about naïve authors who are deceived by hijacked journals has not been investigated in the literature. At the same time, there is evidence of the circulation of texts between predatory and hijacked journals (Dadkhah et al. 2016) and of the violation of academic ethics and the presence of plagiarism in papers submitted to hijacked journals (Abalkina 2020). This evidence suggests another hypothesis that besides naïve authors there are dishonest contributors to hijacked journals who violate academic ethics. To test this hypothesis, I detected plagiarism in papers published in hijacked journals. Plagiarism is considered to be

one the most serious types of academic misconduct (Resnik et al. 2015), and the authors of papers that contain plagiarism can be considered dishonest. I extracted a list of 85 hijacked journals whose websites were available as of March 2021 from several sources, i.e., <https://beallslist.net/hijacked-journals/>, Jalalian and Dadkhah (2015), Abalkina (2021) and SCImago journal profiles in which users leave comments about hijacked journals. I selected articles from three recent issues and extracted each tenth paper to check for plagiarism. I randomly selected the first paper (from one to ten) and then downloaded each tenth paper. If the total number of papers in the issue was less than ten, I downloaded each fifth paper. In case of the hijacked “Journal of Talent and Development Excellence”, I selected each 20th paper due to the large number of papers in each issue. The texts were checked for plagiarism in Urkund (Ouriginal). Foltýnek et al. (2020) have shown the efficiency of Urkund to detect text similarities.

The results of the research in progress show that most of the papers contained cases of academic misconduct violations, e.g., plagiarism, data fabrication, self-plagiarism or gift coauthorship. The average level of plagiarism in the sample was 20.3

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# POLICIES TO ADDRESS CONTRACT CHEATING

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Contract cheating (Clarke and Lancaster 2006; Lancaster and Clarke, 2016) represents a major threat to the academic integrity of higher education. Many solutions to contract cheating have been proposed, including legal, technological and pedagogical interventions. An area that is underexplored in the academic literature is the importance of university policies as part of the contract cheating debate.

The proposed session will be run as a panel, with the panelists discussing the type of policies in place to address contract cheating that they are aware of, as well as the need for continuing development of policies to account for emerging contract cheating developments and threats to academic integrity. The panelists are all members of the ENAI Addressing Contract Cheating working group, bringing with them a wide range of different perspectives, including at institutional and national level. The role of wider quality assurance bodies is also represented.

The ENAI working group so far has identified that policies for addressing contract cheating differ greatly across the sector. Some institutions do not yet appear to have policies about this at all. In some cases, this is covered as part of wider policy relating to academic misconduct. The panelists will help to present a picture of how this issue is approached across Europe and beyond, providing guidance that delegates can take back to their own institutions.

Of particular interest to delegates will be a discussion of emerging developments in this space. Some of these have not yet been widely integrated into university policies, but the panelists will share examples from their own experience and research. These include the issue of how institutions could react if they are notified that students are contract cheating, for example by a disgruntled writer. Another instance asks how we can best deal with the situation where a student says they are at risk of blackmail. Should this be used solely as an opportunity to introduce sanctions or is it better to ensure that the student is protected and supported? At what stage does external proofreading become contract cheating and how should university policies address this? Yet a further source of concern surrounds undercover work by some faculty who approach students on social media, inviting them to buy assignments and then reporting them for misconduct. To what extent should such work be considered as detection and where does this cross a line?

Ideally, institutions should develop a strategic approach for instilling a culture of academic integrity across their whole community (Bretag and Mahmud, 2016). The panel aims to provide guidance and engage delegates in discussing ways to develop associated policies and procedures, to encourage more consistency of approaches across the higher education sector globally.

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# PREVENTING STUDENT PLAGIARISM: FINDINGS OF A JOINT PROJECT INVOLVING CZECH UNIVERSITIES

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In 2020, nine largest Czech universities embarked on a new project with the view to foster mutual collaboration to prevent ethical misconduct in student writing. The presentation will summarize the main experiences from and outcomes of this joint project.

Over the last two decades, Czech HEIs identified the increased lure to plagiarize among students and responded to the rising threats to academic integrity with several initiatives, notably with building up open-access repositories of student papers and implementation of antiplagiarism software. There is sufficient evidence that, as a result, a tolerance for student plagiarism has generally decreased at Czech universities. Findings of recent audits of plagiarism checkers carried out at several Czech universities indicate that the deterrent effect of these tools has been strong enough to drive the most severe forms of plagiarism out of the mainstream higher education towards its very margins. Furthermore, it is clear that subtle forms of misconduct are being commonly identified, reported and prosecuted, also to much greater extent than it was usual 10 or 15 year ago. In this respect, the new technology tools have had a positive impact on Czech higher education.

In comparison with the approaches that mostly tend to support repressive treatment, the 2020 project has risen out of the belief that repressive tools are bound to be complemented by preventive interventions, supporting the general teaching of academic integrity values. A particular emphasis has been laid both on early-stage university students, who usually face the challenges of academic writing for the first time in their life, as well as on their teachers, i.e. their tutors and guides in developing their writing skills.

During 2020 the project team consulted multiple experts on academic ethics from several countries,

vice-rectors of Czech universities, ethics and disciplinary committee members, academics, students, various representatives of state institutions and other specialists. The project team also organized a topical conference Academic ethics and prevention of plagiarism (Prague, 13th - 14th October 2020), conducted extensive research on the existing literature, studied successful strategies and initiatives at foreign institutions and conducted several analyses on this topic within the Czech context. All evidence, including multiple incentives for further action, has provided a solid summary of the current findings in the "student-driven" plagiarism in Czech universities and colleges.

The main target was twofold: to harmonize the incoherent criteria for assessing the extent to which a work can be considered to be serious plagiarism, supporting the complex view of potential risks that plagiarism brings; and to promote the main idea, as discussed above, i.e. to draw attention to the prevention, rather than repression, with developing competences of all players to intervene and provide support as early as possible.

The joint efforts resulted in two publications, available to general public, that address both university students and academics, acting as authorities, tutors and assessors of the student work. The project team has come to the conclusion that responsibility for perseverance of the ethical principles is not to be delegated only on particular students, academics or academic departments. Much of the responsibility is to be taken by the universities as self-governing institutions, providing the frame and particular mechanisms for support as well as coercion of academic ethics. These should be robust, transparent and understandable enough to stand up not only to the academia, but also to the general public.

The project met with great success in 2020 bringing results relevant for HEIs both in the Czech Republic and abroad and attracting new institutions to further collaboration. For 2021 a follow-up project involving 20 out of 27 Czech public universities was supported by the Ministry of Education. This project not only further develops and disseminates

the outcomes of the 2020 project, but also addresses a wider range of topics, incl. contract cheating and academic integrity in online education. Also, the online magazine Universitas.cz is part of the project to cover the integrity topics and to approach the entire Czech academic community.



# PUBLICATION AND RESEARCH INTEGRITY: DOES IT MATTER WHERE YOU PUBLISH YOUR RESEARCH?

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## KEY WORDS

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predatory journals, PPJs+, publication ethics, publication integrity, predatory publishers

The content of this workshop has high relevance to anyone involved in academic research and publishing. Despite several recent publications with excellent guidance aimed at students (Eaton 2018), academics, researchers and publishers (Binning et al., 2018; COPE, 2017, 2019; Moher et al., 2017a), the vast industry of academic publishers, journals, conferences and events that are either fraudulent or of questionable value and quality, continues to thrive and proliferate (Macháček and Srholec, 2021).

In the dual interests of both caution and convenience we will use the abbreviation PPJs+ (potentially predatory journals plus) in this abstract to encompass all aspects of this phenomenon.

Some of the researchers who publish in and disseminate through PPJs+ do so knowingly, as a speedy way to boost their publication count, typically to satisfy perverse incentives for promotion, to qualify for a bonus (Moher et al., 2017b; Rui, 2015) or to remain in their current precarious teaching job (Glendinning et al., 2018). However, many students and researchers, and both experienced and inexperienced academics, make use of PPJs without appreciating the full implications (Sanders, 2021). Sanders highlights that those with limited understanding have no idea how to recognise a PPJ, nor do they understand the risks to themselves and others from patronising them. Indeed, despite the

popularity of some PPJ blacklists (such as Beall's list [2021] and Cabells Predatory Report), it is well understood that, for various reasons, no blacklist can include all PPJs (e.g., emergence of new PPJ+, disagreements about how to categorise). Conversely, white lists are also problematic as many journals with questionable publishing practices are included in reputable citation indexes, such as Scopus or even Web of Science.

To be clear, the risks from PPJs+ include, but are not confined to: diverting public funds into the pockets of unscrupulous fraudsters, damaging individual and institutional reputations by claiming credit for publications in discredited journals, waste of personal effort and research by publishing in a journal that is poorly curated and inaccessible to other researchers, devaluing public trust in science if a research paper is not adequately peer reviewed, misleading other researchers attempting to build on unreproducible or fake results. However, a word of caution is in order here, it must be noted that some of the points listed in the previous sentence can also apply to papers published in highly ranking reputable journals.

It is well understood, including from recent analysis conducted by Macháček and Srholec (2021), that publishing in PPJs+ and citation of articles published in PPJs+ are more prevalent in some

countries, such as Balkan countries, Russia, Italy, China, India (Abalkina 2021; Glendinning et al., 2018; Moher et al., 2017b), than in others. However, this is a truly global problem, no country is immune, therefore helping to address PPJs+ is the responsibility of everyone involved in academic research.

It is clear that more needs to be done to stem the high demand for such services. The most obvious first step is to raise awareness, starting with people already interested in and committed to academic and research integrity. Accordingly, the ENAI working group IN\_A\_DIP (Integrity in academic dissemination and publishing) is focused on improving understanding of this phenomenon by designing materials and running workshops to highlight this

phenomenon and the dangers and consequences to research and academic publishing globally.

This workshop will introduce the ENAI working group IN\_A\_DIP and the focus of its work. Links to useful materials will be provided that are available for free. Practical examples of how PPJs+ operate, deceive and market their services will be used to highlight how to distinguish between genuine and disreputable services.

This is a vast subject area, so we will not have time to cover everything of interest, but we will try to leave participants with something they can directly use for their own benefit or teach to their students. The expectation is that what is learnt from this workshop will spark an interest in finding out more.

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# ACADEMIC INTEGRITY SOCIALIZATION AND LANGUAGE COMPETENCE TRAINING FOR UNDERGRADUATES DURING THE COVID-19 PANDEMIC: A CANADIAN UNIVERSITY'S EXPERIENCE

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## KEY WORDS

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international students, educative approach, academic writing, academic integrity, English as Additional Language students

International students with low Academic English have been over-represented in contract cheating (e.g. Bretag et al., 2019) and many cases of textual plagiarism. As such, these students are often vilified as likely cheaters and plagiarist although in reality they are disadvantaged due to their non-Western perspectives as they try to find their way in academia that has for centuries been dominated by Western academic writing norms and conventions. In fact much of textual plagiarism committed by a student with low Academic English may reflect the developmental stage of the student's language ability and previous learning practices. Since students with low Academic English find it linguistically challenging to paraphrase and even more challenging to quote (Pecorari, 2015), it is essential that students be supported to get sustained source-based writing practice with instructor feedback. Furthermore, students also need to be provided with opportunities to enable them to gain "academic integrity socialization experiences" (Bertram Gallant et al., 2015, p. 227).

The necessity of remote learning during the pandemic exacerbates the challenges some international students with low Academic English face in dealing with the academic demands of their courses and the writing needs. This is because these students are living in their home communities and interacting with their social groups in their home language while they have to cope with the sophistication

of the written academic language in their course texts and much of their academic work. This paper presents the proactive approach taken by a Canadian university in simultaneously addressing the need to educate students about academic integrity while improving their language competence. This was done using the educative (E) approach to introduce students to academic integrity, followed by a phase of strong academic language development (LD) along with learner empowerment (E) implemented through a one-month learner-driven and instructor-supported program that directly impacts student's engagement with one or more of their credit courses. As a non-credit co-curricular program offered at the start of the semester to support students from all departments across campus, this program has attracted participation from a large number of first- and second-year students with low Academic English competence. The quantitative analysis of students' output (e.g. volume of written words in a month), responses to an anonymous survey instrument (to study student perception of the experience and support) as well as the qualitative analysis end-of-semester self-assessment reflections of extent of goal attainment will be triangulated to establish the viability of this ELDE model for supporting students with low Academic English in gaining academic integrity socialization experience as well as develop the competence and confidence to participate in the

academic community. As this program has been a long-running program that had to be pivoted to be fully online with mainly asynchronous communication coupled with a total of one-hour virtual one-on-one meeting per month with the instructor, the pedagogical framework was easily transferred to the fully-online iteration. However, in acknowledging the additional challenges that international students in countries where English is a foreign language face when dealing with the academic integrity and academic writing expectations in a Canadian university, the pedagogical practices of the writing instructors were refined to better implement a Community of Inquiry (Garrison et al., 2010) framework that could

better socialize students for interrogating their source texts and developing a better authorial voice.

As this expanded educative approach has much potential for research, participants are invited to a discussion of how an increased emphasis on this approach instead relying on surveillance and detection could lead to better teaching-learning outcomes. Participants are also invited to explore the analysis of this cost-effective program for implications for supporting the academic integrity and language development training for international students with low Academic English proficiency in different contexts.

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# ACCURACY OF REFERENCING IN MASTER'S THESES REFLECTING INTEGRITY IN ACADEMIC WRITING

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Academic integrity and internationalization of higher education are themes widely covered in research. This paper presents a study combining these themes and more specifically, focuses on integrity in academic writing in Master's theses within internationalization of Finnish higher education.

The Finnish language does not have a direct equivalent to the word 'integrity' and often 'ethics' is used in the context of integrity in academic writing. A frequently used definition of integrity is the one presented in the Cambridge dictionary: "the quality of being honest and having strong moral principles that you refuse to change". Merriam Webster dictionary adds another word to the content of the definition: "incorruptibility". The content of academic integrity is defined and explained for the Finnish higher education sector in RCR-guidelines (TENK 2012) that were originally written in Finnish, Swedish and English, but later translated also to Chinese, Russian and Spanish. Academic writing as such is not mentioned in the guidelines, but students, teachers and researchers are supposed to take "due account of the work and achievements of other researchers by respecting their work" and "citing their publications appropriately" (TENK 2012, p.30).

Internationalization of higher education in Finland has broadened in the 21st century. Finland offers higher education to international degree-seeking students, and follows the principles of internationalization at home (Weimer et al. 2019). In the recent policy by Finnish Ministry of Education and culture (2020) higher education is described to have "strong learning outcomes" that "provide ample evidence of the quality of Finnish higher education". This kind of quality discourse has not been questioned and for example academic writing outcomes or quality of theses have not been evaluated. In the EU report on internationalization of higher education (de

Wit et al. 2015, p.95) it was noted that "Finnish universities and universities of applied science are far too accustomed to working towards the achievement of quantitative goals in their internationalization efforts" and "...Finnish higher education institutions must become more quality-oriented in their approach to internationalization."

This paper presents a study that partly replicates the study published in 2014 analyzing the accuracy and consistency of referencing in theses (Moore 2014). The analysis instrument that was developed for the 2014 study is used in the current study. The data consist of a purposive sample of 28 English language Master's theses that have been accepted in Finnish Universities of Applied Sciences in 2020 and published in Theseus. The sample covers one percent of Master's thesis published in Theseus in 2020 and it is estimated to cover 10 percent of Master's theses written in English. Accuracy of referencing is categorized into four categories: accurate, some inaccuracy, constant inaccuracy and misleading referencing/plagiarism. The analysis was performed "manually" using the browsing tool first in Theseus to form the sample, and second in analyzing the use of references. If inconsistency or inaccuracy was detected in between in-text citations and the list of references, simple plagiarism check-ups were done using Google to identify possible plagiarism. Specific attention was paid to the methodology chapters and accuracy of referencing used in methodology. In many theses students show that they master referencing and follow the integrity guidelines in writing. However, a significant proportion of theses have inaccuracies or mistakes in referencing. Patterns of writing inaccuracies are diverse, partly similar to those found in the 2014 study (Moore 2014): confusing references, quotations without quotation marks or page numbers, the primary source is not

identified, and misquoting. New patterns of inaccuracy were found. Mistakes in author or publication details were found to originate back in time and place, e.g., a mistake in the title of the referred book can be found in texts published on the other side of the world resulting in a truly international mistake. Other inaccuracies in referencing are: rearranging the names of authors in alphabetical order and thus referring to the wrong person as the first author; referring to the authors by their first names; referring to texts on commercial websites which, in some cases, are not available anymore less than a year after the publication of the thesis.

The scrutiny of methodology in theses reveals vast differences in quality of references used. All theses in the sample have a methodology chapter written, but the content varies from no references at all to profound and detailed reflections of the methodology with references to appropriate sources. Internationalization at home is manifested in the data when the student uses Finnish literature and paraphrases Finnish text in English. It is noteworthy that Finnish methodology guides are referred to also in theses written in English which can be seen as using secondary sources, knowing that the author of the guide has referred to methodology books originally written in English. In some occasions the student's translation (back) to English has led to

a mistake in the meaning of the sentence. Several plagiarized text columns were also found in the analysis.

Based on the analysis of 28 recent Master's theses, written in English and accepted in Finland, there is evidence that plagiarism is present in theses in the context of internationalization of higher education. The writing instructions given by each HE institution are not always followed even if statements from TENK have presumed otherwise (Moore 2021). Referencing was found to be accurate in six theses (21%), and some inaccuracy was found in seven theses (25%). In 15 theses (54%) inaccuracy of referencing was constant, references were misleading or the thesis contained plagiarism. Internationalization at home and the unquestioned use of English language (Weimer et al. 2019) has led to situations in which neither the teacher nor the student is using their mother tongue, and the linguistic level of a Master's thesis is not sufficient. The results of this study call for increased quality orientation in Finnish higher education and evaluation of contents and outcomes of higher education programs that are offered to degree-seeking international students and as internationalization at home. There is a need for international external evaluation of Finnish higher education outcomes and a need for international cooperation in plagiarism research.

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# PRACTICES OF ACADEMIC INTEGRITY IN TEACHER EDUCATION PROGRAM IN NEPAL

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Integrity is a value-based solution oriented holistic approach in resolving personal and professional problems. The main agenda of academic integrity is to develop the quality of scholarly work. Universities in Nepal have started to develop and implement policies on academic integrity to prevent misconducts. The main objective of the research was to explore the present scenario of academic integrity with reference to students' knowledge, practices, and problems in post/graduate teacher education programs in Nepal. To present solution strategies/mechanisms for developing academic integrity was an additional objective of the research.

To reflect the status of academic integrity, a college offering post/graduate study: Master, M Phil and PhD level in teacher education programs was selected. A quantitative-qualitative with quantitative focused sequential mixed methods research was applied. In the first phase, the survey was the research design. A team of nine members having five faculties and four students from the college was formed. The team developed and finalized the survey questionnaire through a week-long workshop. The questionnaires were distributed to each student in their respective classes and asked to bring the next day. There were around 350 students in the college and 162 students returned the questionnaires. These 162 students are the sample size of the study. Then, in the second phase, eight students of different groups were selected for an interview with a view to explore reasons for the existing practices and to suggest appropriate mechanism(s) for developing academic integrity in the college.

Based on the data, getting information about academic integrity is the major problem because

around half of the students' responded that they do not have access to information about academic integrity. About 60% of the students were familiar with mis/conducts: Plagiarism, collusion, fabrication, cheating and solicitation. Most of the students were familiar with the citation and reference convention but they responded that they are facing difficulties in paraphrasing and rephrasing. The level of their familiarity about academic integrity is information. Their responses helped us to state that they are struggling in skill level particularly they are having greater challenges in writing academic papers or assignments.

Students' contribution in-class group work and outclass group work vary. They seek their contributions when they are in-class activities. Some of the students who still wished to be named in activities without contributions was another major problem. Students start to learn about citation and reference at the eleventh hour and are not able to complete everything within the deadline is the one of main reasons for misconduct. Cheating in exams and copying answers from others are the two major academic misconducts. The main reasons for these misconducts are professional pressure, unknown consequences and obviously teaching learning system.

Students' expectation for academic integrity moves beyond formal teaching learning processes. They expect a strong support system and policy on academic integrity which moves beyond the existing rule compliance approach. The higher education institutions are suggested to develop a strong support system for leaning, updating, and upgrading the skills of students in academic integrity along with their regular academic programs.



# “I WAS RIPPED OFF”: EXAMINING THE DISCOURSE OF CONSUMER ENTITLEMENT IN COMMERCIAL CONTRACT CHEATING

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When students outsource an assessment task to a commercial essay mill in order to contract cheat, they run many risks, from experiencing the consequences of academic misconduct to purchasing an essay truly worthy of a resounding fail. As Sutherland-Smith and Dullaghan (2019) note, “You don’t always get what you pay for” (p. 1). For many academic staff, contract cheating is an egregious breach of academic integrity and violation of the norms of the academic community (Bretag et al., 2018). However, in a commercialised world of higher education where learning is perceived as transactional (Lines, 2016), students may view the outsourcing of assessment to a third party as a decision borne of utility where the ends justify the means.

In this study I consider the nature of feedback and complaints found on essay mill review sites through a purposeful harvesting of posts. The comments, indicating disappointment with the quality of material provided by commercial companies, do not acknowledge a violation of academic integrity, instead focussing on the breach of contractual understanding between the customer and the commercial operators tasked with preparing their assessment.

However, it should be noted that many, if not most, of the reviews posted on essay mill review websites are not genuine (Dawson, 2020). Companies frequently self-post positive reviews to attract customers, and flood competitors’ sites with negative reviews. Even so, when the potential cheater, undertaking a diligent investigation of the ‘best’ contract cheating sites, encounters these reviews they are immersed in a discourse of consumer entitlement.

The language used by websites, reviews and ‘complaints’ clearly embraces the discourse of commerce

(Kaktiņš, 2018), however it is worth noting the additional overlay of a legal argument:

In the case of buying a paper, it’s a “victimless” situation because the professional writer agrees to turn over the paper’s full ownership rights to the customer who orders them, making the customer the “original author”. (<https://www.ihatewritingessays.com/safe-essay-services#legal>)

This implies that the commissioned author voluntarily and legally hands over intellectual copyright and ownership of material to the buyer, so that a student could be persuaded to absolve themselves from any guilt associated with theft or unauthorised use of text and ideas. This spurious argument conveniently feeds into the issue that students do not necessarily understand, or share with the academic community an understanding of, the meaning of plagiarism (Gullifer and Tyson, 2014).

When essay mills advertise that their products are ‘plagiarism free’, citing percentages as remarkable as 101% (essaymills.com), the emphasis on percentages resonates with the myth that the text similarity index number is the final arbiter of plagiarism (Weber-Wulff, 2019). In many ways technology has facilitated the depersonalisation of plagiarism. From the anonymised keystrokes of copy and paste to the remote and commercial transaction of contract cheating, the actual meaning of plagiarism as the unacknowledged use of another person’s words, artifacts and ideas has been obfuscated. In our approach to inculcating the norms of academic integrity, including a shared understanding of plagiarism, we need to acknowledge that students are being immersed in an explicit discourse of consumer entitlement by the industry of contract cheating.

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# 'NEPOTISTIC JOURNALS': A SURVEY OF BIOMEDICAL JOURNALS

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## KEY WORDS

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Bibliometrics, Editorial Policies, Publishing, Scientific integrity, Journalology

## CONTEXT

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Convergent analyses in different disciplines support the use of the Percentage of Papers by the Most Prolific author (PPMP) as a red flag to identify journals that can be suspected of questionable

editorial practices. We examined whether this index, complemented by the Gini index, could be useful for identifying cases of potential editorial bias, using a large sample of biomedical journals.

## METHODS

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We extracted metadata for all biomedical journals referenced in the United States National Library of Medicine, with any attributed Broad Subject Terms, and at least 50 authored (i.e. by at least one author) articles between 2015 and 2019, identifying the most prolific author (i.e. the person who signed the most papers in each particular journal). We calculated the PPMP and the 2015-2019 Gini index for the distribution of articles across authors. When the relevant information was reported, we also computed

the median publication lag (time between submission and acceptance) for articles authored by any of the most prolific authors and that for articles not authored by prolific authors. For outlier journals, defined as a PPMP or Gini index above the 95th percentile of their respective distributions, a random sample of 100 journals was selected and described in relation to status on the editorial board for the most prolific author.

## RESULTS

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5 468 journals that published 4 986 335 papers between 2015 and 2019 were analysed. The PPMP 95th percentile was 10.6% (median 2.9%). The Gini index 95th percentile was .36 (median .18). Correlation between the two indices was 0.35 (95CI 0.33 to 0.37). Information on publication lag was available for 2 743 journals. We found that 277 journals (10.2%) had a median time lag to publication for articles by the

most prolific author(s) that was shorter than 3 weeks, versus 51 (1.9%) journals with articles not authored by prolific author(s). Among the random sample of outlier journals, 98 provided information about the composition of their editorial board. Among these 98, the most prolific author was part of the editorial board in 60 cases (61%), among whom 25 (26% of the 98) were editors-in-chief.

## DISCUSSION

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In most journals, publications are distributed across a large number of authors. Our results reveal a subset of journals where a few authors, often members of the editorial board, were responsible for a disproportionate number of publications. The papers by these authors were more likely to be accepted for publication within 3 weeks of their submission. To enhance trust in their practices, journals need

to be transparent about their editorial and peer review practices. We hope that further research will help to establish these indexes as an additional resource for publishers, authors, and indeed scientific committees involved in promotion and tenure, to screen for potentially biased journals needing further investigation considering integrity and quality of review.

# WHO IS RESPONSIBLE FOR INTEGRITY IN THE AGE OF ARTIFICIAL INTELLIGENCE? AN ANALYSIS USING THE EXAMPLE OF ACADEMIC WRITING

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## INTRODUCTION

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In this workshop we will focus on the impact of the increasing changes in academic practices due to tools based on Artificial Intelligence (AI). The guiding question for the workshop is who is responsible for ensuring academic integrity in such practices. Our research results so far (Wilder et al., 2021) show that the previous concept of integrity, in which the individual or the collaboration bears ultimate responsibility for both the process and the results of their work, can no longer be sustained in the age of AI. The system of human-machine-cooperation, for example in the production of academic text using AI-based

tools, is far too complex for individuals to understand and take responsibility for all the processes involved. This outcome requires a fundamental rethinking of the distribution of responsibility for academic integrity. We have designed an initial model that proposes how responsibility can be distributed across broader shoulders. The aim of the workshop is to present, discuss and further develop this draft and thus to initiate what we believe is an urgently needed discourse on the future of academic integrity in times of AI in the scientific community using the example of AI-based academic writing.

## BACKGROUND

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The fact that AI will revolutionize traditional academic practices is no longer contentious, in particular, since there have been important technical breakthroughs using AI (The Royal Society, 2017; The Royal Society & The Alan Turing Institute, 2019). However, the pervasive presence of AI even in our lives is often unperceived and there is a lack of conscious awareness for the implications. The quality of AI-based tools for text production based on GPT-3 such as copy.ai oder shortlyai.com has improved significantly, so that the outcomes, for instance translations or texts, often are indistinguishable from human ones (Radford et al., 2019; Scott, 2020) or do even outperform college students (EduRef, 2021). New possibilities open up when one thinks of the active and conscious integration of AI-tools into

working processes. In journalism, for instance, AI is already used for research and news production with the objective of both more efficiency and new impulses, but not without a discussion about the ethical questions that comes with the use and yet unpredictable potential of AI-tools (Beckett, 2019). And the use of AI for text production is also becoming increasingly apparent in the context of academic education, as well as the opportunities and risks associated with it (Weßels and Meyer, 2021) such as submitting fully AI-generated texts as examination papers. The first declarations and guidelines for responsible work with AI are being published, however, they are mostly focused on the development of the programs and only give a vague

understanding of how those guidelines should be implemented (Université de Montréal, 2018).

Currently, the responsibility for academic writing lies entirely with the authors, both in terms of the production process and the outcome. This distribution of responsibility must be reconsidered considering that the process from developing to using AI and dealing with the effects of AI-usage involves several actors. In order to avoid the issue of responsibility diffusion in this complex system (DeCamp and Tilburt 2019) by making the human actors involved transparent, we propose the following different responsibility roles for human-machine-collaboration:

1. The “creator” of the AI develops algorithms of a program and models, selects, and provides the set of used data, tests the software, monitors the system etc.
2. The “tool expert” of the AI selects and purposefully configures the AI- application.
3. The “user” of the AI integrates the AI-application to their work as
  - producer who collaborates with the AI consciously.
  - consumer who receives, spreads and comments AI-generated texts.
4. The “affected person” is unaware of the AI’s involvement in the process or ignores it and is indirectly affected by the results as a member of the (academic) society.

## METHODOLOGY

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For the purpose of achieving the specific objectives set for the workshop as efficiently as possible, the workshop will be divided into six steps:

**Step 1: Presentation of the status quo** The first step is to present the current development of AI in relation to academic text production and to outline the associated challenges for academic integrity. Finally, the first draft of the different roles is presented.

**Step 2: Defining the role differentiations** After the presentation of the model, it will be discussed with the participants whether the proposed differentiation is appropriate or needs to be adapted.

**Step 3: What can each role be responsible for?** All workshop participants are assigned to the defined roles in small groups. There they are to determine

which specific responsibilities can be covered by this role. The results are recorded.

**Step 4: Consolidation of the results in the plenary session** Here, each group briefly presents the results they have worked out. All results are presented in key words on a virtual whiteboard.

**Step 5: Developing a who-is-where-responsible matrix** Ideally, a two-dimensional matrix should be developed in this step which shows at a glance which role is responsible for which aspects of academic integrity.

**Step 6: Final discussion** Finally, the results of the workshop are summarized and reflected on and the further handling of the results is discussed.

Miroboard will be used for the documentation of the results.

## EXPECTED OUTCOMES

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The aim of the workshop is to engage in an intensive discourse on the integrity- responsibility model with the participants. At the same time, the draft model is to be subjected to a validity check by the participating experts for academic integrity and further elaborated at the same time. The manifested outcome of the workshop is the further development of the role differentiation into a two-dimensional matrix defining on one axis the

different roles responsible for academic integrity in the complex human-machine-collaborations. And on the other axis, the different sub-areas of academic integrity are listed, i.e., what responsibility is taken for. Ideally, the matrix shows at a glance which role is responsible for which aspects. These results will then be presented to the wider community for discussion in a publication in which the participants will be named as collaborators in the development of the matrix.

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# **Student Involvement in Building Culture of Academic Integrity**

# INDIGENOUS ACADEMIC INTEGRITY: PARADIGMS INTO PRACTICE

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Internationally there are gathering movements of decolonizing and Indigenizing post-secondary education. Indigenous peoples with their approaches to gathering, sharing, and safeguarding knowledge for millennia are key to these movements. When it comes to academic integrity, Indigenous people have much to give to strengthen the diversity of thought and theory in the academy.

In Canada, Indigenous peoples are distinct and diverse nations and communities who carry forward the knowledge of millennia in their stories, songs, protocols, ceremonies, and histories. As Indigenous

peoples we know that the knowledge we carry must be authentic, validated, and shared through principled action in order for our peoples to survive and thrive into the future.

Join us as we discuss the paradigms and principles of academic integrity based on Indigenous values. Providing the philosophical and the practical, this presentation is designed to explore Indigenous approaches to the caretaking of knowledge for both Indigenous and non-Indigenous members of the post-secondary community.

## WORKSHOP DESCRIPTION

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This presentation will explore the Indigenous Academic Integrity project. Designed to serve Indigenous and non-Indigenous scholars, students, faculty, and community, the Indigenous Academic Integrity project provides insight into paradigms and practices founded in shared values and parallel ways of being. Using a multimodal approach to storytelling, including oral, visual, and written mediums, this presentation demonstrates the formal rigour, validation, and approaches found within Indigenous paradigms that serve to caretake and protect the integrity of knowledge. This resource provides concrete practices that centre Indigenous academic integrity and stem from Indigenous theories and Indigenous research, and it focuses on the principles of relationality, reciprocity, and respect.

Equity, diversity, and inclusion have never been more important to our global community than

they are today. The inclusion of new ideas, new perspectives and diversity of thought are the focus of movements around the world. The caretaking of knowledge is fundamental to every culture and every people, yet academic integrity is often considered from a single perspective, a western, often legalistic, and individualist perspective. With growing international calls to decolonize and Indigenize post-secondary education, this presentation offers insight into the values-based, collectivist paradigms, and practices of Indigenous academic integrity.

The presentation will outline the Indigenous Academic Integrity project and how it seeks to explore the many ways of being, connecting, and learning which support both Indigenization and decolonization in the field of academic integrity.

## LEARNING OUTCOMES

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- Identify specific themes and principles of Indigenous paradigms.
- Gain insight and examples of Indigenous paradigms in practice.
- Ability to demonstrate concrete knowledge on differences between decolonization and Indigenization in the academy.

My hope, as an Indigenous scholar, is that my research and this project will support reconciliation and create bridges of understanding between Indigenous and non-Indigenous academia. In order to support the inclusion of Indigenous voices in

scholarship, non-Indigenous academics must be able to understand the validity and rigor of Indigenous ways of knowing. The intent of this project is to outline the paradigms of Indigenous academic integrity and demonstrate the practical implementation of Indigenous principles and values. This presentation would allow me to connect with social workers interested in social work education, the perfect group to proof these ideas and engage in a discussion on this topic. I look forward to coming together with my peers and social work community members to build bonds of understand and respect.

# DEVELOPING A SHARED CULTURE OF COMMITMENT TO ACADEMIC INTEGRITY: A STUDENT-STAFF PARTNERSHIP APPROACH

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Academic integrity is a priority issue in Irish Higher Education (QQI, 2018). Creation of a culture of shared responsibility for, and commitment to, academic honesty is key to the establishment of an environment that values, fosters and promotes academic integrity. Yet issues relating to academic integrity may be understood differently by institutions, by staff, and by students (Macdonald and Carroll, 2007). The establishment of a shared understanding of academic integrity in Higher Education, by all stakeholders, is therefore essential. Authentic student-staff partnerships, whereby “students are directly involved as change agents and partners within the system” (Collins et al 2016, p. 16) are one way in which dialogue about, and shared understanding of, issues surrounding academic integrity might be fostered.

This presentation, delivered by students and staff, will discuss how a student-staff partnership initiated at [UNIVERSITY NAME] is contributing to the development of a shared culture of commit-

ment to academic integrity in our institution. The partnership was established as part of the Irish University’s Association (IUA) Enhancing Digital Teaching and Learning (EDTL) project, and has focused on academic integrity as a key area of work. For Cook-Sather, Bovill and Felton, (2014, pp. 6-7) effective student-staff partnership is “a collaborative, reciprocal process through which all participants have the same opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualisation, decision making, implementation, investigation, or analysis”. Our paper will share some of the strategies we have employed in order to engage staff and students in dialogue aimed at the development of shared understanding around academic integrity. We will also share some of the academic integrity resources and supports that have been developed ‘by students for students’, including student-led workshops and student-driven social media campaigns.

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# STUDENT INSIGHT ON ACADEMIC INTEGRITY

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There is no shortage of advice from university administration and faculty on ways educational institutions can improve their culture of academic integrity. To put it bluntly, some percentage of students violate academic integrity, many faculty and administrators complain that they do, and at various points in an institution's history – often in response to a cheating scandal or a growing unease that the situation has gotten out of hand – faculty and administration will introduce new programs, policies and/or pedagogical innovations designed to improve academic integrity (e.g. Packalen and Rowbotham, 2020; Raman and Ramlogan, 2020).

For these efforts to improve academic integrity to be successful, however, administration, faculty and students must recognize that there is a problem, be motivated to solve the problem, and be willing to change their attitudes and behaviours accordingly. Change is also more likely to be effective and enduring when solutions incorporate the concerns and recommendations of all affected stakeholders (Eury and Treviño, 2019). In our review of the literature we found that faculty members and university administrators were both well represented in articles offering advice on ways to improve students' adherence to academic integrity. In comparison, students were frequently surveyed on what they do and why, but were only sometimes consulted on whether they perceived their behaviour as problematic, and if yes, what they thought should be done to improve that behaviour.

Our research addressed this shortcoming in the literature by using a methodology – computer-facilitated or electronic focus groups – that to our knowledge had not been used previously to study academic integrity. Due to its combination of anonymous written entries with oral conversation this method was ideal for discussing confidential and sensitive issues. In Winter 2019, 44 Canadian undergraduate business students participated in one of four year-specific computer-facilitated focus groups.

Students responded to questions about the general attitudes among themselves and their peers with respect to academic integrity. They also provided specific suggestions of actions that both students and faculty might take to improve the culture of academic integrity in their program.

Students perceived themselves and their peers to have varying levels of adherence – from ignorance to best effort to selective to poor to complete disregard – and provided different justifications at each of these levels for why they believed they and their peers behaved as such. These responses were skewed by cohort and reflected a growing ambivalence or hostility to academic integrity as their time in the program progressed.

Students also understood what they could do at both a macro- and micro-level to improve their own academic integrity and the culture of academic integrity in the program. Students in the first year of the program focused on ways they could change their own perspectives and attitudes, those in the second year reduced the scope of their ambitions and focused on small proactive steps that would minimize specific incidences, and those in the third and fourth year spoke to ways they could help to change the culture of academic integrity in which they were situated.

Finally, students provided numerous suggestions of actions that faculty and administration could take to improve the culture of academic integrity. These included program-wide suggestions around culture and policy and structure, those directed to the policy and its enforcement and numerous suggestions around coursework including flexibility around submission, learning supports and the logistics of testing situations.

Our contributions to the field of academic integrity are three-fold. First, we give voice to students in an area in which historically their opinions have been lacking, namely in the generation of specific actions that both students and faculty can take to improve academic integrity. Second, we

connect students' opinions and suggestions to the broader literature on academic integrity, classroom pedagogy, and organizational culture to interpret our findings. Third, we introduce readers to an uncommon methodology, computer-facilitated focus groups, which is well suited to gathering rich and diverse insights on sensitive topics.

The chapter on which this abstract and associated presentation are based is forthcoming in Eaton, S. E., and Christensen Hughes, J. (Eds.). (2021). *Academic Integrity in Canada: An Enduring and Essential Challenge*. Springer.

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# THE ROLE OF STUDENTS IN THE PRESERVATION OF ACADEMIC INTEGRITY

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Academic integrity is usually protected at European Higher Education Institutions (HEIs) through the work of various committees, expert bodies and services offered to students. In some cases, students get an opportunity to follow different courses aimed specifically to tackle certain aspects of academic integrity (i.e. courses on scientific research that aim to educate students on plagiarism and how to avoid it). However, academic integrity as an important part of higher education is still an underexplored topic among students at the European level.

European Students' Union (ESU) is the umbrella organisation of 45 National Unions of Students from 40 countries. Our members are student-run, autonomous, representative and operate according to democratic principles. Since 2020, ESU has been a member of the European Network for Academic Integrity (ENAI), and it is actively involved in international advocacy on academic integrity from students' perspective. Our goal is to ensure that students actively participate in promoting the values of academic community, uphold them and share the good practices, not only on the international and national levels, but locally within their communities as well.

Through our participation at the European Conference on Academic Integrity and Plagiarism (ECAI) 2021, ESU will present various ways in which students can actively engage in protection of students' rights, mainly through offering peer-to-peer support in the aspects of academic integrity, academic freedom and human rights. Students' rights within this topic, as defined by ESU, are guaranteed rights and obligations all students' have during their time of studies at a particular higher education institution of their choice. They include the rights to students' support services, right to the quality of education, right to vote in students' elections and

to be a candidate in the elections, right to organize into students' groups, right to the protection of their intellectual property etc., without any discrimination based on faith, origin, gender, culture, belief<sup>1</sup>. We will explore the impact that students' representatives can have through active participation in promotion of these values, not only as members of university bodies, but through the role of students' ombudspersons as well.

Additionally, we shall present some of the most common breaches of academic standards students notice among their colleagues and teaching staff, warning about the importance of critical dialogue, sharing best practices and assuring that integrity is honoured by all members of the academic community (based on internal consultation with ESU's Board members). Such breaches include plagiarism, contract cheating, collusion, cheating, dishonesty, data fabrication, conflict of interest, ghost authorship and students' intellectual property protection. We want to help institutions engage students more by including them in different ethical bodies or bodies on academic integrity values, and training them to spread awareness, actively participate in upholding academic values, and contribute to the development of new approachable ways to counter academic dishonesty.

On the international level, students can help in sharing best practices through the newly established Working Group for students of ENAI, welcoming all those who wish to contribute to upkeeping the before-mentioned values. How can these students become a voice on the European level for the desired outcomes, and help their colleagues in establishing transparent educational systems? We aim to demonstrate the necessity of their involvement in cooperation with the HEIs existing systems, experts and practitioners.

<sup>1</sup>2008 Students' Rights Charter; European Students' Union; 2008; link: <https://www.esu-online.org/?policy=students-rights-charter>



# CREATION OF AN ACADEMIC INTEGRITY CLUB AT GULF MEDICAL UNIVERSITY – SHARING OUR EXPERIENCE

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## KEY WORDS

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academic integrity, academically dishonest behaviours, ethics, academic integrity club, health professions students

## BACKGROUND

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Gulf Medical University (GMU) is a leading university in United Arab Emirates (UAE) offering programs in health professions. As future healthcare workers, academic integrity plays an important role in the lives of the students. Studies have shown that students who engage in academic misconduct behaviors are likely to showcase future unethical behavior in patient care<sup>1</sup> or in other aspects of life<sup>2</sup>. Though the value of academic integrity is deep rooted in most students, a few, intentionally or unintentionally, engage in academic dishonesty behaviors despite the honor pledges or other academic misconduct policies in many universities. An earlier study<sup>3</sup> had investigated health professions

students' perceptions about academic integrity in UAE. The results of that study revealed that though a majority of students knew what academic integrity meant, academic misconducts like copying someone else's work, and "helping" others by doing their work were not taken seriously or considered dishonest. Factors such as peer pressure, pressure to perform well, and lack of time to complete assignments were some reasons that students reported for engaging in academic dishonesty. Students in that study had also themselves suggested that availability of resources on avoiding plagiarism, reducing academic workload, and peer support could be ways to address the problem.

## THE IDEA OF AN ACADEMIC INTEGRITY CLUB

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As students, our interest in academic integrity first developed when we participated online in a poster competition organized by the International Center for Academic Integrity. When the Center for Academic Integrity in the UAE (CAIU) was launched in October 2020 with the aim of raising awareness about academic integrity in universities, colleges, and schools, we were given the opportunity to join as student board members. As members of the student board, our role is to promote the values of academic

integrity among the student community by hosting events that make learning about academic integrity enjoyable such as podcasts, talks by experts and senior faculty, practitioner series, etc.

As members of the student board of CAIU and keeping the findings of the earlier study in mind, the idea of a club to promote Academic Integrity on campus started to take shape. The goal of the Academic Integrity club is to help students identify dishonest behaviours and raise awareness about academic in-

tegrity. The motto of the club is “Academic Integrity for the students by the students”. This approach was adopted with the idea that students are more likely to react positively and participate in peer-led activities aimed to increase awareness, and to foster a culture of Integrity on campus. Building a culture of academic integrity takes time and effort, and includes four main steps starting from recognition of the issue, commitment to deal with it, generating the response and finally implementation of measures resulting in institutionalization of the culture.<sup>4</sup> Various types

of activities have been attempted in universities to promote ethical behavior such as truthfulness regarding cheating behavior,<sup>5</sup> a co-curricular honor and integrity program<sup>6</sup> and an academic integrity e-tutorial as part of the curriculum.<sup>7</sup> Since students are important stakeholders in this process, we planned to get student views on academic integrity in general, responses to the idea of an academic integrity club, and how such a club could assist them, by means of a survey.

## THE SURVEY

A short 6-question survey using google forms was prepared and pilot tested. All undergraduate health professions students at the university were invited to participate by email. Participation was voluntary and the survey was kept open for one month. Reminders were sent by email and announcements were also made in class. Students were asked to rate, using 3 or 4-point scales, their knowledge regarding academic integrity (poor-fair-good-very good),

importance of academic integrity (not important - somewhat important-very important), desire to learn more about academic integrity (yes-not sure-no), whether they found it difficult to discuss academic integrity issues with faculty (yes-sometimes-no), their interest to join the club (yes-maybe-no) and finally how they would like to learn more about academic integrity with an option for free responses.

## FINDINGS

121 students responded. Age of the students ranged from 18-23 years and 70% of the respondents were females. Students were from different colleges including medicine (38.84%), dentistry (12.39%), nursing (5.78%) pharmacy (2.47%), health sciences (37.19%) and healthcare management (3.30%). Most students were from year 1 (61%) followed by year 3 (14.9%), year 2 (13.2%) and year 4 (10%). Our findings indicate that 2 out of 3 students (66%) feel they have a very good/good idea about academic integrity with the rest indicating fair to poor knowledge. Most (98%) students felt academic integrity to be important for healthcare professionals and 76% wanted to know more about academic integrity. We also wanted to know if the students felt comfortable discussing academic integrity issues with the faculty. Only 6.7% said yes and the rest were divided between students who said “No (48%)” and those

who said “sometimes (46%)” indicating that there is a need for a forum where students can express themselves freely on matters related to academic integrity. A good number of students (43%) showed interest in joining the club while many indicated “maybe (48%)” to joining the club. Regarding the types of activities for the club, responses selected included workshops by senior students/experts (67%) followed by skits/podcasts/videos (53%) as well as case studies and debates (44% and 46%). Some other suggestions from the students received as free responses were: “This club is very important and wonderful it is possible, for example, to make a meeting in which you can explain more about this club so that the information can be clearer” and Apart from ‘Talks’ do focus on organizing interactive events for students, that involve students in different activities or tasks.

## CONCLUSIONS

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Keeping the above findings in mind we have launched the academic integrity club in GMU. We plan to organize a variety of events for students, actively engaging them and promoting knowledge and practices related to academic integrity. The idea being to change the culture of the university from a punitive

one to a preventive one with respect to academic misconduct. We will also be encouraging them to participate in various competitions conducted by international organizations making the whole learning process enjoyable and entertaining.

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# A UNIVERSAL APPROACH TO A CULTURE OF INTEGRITY: “A FAMILY BUILT ON TRUST”

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Reimagining a culture of integrity must include all stakeholders such as institutional alumni, current faculty, current staff, current students, and future students. Not long ago, the presenter’s institution implemented a new brand for academic integrity on campus, “A Family Built on Trust.” The institution attempts to be the family away from home for its students as well as a family relationship for its employees. A key aspect of this family built on trust is the “US” in the word “trust” signifying that the trust must not only come from the educators or administration, but it should come from all stakeholders of the institution.

This presentation will examine both the idea “A Family Built on Trust” as a conceptual framework of a culture of integrity while sharing actual examples from the presenter’s institution. The presentation will examine how institutional stakeholders (institutional alumni, administration, faculty, staff, students, and future student) must build and maintain a culture of integrity by looking at what they can do and how they can uphold the fundamental values of academic integrity (International Center for Academic Integrity, 2021) to have the family built on trust.

**Institutional Alumni:** Alumni already have their degree or certificate from your institution; however, they are relying on the current population to maintain the integrity of that degree. This presentation will examine the need for active alumni in various aspects of the university from assisting in job placement for students to assisting in the maintaining the culture of integrity beyond the classroom.

**Current Administration:** Administration is often the group who has decision making authority. This presentation will give ideas on how to interact with

the administration to show them the necessity for a culture of integrity at the institution.

**Current Faculty and Staff:** Current faculty and staff are the ones who will often be holding each other and students accountable for infractions of integrity. This group must be a major component of the culture of integrity so that they truly understand the mission and reason for such a push at the institution (Saddiqui, 2016).

**Current Students:** Of all the stakeholders to build a culture of integrity, students must be the primary group to include. Students hold each other to high standard and look to each other for societal cues on how to act and what to do. If students are working to uphold a standard of integrity, they will be able to be influencers of other students (Morris, 2018). This presentation will examine ways various institutions have used students to assist in building a culture of integrity.

**Future Students:** For some institutions, recruitment of future students is just as meaningful as retaining current students. The reputation of the institution plays a factor in that recruitment. Therefore, if the reputation is one lacking integrity, the recruitment process may fail or could possibly recruit those students who lack the integrity the institution would want.

**Community Beyond the Institution:** Part of the importance of building a culture of integrity at your institution is that when the students leave the institution, integrity is part of who they are and they then impact the community beyond the institution.

Overall, this presentation will give attendees practical ways to get stakeholders involved in creating a culture of academic integrity formulated around the six fundamental values of academic integrity.

## REFERENCES

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