ABSTRACT BOOK

5TH INTERNATIONAL CONFERENCE
Plagiarism Across Europe and Beyond

3RD INTERNATIONAL CONFERENCE
Shaping Ethics in Academia and Society

Plagiarism Across Europe and Beyond is jointly organized by Mykolas Romeris University, Mendel University in Brno, and the European Network for Academic Integrity and is co-funded by the Erasmus+ Programme of the European Union.

ENAI

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MYKOLAS ROMERIS UNIVERSITY

Mendel University in Brno

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5TH INTERNATIONAL CONFERENCE
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Shaping Ethics in Academia and Society

Conference venue:
Mykolas Romeris University
Ateities st. 20

19 – 21 June 2019
Vilnius, Lithuania

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Dear Readers,

You are invited to read the proceedings of abstracts of two conferences, which are held together. Mykolas Romeris University in Vilnius, Lithuania, jointly organizes these conferences in close cooperation with Mendel University in Brno, Czechia, and the European Network for Academic Integrity.

The first one is the 5th international conference **Plagiarism across Europe and Beyond**. This conference was for the first time organized in 2013 in Brno, Czechia as a final conference of the project "Impact of Policies for Plagiarism across Europe and Beyond." In 2017, 2018 and 2019, this conference is a part of the Erasmus+ Strategic Partnerships project "European Network for Academic Integrity." From the very beginning, this conference serves as a venue for both computer science contributions dealing with various methods of plagiarism detection, as well as for pedagogical contributions dealing with academic integrity and prevention of multiple forms of misconducts.

The second one is the 3rd international conference **Shaping Ethics in Academia and Society**. Social sciences are much more predominant at this conference. It focuses on ethical values and their role not only in academia but also in society as a whole. The topics of this conference also include research ethics and responsible research conduct as crucial presumptions of trust of the society towards the research and broad adoption of research outcomes in the society.

All abstracts in the proceedings were peer reviewed. Therefore, this book brings a number of high-quality contributions, which explore various problems of educational and research integrity, share best practices, and provide inspiration for prevention. The target audience is higher education teachers, researchers, and policymakers, as well as secondary school teachers.

On behalf of organizing team, I wish you an inspiring reading.

Tomáš Foltýnek

President of the ENAI Board

SCIENTIFIC BOARD

CONFERENCE DESCRIPTION

With regards to the crucial role of ethics and honesty in academic work and workplace, universities and business sector are in need of more effective policies against diverse misbehavior. Therefore, two sister conferences – the 5th international conference **Plagiarism Across Europe and Beyond** and the 3rd international conference **Shaping Ethics in Academia and Society** – aim to be a forum for sharing best practices and experiences by addressing issues of academic integrity and business ethics as well as contributing to relevant managerial solutions, such as governance ethics, sustainability and social responsibility. The conference brings together prominent scholars and practitioners in the field of academic integrity and business ethics from all over the world.

There were two types of submissions for the conference: extended abstracts for regular conference presentations and extended abstracts for workshops. We received contributions in the following conference topics:

- Ethical leadership in academia and society
- Ethical issues in academia and their influence on business
- Challenges in research integrity
- Making an effective university ethics infrastructure
- Teaching effective strategies to encourage academic integrity and prevent academic misconduct
- Addressing contract cheating
- Using e-tools and technologies for addressing academic misconduct
- International and national projects related to academic and research integrity
- Linkage between academic and professional ethics

We provided an opportunity to submit conference full papers to be selected for publication in one of the following journals: *Journal of Academic Ethics (JAE)* and *Journal of Management and Change (JMC)*. All papers will be subject to double-blind review and only the selected full papers will be invited for further consideration for publishing.

Conference *Plagiarism Across Europe and Beyond* is supported by the Erasmus+ Strategic Partnerships project 2016-1-CZ01-KA203-023949.

PRESENTATIONS

USING E-TOOLS AND TECHNOLOGIES FOR ADDRESSING ACADEMIC MISCONDUCT

Centralized national repository of theses and dissertations and centralized plagiarism detection system for higher education institutions in operation since 2010 – Slovak experience

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The reasons why Centralized national repository of theses and dissertations and Centralized plagiarism detection system for higher education institutions (aka under the common name SK ANTIPLAG) were implemented in Slovakia will be explained.

The single steps in pre-implementation, implementation and post implementation phases will be explained in detail. The comparison between SK ANTIPLAG and prevailing model of plagiarism detection will be analyzed.

Keywords: national repository, plagiarism detection, experience, theses, dissertations, collection, methodology, metadata, model, comparison, implementation.

Centralised electronic systems for managing student academic misconduct: Evidence from Australia

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As part of a holistic institution approach to addressing academic integrity, a working group was formed to develop, test and implement a centralised system to manage academic misconduct cases. The centralised system was designed to replace ad hoc faculty based systems, which required duplication of data and inconsistencies in coding and measurement. The complicated nature of the paper based system placed a heavy time and administrative burden on academic and professional staff, which discouraged some levels of reporting.

Phase 1 of the system was designed to interface with existing student datasets, improving accuracy, saving time through pre-population of student, subject and assessment information, in addition to having delegation and escalation workflows built in. Phase 2 has just been released (start of 2019) with enhancement requirements identified through the first year of operation, and to accommodate some additional functionality outside of the initial scope of work.

Like all technology systems related to academic integrity, insights can be drawn from the information both from what is reported, in terms of cases, assessment types and how cases are managed, and what is not reported, for example some assessment types, disciplines of study and who is not reporting cases.

The new system was introduced at the end of 2017, and has just produced its first 12 months of reporting data. This paper discusses the design considerations, benefits and insights gained from the process, in addition what has been learned from introducing a centralised electronic system to manage academic misconduct cases.

Please note: data will be included in the full paper. Due to the first year of full data just becoming available (for the 2018 year) the datasets are currently under analysis, and have to go through internal reporting processes therefore cannot be outlined in this abstract proposal.

Keywords: academic integrity, academic misconduct, university systems, academic reporting.

The unified anti-plagiarism system in Poland

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The Unified Antiplagiarism System (JSA) is a plagiarism-protection tool all Polish higher education institutions (HEIs) and research institutes are obliged to use. JSA checks theses, before they are defended, against the National Repository of Written Theses, Polish-language Internet resources (NEKST), Wikipedias in the most popular languages and databases of legal acts. The total volume of data used by the System to determine the originality of a thesis is now over 30 terabytes.

The System, built in 2017–2018 at the National Information Processing Institute, encompasses all areas of teaching and is free of charge for all HEIs and research entities. It has been available for checking theses since January 2019, while verifying doctoral dissertations will commence in October 2019.

Poland has opted for a publicly devised and funded antiplagiarism system so that universities and research institutions have free access to a high-quality tool whose performance is consistent across the country. Its development involved an open competition for algorithms and source codes of different solutions so that its architecture reflects the cutting edge in plagiarism detection technology.

We tested our methodology and tools during the afore-mentioned competition in 2017. In addition, using some reference theses, we compared JSA with such commercial systems as Plagiat.pl or Genuino in order to check the detection quality differences. We did not evaluate the System against Turnitin or other international plagiarism detection tools.

The System's operation can be roughly divided into four stages:

1. statistics
2. stylometry
3. identification of documents (say, on the Internet or in the Repository) from which text fragments may have been lifted into the checked thesis or dissertation
4. for selected documents found in stage 3 – more detailed identification of shared or similar text passages between them and the writing under investigation.

Re 1: basic statistical data are collected (regarding the number of words, characters, unrecognised words, special characters or characters from another language, distribution of word length) and compared with averages and distributions found in the Repository.

Re 2: internal analysis – detection, within a single document, of fragments possibly written by another author. Based on the entirety of the text being analysed, the System highlights passages attributable to another person or persons (assuming that the text has a principal author). The objective here is to determine the stylistic profile of the principal author and highlight blocs of text exhibiting stylistic features inconsistent with that profile.

Re 3: external analysis – singling out from the reference databases source documents, that is texts whose fragments appear to have been used in the thesis under investigation. Given that the set of source documents (or a reference corpus) is very large and thus searching it would be too time-consuming, we have developed a number of indices allowing us to build computing clusters.

Re 4: detection of passages (phrases / sentences / paragraphs) shared by two documents, the reference one and the one being checked for originality. JSA does these paired comparisons looking for four different kinds of plagiarism, in different variants:

- copy-paste,
- copy-paste + word order alteration,
- copy-paste + synonym substitution,
- copy-paste + synonym substitution + word order alteration.

During the first 4 months of stable-release operation, JSA has analysed 55 thousand theses, the median time of a single thesis analysis is about 5 minutes, it has almost 50 thousand active users, and 271 active universities. Infrastructure-wise, it has used almost 100 middle-class servers.

Keywords: JSA, anti-plagiarism, system, public, free, high-quality.

Testing of support tools for plagiarism detection

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Introduction

Plagiarism detection tools, also known as text-matching software, are expected to use state-of-the-art methods to detect plagiarism. The expected output is a suspicious document, where the plagiarized parts are highlighted (showing WHAT was reused), together with links to potential sources (showing WHERE these parts came from). To reveal HOW the source was changed and whether a particular case constitutes plagiarism, human examination is needed.

Current detection systems are quite good at finding copy-paste plagiarism, but unfortunately (and surprisingly) fail in finding obfuscated plagiarism, such as translation, paraphrase and summary (Vani & Gupta, 2016). There are a number of systems available for free or as a paid service, some are available online, while others can be downloaded and used locally. Academics around the globe are naturally interested in the question: How far can these systems reach in detecting plagiarism and to what extent are they successful?

In this study, we will look at state of the art plagiarism detection software and provide a comparison based on specific criteria by following a systematic methodology.

Related Work

There have been several initiatives to test the current tools that claim to detect plagiarism. The most methodologically sound comparison was conducted by Debora Weber-Wulff and her team between 2004 and 2013. In their last testing experiment in 2013, the researchers

compared 15 tools which were selected based on previous comparisons (Weber-Wulff et al, 2013). The testing set contained documents mostly in English and German.

After that time, there have been several more attempts at testing. Luparenko (2014) published useful comparative tables of the tools. An overview of detection systems summarizing their most important characteristics was also provided by Pertile (2015). Chowdhury and Bhattacharyya (2016) provided an exhaustive list of tools, but each was presented briefly and authors did not make comparisons. Vani and Gupta (2016) compared 4 publicly available plagiarism detection tools; however, the selection criteria they used are unclear.

It should be noted that none of these attempts was as systematic and methodologically sound as that carried out by Weber-Wulff and her team. The international team formed under the European Network for Academic Integrity decided to fill this knowledge gap by conducting a broad test of such tools using a clear methodology with the ultimate aim of the results being generally accepted. Both the initiative and the group are called "Testing of Support Tools for Plagiarism Detection" (TeSToP).

Methodology

In order to test the systems, a large collection of intentionally plagiarized documents in 9 different languages was prepared: Czech, English, German, Greek, Italian, Latvian, Slovak, Spanish, and Turkish. The documents use various sources, various plagiarism techniques (cut and paste, paraphrase, translation) and various disguising techniques. The testing set also contains original documents to check for possible false positives. All testing documents were prepared by TeSToP team members or their collaborators.

The documents are available in PDF, DOCX, and TXT form. The amount of plagiarism in each document and the sources used are determined according to TeSToP document set methodology, which is unavailable to vendors before testing. Each document was numbered according to an internal document-numbering scheme. Each document may belong to one or more specific subsets according to the language, type of plagiarism and disguising technique.

Approximately 20 vendors have agreed to participate in the testing. In the next stage, the documents will be submitted to the systems by authorized TeSToP members at a time unknown to the vendor. To ensure comparability, the time difference between submission to different systems will be as small as possible.

The reports will be reviewed by participating TeSToP authorized members and judged qualitatively. System default parameters will be used at all times; if values such as minimum word run are discernable, they will be recorded. The evaluators will judge the following aspects:

- Coverage (How much of the known plagiarism was found? How much plagiarism was reported?)
- Usability (Understandability of report; Usefulness)
- Price (where available)

We are aware of the fact that percentages of similarity do not carry any information on the

actual extent of plagiarism and may even be misleading. Therefore we decided to evaluate the coverage by awarding 0-5 points for each test case, as per the following criteria for the amount of plagiarism detected (all (5), major portion (4), more than half (3), half or less (2), very minor portion (1), none (0)). For false positives, the scale is reversed.

The testers keep the right to make modifications in the evaluation criteria if the testing results will reveal new aspects that should be taken into account. However, the testers will notify vendors about possible changes before introducing them.

The final report will be made available to the vendors prior to publication. They can send a response to the assessment of their system. If any mistake is revealed, it will be corrected. Other responses will be included in the final report. The test report will be available online as an open access document. The authors of the study may publish academic papers on the test, but they are obligated to always include a reference to the open access document.

Expected Results

Based on the above mentioned points, usefulness and expert judgement of the testing team, the systems will be classified into four groups using a qualitative assessment:

1. Useful for academic institution
2. Partially useful for academic institutions
3. Marginally useful for academic institutions
4. Unsuited for academic institutions

At the time of submitting this abstract, the documents are being uploaded to the systems. The results will be fully evaluated by the spring of 2019. However, the conference presentation will endeavour to cover the most important findings of this evaluation.

Keywords: plagiarism detection, text matching software, testing.

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Comparing text-matching software systems using the document set in Latvian language

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The formal education especially diploma of higher education often opens the doors to the career opportunities and success in the future life. Not all the students are going a fair path to receive the acknowledgment of education acquired. Moreover, it is seen and discovered that also teachers, employers and employees are plagiarizing their works as well. The more developing are technologies, the more complex and unseen ways how students are cheating are discovered. Therefore there is a need to create more advanced tools to more precisely detect and afterwards make a very detailed report indicating and approving the existence of plagiarism in plagiarized students' or even teachers' work.

Text-matching software systems are usually used for revealing plagiarism. They detect whether equal or similar parts of text can be found in other written sources which are located in databases which is a significant part of any text-matching software. Since there are many different languages in which students and tutors can complete their formal education works, text-matching software can be made for both international and country specific needs. In some countries these tools are united and one software is used for all universities in cooperation with government, for example, in Slovakia such a software system is called "Antiplag". It is used in all Slovakian universities and financially supported by the Ministry of Education, as well as there is a regulation that any student's final thesis need to be evaluated by this software before the student can defend the thesis (Kravjar, 2018).

The paper presents a part of results acquired by an international initiative "Testing of Support Tools for Plagiarism Detection (TeSToP)" in regard to the comparison of different text-matching software systems based on a document set prepared by Latvian participants. The document set included both paraphrased and translated texts from English to Latvian and Russian to Latvian, original texts and a large document in the form of a bachelor thesis.

The first testing document is based on an article in Latvian language from Wikipedia (Wikipedia, 2016) that includes information about robotics history and components (types of muscles, engines etc.). The article is divided into three approximately equal parts - Chapter 1, Chapter 2 and Chapter 3. In Chapter 1, a copy-paste text from Wikipedia article is kept without changing anything excluding text formatting. Both Chapter 2 and Chapter 3 contain a text where one to two words were replaced in each sentence with their synonyms without changing the word order in sentences. Besides word replacing with synonyms, the order of words is changed in each sentence of Chapter 3.

The second testing document uses an article in Latvian which includes an interview about modern technologies in the gambling industry from a well-known web source in Latvia - *Kursors.lv* (Skutelis, 2018). The article is used for the research needs in agreement with the author of the mentioned article. The whole article text is copied to the second document, as well as divided into three similar parts and formatted as Chapter 1, Chapter 2 and Chapter

3 similarly to the first document.

The third document is based on the article on plagiarism detection in English from Wikipedia (Wikipedia, 2018a). The text from the article is copied from its source also including pictures and divided in two large parts. The first part is translated from English to Latvian using “Google Translate” and it is copied to the second document without any changes. The second part of the article is human translated by the author of this paper. The tables which are available in the Wikipedia article are also translated.

Four original and short stories were used for the creation of the fourth document. The main criterion for selecting the stories was a fact that the text was not either published on the Internet or located in “Google Docs” or other online text editor. The document is created with the aim of checking how the text-matching software systems react to the testing documents that do not contain the text from any Internet source.

Usually text-matching software systems have difficulties in revealing if there is translated plagiarisms in the given text. It is more complicated to detect and check if the translations are from a language containing different alphabet with another way of writing the letters, for example, Cyrillic script in Russian. It should be noted that there many people in Latvia who know Russian fluently or Russian is their native language. For these people it can be easier to look for information sources in Russian rather than English, Latvian or other languages. Afterwards this information can be used for their final theses or other works as well.

This is a reason for creating an additional testing document for testing text-matching software systems - the fifth testing document using the text from Wikipedia article in Russian that contains information about the population on the Earth (Wikipedia, 2018b). Similar to the third testing document the selected text from Wikipedia is copied together with tables and pasted into the document. The whole text is divided into two parts: the first part is translated from Russian to Latvian using “Google Translate” without any corrections or changes. The second part of the divided text is human translated by the author of this paper as it was done when preparing the third testing document. The tables which are available in the Wikipedia article are translated as well.

To check if text-matching software systems are able to process large documents, the sixth document was added - a bachelor thesis with a permission of its author. It contains 10064 words in total.

During the research, 16 text-matching software systems were used to check their performance on the set of documents in Latvian language. The paper presents the detailed description of the document set prepared for testing, the research methodology and testing results showing plagiarism coverage. The authors of the paper also make worthwhile and useful conclusions for text-matching software developers, universities, schools and other educational institutions and their representatives about suitability of the known text-matching software systems for Latvian academic environment.

Keywords: text-matching software, plagiarism detection, academic integrity, software testing.

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Testing of plagiarism detection tools for Czech environment

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Introduction

There exist many text matching systems being used as plagiarism detection tools in the current global market. Naturally, the main focus of the systems is on the most world-widely used languages. Even if many systems claim they work for any language, an even if they do, we miss answer on a question – how efficient they are on "minor" languages? Hence many smaller countries, such as Slovakia rather develop and implement their own national systems (Kravjar, Noge, 2013). This brings further questions – is it necessary? Do the national systems perform better on the languages to which they are tailored to? These are few of many questions which should be answered within an international project "Testing of Support Tools for Plagiarism Detection (TeSToP)" which aims to perform a complex testing of so-called plagiarism detection systems using documents in multiple languages, including Czech. Results for this language and for Czech environment are presented in this contribution.

Objectives

The goal of the testing for the Czech settings are the same as for the entire TeSToP project, i.e. testing and evaluating almost 20 support tools for plagiarism detection. In addition, text matching system Odevzdej.cz is evaluated for selected documents. This review includes coverage evaluation and usability evaluation.

Note

This paper is based on a bachelor thesis of the author, which is supervised by the co-author. The thesis covers the topic more widely and it is written in Czech language, this contribution sums up the most important points of the thesis and presents them in English, as they might be interesting to readers interested in the performance of systems for plagiarism detection for languages related to the Czech language.

Testing of Support Tools for Plagiarism Detection (TeSToP)

With the above-mentioned motivation, an international team of volunteers was established in 2018, consisting of professors and students of several universities. The team member is also prof. Debora Weber-Wulff, who led plagiarism testing with her team in 2013 (Weber-Wulf et al, 2013). Since then, no comprehensive testing has been repeated. The team was tasked with testing and evaluating plagiarism detection systems that were selected based on previous knowledge and experience. System representatives were contacted to obtain their agreement with their participation in the testing.

Situation in the Czech Republic

Almost all universities in the Czech Republic use the plagiarism system Theses.cz, which is also used as a database of theses. This system is developed and operated by the Faculty of Informatics of Masaryk University in Brno (FI MUNI, n.d. b). The system is not an official national system and universities are not obliged to use it, but due to its wide used, it can be considered as de facto national system. Theses.cz has a sister project named Odevzdej.cz ("odevzdej" in Czech which means "submit"), which is an e-learning tool performing also text matching using the same database as Theses.cz. The similarity detection function is publicly available, anybody can register and immediately upload documents for verification of similarities (FI MUNI, n.d. a). After uploading of a document, the user receives a confirmation email within few days, it contains the result of the evaluation in the form of a number representing how many percent of the text is considered to be a plagiarism. If the system did not find any text matches and showed 0%, the document test is finished. If the system reported some plagiarism, the detailed report is made available after a payment (27 CZK, which is approximately 1 EUR). The paid report contains highlighted text marked as plagiarism and on the right side there are sources from which it was plagiarized.

Methodology

Testing documents

The methodology overlaps with the methodology of the TeSToP project in general. The set of testing documents mainly overlaps with the TeSToP testing set for other languages. It is composed of following documents:

- Wikipedia article in Czech, Slovak and English - divided into multiple documents using different types of plagiarism: copy&paste plagiarism, the same text with copy&paste plagiarism with white characters replaced by a letter (Czech only), the same text with copy&paste plagiarism containing image instead of the text (Czech only), text with replaced synonyms, and paraphrased text.
- Part of a master theses in Czech submitted in 2010, publicly available online - divided into three documents using different types of plagiarism: copy&paste plagiarism, text with replaced synonyms, and paraphrased text.
- Open access article in Slovak and in English – both divided into three documents using different types of plagiarism: copy&paste plagiarism, text with replaced synonyms, and paraphrased text.
- Translation of an English Wikipedia article to Czech, Slovak and English – always with one part translated by Google Translator only, the other part translated manually.
- Original document - in Czech, Slovak and English.
- A translation of a document in Slovak language to Czech.

The Slovak and English language were added to the Czech test as many Czech universities enables submission of theses in these languages (mainly by the international students, and Slovak students who form quite significant percent of students at Czech universities).

The specific documents for the Czech language are two obfuscating methods - white characters and text as an image and translation from Slovak language. This specific translation

was selected due to a big similarity of Czech and Slovak language, any native Czech speaker can understand Slovak language without a problem (and vice versa).
The tested systems

The 17 tested systems overlap with the systems in the TeSToP project, with one exception - the Czech set was also tested on the system Odevzdej.cz.

The course of testing and evaluation

The course of testing was identical with the TeSToP project to ensure the comparability of results among different languages, hence for more details please see that conference contribution.

Preliminary Results

We will combine complete results from coverage evaluation and evaluation of usability.
Coverage evaluation:

- whether the system marked plagiarized text as plagiarism,
- to what extent has the plagiarized text been marked as plagiarism by the system
- whether the system found the right source from which it was plagiarized,
- whether the system has found other resources.

Preliminary results show that StrikePlagiarism and Urkund are the best for the Czech language. On the other hand, the Slovenian system DVP was the worst.

This rating is different from all other languages. In the preliminary results of all language packs together, the Urkund system, PlagiarismCheck and Turnitin are the best plagiarism detection systems. The worst hit was iPlagiarism.net.

Nevertheless, the final results can significantly differ, as the usability evaluation and the evaluation of the obfuscating methods has not been performed yet.

Keywords: plagiarism detection, text matching software, testing, Czechia, Czech language.

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Defeat the cheat: how technology can aid in the detection and investigation of contract cheating

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In October 2017, the Quality Assurance Agency for Higher Education (QAA) published its report on contract cheating in response to growing concern in the Higher Education Sector; following this, in May 2018 the BBC began reporting on the rise of contract cheating (BBC, 2018; Smith, 2018), including a report on popular YouTubers who were being paid to promote essay mills and essay writing services, encouraging students to buy their coursework rather than 'waste valuable time' completing it themselves (Jeffreys and Main, 2018). Contract cheating is a fast growing problem facing all higher education institutions which is being reported on more widely, and the implications for the potential de-valuing of qualifications and the social impact is clear. Furthermore, 'Essay mills' have also adopted more direct marketing strategies through targeting students via the internet; some are targeting students outside their university campuses.

Greenwich School of Management (GSM London) is an independent provider of Business education, Law and Economics, offering undergraduate and postgraduate degrees in partnership with the University of Plymouth. GSM aims to support social mobility and inclusion by offering degrees to individuals who may not otherwise engage with higher education. With a widening participation student population who are predominantly BAME (Black, Asian, and Minority Ethnic), mature, the first in family to attend university and/or from disadvantaged areas. These students have often been out of education for a significant amount of time, many work part-time in addition to studying and/or have families and have been identified at our institution as more vulnerable to offers of 'assignment help'.

A common approach to detecting ghost writing focuses on the individual student's submission. Research conducted so far coupled with analysis of approaches adapted by individual institutions around the world provides academics with useful tips on what to look for when assessing student's work, for example: grade shifts, content of the submitted work, deviation from the assignment brief, vivas (QAA, 2017). Similar guidance has been published by the Australian Tertiary Education Quality and Standards Agency, which details a number of approaches that can be adapted to tackle the issue of contract cheating in higher education (TEQSA, 2017).

To better apprehend and prevent contract cheating at our institution, IT software was developed that allowed for a large-scale extraction of metadata from student assignments. Metadata for over 30,000 student assignments, submitted in various common files formats, such as, Microsoft Word (doc, docx), Adobe PDF (pdf) and Apache Open Office (odf), was collected across three terms and examined for patterns evidencing potential contract cheating, for example, a common source of authorship across multiple coursework pieces or evident authorship of publicly known ghost-writing agencies.

The collected data contained information on both original and editing authors of student assignments, including potential modifications and editing times. Examination of the dataset

helped to inform academic staff of submissions which required further scrutiny.

In addition to the metadata, students' IP addresses, attendance data, viva notes, performance trends and linguistic analysis were utilised to supplement the data, and build strong cases with layers of evidence. This analysis has helped us to formulate specific strategies to tackle the issue of contract cheating and to undertake a multifaceted approach, involving both education and detection.

For academic staff there has been training on a faculty-wide, departmental and individual level in order to better understand how to prevent, detect and investigate student work. Since this focus on training, there has been a 72% increase in proven cases which suggests that academic staff are more aware of academic misconduct and/or the training is effective.

The other core aspect of our work is to educate students in the importance of academic integrity. GSM's Academic Integrity working group, with representation from across the College, has been working on both fostering a sense of Academic Integrity and raising awareness of Academic Misconduct such as contract cheating. Our message has been one of staff and students united as an academic community to protect values of integrity and a commitment to learning.

A college-wide Academic Integrity campaign was launched in Spring 2018 which includes:

- Information and guidance sessions for students embedded in the curriculum (induction, personal tutoring, skills modules). It is crucial that principles of Academic Integrity are explained and shared with our students as soon as they start their higher education journey (For example, through Induction).
- A poster campaign of both students and staff holding self-penned statements related to hashtags #defeatthecheat and #succeddwithintegrity. Both students and staff have an interest in maintaining the value of qualifications and are key stakeholders in this campaign.
- Development of a 'defeat the cheat' board game which aims to develop understanding of academic integrity as well as test the knowledge in various real life situations, which can be tailored to specific institution.
- 'Defeat the cheat' badges given out at various events (for example during the International Day against Contract Cheating) which are worn by both staff and students throughout the year.
- An Academic Integrity video designed and created by students.

Recommendations and next steps

The issue of contract cheating in higher education is highly complex and tackling it requires a continued collective approach to building integrity and a sense of community who recognise the value in learning, raising awareness, training staff and gaining public support. In addition, there is a need for new technology to assist institutions in detecting such practices and this technology needs to be able to adapt as contract cheating practices become more sophisticated.
Next steps for GSM include continuing to foster a sense of integrity and academic community, working with students to gain more insight into the risk factors associated with why

our student body resort to contract cheating. The results from the computer-aided metadata analysis so far has motivated the GSM team to further develop this tool.

Initial results are highly encouraging and it is hoped that the work completed to date and insights gained will contribute to the international discussion around contract cheating in higher education.

Keywords: academic integrity, contract cheating, essay mills, university cheating, contract cheating detection software.

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Using digital forensic techniques to identify contract cheating: A case study

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Academics typically use two methods for detecting plagiarism: a tool such as Turnitin®, which provides a suite of online educative and evaluation tools including a section that checks for originality of work submitted (www.turnitin.com), or their knowledge of the student and likely standard of work as a flag for what to expect – an outstanding piece of written work from a student that struggles to write a bullet point on a post it note is likely to raise the attention of the assessor. Other techniques include the use of online search tools, where unusually phrased sentences in an assignment, which may seem out of character for the student or within the context of the rest of the assignment, can be pasted into Google to see if a match can be found.

In their paper of 2009, Bretag and Mahmud conclude that electronic detection provides an effective starting point in detecting plagiarism but that this must be "combined with considerable manual analysis and subjective judgement". Identifying contract cheating introduces further problems: the work may be original and of good standard – it just isn't written by the person who has submitted it. "Educators and researchers working in the field of academic integrity agree that electronic detection is not the solution to eliminating plagiarism" (Bretag & Mahmud, 2009), whilst Rogerson (2017) suggests that "Some knowledge of the practices of students … can be useful to identify instances of potential contract cheating". This can be difficult in large classes or where assessors do not know the students they are assessing.

Indeed, Turnitin recognises that whilst their detection tools are hugely beneficial, they are still limited in their ability to detect contract cheating. They are currently developing 'Authorship Investigation', which will use stylometry and other semantics to help establish authorship of a document.

The researchers in this project both work in the academic Cyber Security department of a UK Higher Education Institution. They have a particular interest in teaching and learning, and both lecture on digital forensics, teaching students how to carry out digital forensic investigations to a level whereby they could feasibly present an expert witness statement in court. Topics include the use of digital forensic tools such as Autopsy (free) and FTK (proprietary). Steganography techniques are also taught.

Contract Cheating Case Study

The researchers were alerted to an alleged instance of contract cheating by the contracted author (hereafter referred to as Ms A). Ms A emailed the department saying that one of the students of the University had used a contracting website to request some work to be done and noted that the person in question has 'a habit of not paying after collecting the scripts' (personal communication, 21 January 2018). Having failed to receive payment, Ms A investigated the assignment brief in more detail and was able to determine which University the assignment came from and the contact details for the department. She provided

screenshots of the contract being negotiated, and the work that she produced in response and sent these to the department.

On receipt of these documents a quick comparison was carried out with the student submission, which showed that there were significant similarities between the work of the contractor and the student. Following standard academic process for the University, the student was referred to an Academic Misconduct hearing where he confessed that he had posted the brief on a contracting website and presented the work produced as his own. The reliability of the allegation against the student is therefore not in question. Publication of the findings of this research has been approved by the Faculty's ethics champion.

Digital Forensics Techniques in other situations

During the literature review it was possible to locate various articles that discuss forensic techniques similar to those used in this case study, but for very different purposes, such as Fu, Sun, Liu & Li (2011) for checking originality of a document in relation to copyright issues and research by Xiang, Sun, Liao, & Wang (2016), who discuss the use of these techniques for hiding data within a Word document (steganography). The methods described below can be used in criminal investigations, but no evidence was found to suggest that they are ever used in establishing that contract cheating has occurred.

Techniques used

There are some very simple tools which can be used to help establish ownership of a document created in Microsoft Word. In Word 2016, Document Properties can provide some basic information such as file size, number of pages, total editing time, company (if used), author and last modified by. As long as the document is still in Word format (and not PDF), these can be easily viewed by opening the file normally and selecting File, Info and Properties.

In order to investigate more thoroughly, an understanding of how a Word document is built is required. A Word document is essentially a collection of other files, gathered together and compressed into a single 'docx' file – much like a zip file which contains a number of documents compressed for sending over the Internet. In most cases, it would never be necessary to decompress a 'docx' file. However, these files, when decompressed, reveal some very useful information about the origins of the work. They contain metadata, document properties, formatting, hyperlinks, and the text itself. Most of these are not of interest to us at this stage. This research focuses on the document.xml file, which in this case reveals some interesting features.

Discussion

Word documents are designed with author collaboration in mind and have a facility to detect specific edits to the contents (e.g. text and images). These edits are marked with values called "Revision Save Identifiers", more commonly referred to as rsid. These values are randomly generated but increment throughout a document's life span, for example when a revision is made, or when the document is saved. This allows two authors to work on the same document where changes are merged based on these values. This information proves

valuable when reviewing a document submitted by a student suspected of contract cheating, and having developed a simple tool for analysis the researchers were able to review the rsid tags in the case study submission.

When a student writes an assignment they will typically go through a series of activities: research, brainstorming, developing content, editing, adding citations and figures, proof reading and corrections. On reviewing the document.xml file of a genuine assignment submission, it is clear to see all the edits that take place during this process. Edits are represented by rsid values wrapped around the text that has been edited and clearly show where someone has added or amended content over a period of time.

Conversely, when a student contract cheats, they will receive a completed assignment written by the contractor. It is unlikely that they would submit this document in its original form, as the metadata would indicate that the author is not the student (and for cyber students, this would be common knowledge). It is more likely that paragraphs will be imported from the contractor's work into a new document created by the student. At the point of pasting, rsid values are stripped out automatically, leaving one rsid edit tag for a whole paragraph. This appears highly unusually for an original piece of work. A student will then carry out some further edits: adding their name, university details, changing the formatting, removing or amending work they are not entirely happy with and adding to the content. Again, these edits or word substitutions are very clear.

Through this is it possible to see on the contracted work that large chunks of text 'appear' with only minor edits of single words / phrases, all completed on a single edit. This is in contrast to an original submission, which is littered with edits throughout, with almost no large runs of text. Further analysis makes it possible to determine the order of edits and this is an area that will be further researched.

Summary

Whilst there are limitations with the above analysis – in particular that only one contracted submission has been fully reviewed and compared with a number of original submissions, initial findings suggest that further analysis would yield very interesting results and add to the evidence that contract cheating has occurred. If this can be formalised and turned into a practical tool, it could be used to support academic staff in identifying cases of contract cheating much more easily.

Keywords: contract cheating, digital forensics, xml, plagiarism detection.

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An exploration of the identification of the use paraphrasing tools and online language translation tools in student academic texts

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The development and widespread implementation of word matching software programs to detect plagiarism has assisted in identifying episodes of academic misconduct (Atkinson & Yeoh, 2008; Sattler, Wiegel, & Veen, 2017). However as the battle metaphors in academic integrity suggest (Asefa & Coalter, 2007; Atkinson, Zaung Nau, & Symons, 2016; Crisp, 2007; Singh & Bennington, 2012), detecting new ways of breaching academic integrity may be viewed as an arms race. Students, under the pressures of time management, competing demands and the cultural dissonance experienced when their transactional approach to learning collides with the concepts of academic integrity espoused by Universities, will seek new ways to circumvent academic integrity (Bretag et al., 2018; Harper et al., 2018).

In this paper we describe our experiences when encountering student academic misconduct in an undergraduate Health Sciences unit of study. The assessment task required students to submit an essay in response to a specific case study prompt. A number of the essays exhibited significant similarity of content, suggesting collusion, however each essay was unique in the language used. The language stood out as not only unidiomatic, but also extraordinary in the use of bizarre synonyms for expected medical terminology.

When working with students who have English as an Additional Language (EAL), we have encountered some written work which is of a low standard of English expression. In these cases we often assumed that the essay had been initially written in the students' first language, and then put through an online translation tool such as Google Translate™ (http://google.translate.com.au), resulting in syntactical and semantic errors. Although this represents poor academic practice, it could be argued that as the original source had been the product of the student's intellectual endeavour, it is not strictly plagiarism (Mundt & Groves, 2016). Students, as entrants to the discourse of writing in the Health Sciences, have also demonstrated patchwriting, where segments of text may be appropriated from other sources and roughly rewritten to evade word matching software. Howard defines patchwriting as,

> Copying from a source text and then deleting some words, altering grammatical structures, or plugging one synonym for another.
>
> Howard, 1999, in Jamieson, 2015, p. xvii

While some synonym substitution may be employed in patchwriting, students in the Health Sciences are required and expected to use specific and standardised medical terminology. In the essays in question, synonyms were used extensively, including the substitution of lay terms for medical nomenclature.

Our curiosity was piqued when, in one essay, a student had directly transcribed and plagiarised from Wikipedia a description of a Computerised Axial Tomography scan (CAT Scan). However, in describing images taken from various angles, they had misspelled the word

'angles' as 'angels'. In a different student's essay the description of the CAT Scan declared that the images were taken from various 'Blessed Messengers'.

Work by Rogerson and McCarthy, 2017, had raised our awareness of students' use of online free paraphrasing tools to 'spin' text in such a way as to deceive word matching software such as Turnitin®, and in this case we believed that this technique may have been employed.

Paraphrasing tools were initially developed to 'spin', that is to generate, new and different versions of source text material to create and populate multiple websites. These websites would contain links to an original webpage, and thus improve the Google Search Index for that page. In this process, referred to a Black Hat Marketing, it is imperative that the multiple websites have text which cannot be identified by word matching software, as this would result in penalties imposed by Google (Lancaster, 2009). Students have subsequently employed these tools to spin text from websites, articles and other students' work to create 'plagiarism free' essays. The paraphrasing tools work by synonym substitution, however they lack the discretionary powers to analyse the re-engineered text for readability and comprehension by human readers. Our examination of the essays which we suspected had been subject to paraphrasing tools demonstrated a profound lack of readability, and the inclusion of synonyms for standardised medical terminology.

If the students had used paraphrasing tools on the work of other authors, it was clearly plagiarism. However, we were concerned that the students may have been subjecting their own work, prepared in a LOTE, to online language translation tools, and thus not breaching academic integrity.

We set out to investigate the question "Are there identifiable features which can differentiate text that has been processed by English-to-English paraphrasing tools from text processed by LOTE-to-English translation tools?" In particular we were looking for the presence of unidiomatic language and the use of synonyms for standardised medical terminology.

We selected a corpus of text from the essay case study prompt which featured standardised health sciences terminology and subjected it to iterative translation through six languages (Arabic, Punjabi, Hindi, Traditional and Simplified Chinese and Vietnamese) using Google Translate™, and through a six free online paraphrasing tools.

The results from Google Translate™ produced readable text, with minor errors in tense, verbal case matching and pronoun gender. Significantly, medical terminology was largely preserved by the language translation tool, with more synonym substitutions found in Vietnamese and Arabic, and less in Punjabi, Hindi and Chinese (Traditional and Simplified), while grammatical errors were more common in Arabic, Hindi and Punjabi.
The results demonstrated that free online paraphrasing tools did not identify medical terminology as standardised nomenclature and substituted a diverse range of often inappropriate synonyms. From the 21 standard medical terms in the source text the paraphrasing tools generated 73 synonyms, compared to only 7 synonyms from Google Translate™. The level of intelligibility of the text varied between paraphrasing tools, for example, from the original (seed) text:

> One day, while Doug was out walking, he felt lightheaded and then lost consciousness and fell to the ground. He was brought to the Emergency Department of a major hospital by ambulance for assessment and investigation.

The following results were obtained:

> Brace girl, stretch Doug was at large peripatetic, he felt lightheaded and fit lost consciousness and fell to the ground. He was debasement to the Danger Diversify of a chief sanatorium by ambulance for weight and criticism.

http://plagiarisma.net/spinner.php

> One sidereal day, while Doug was out walk, he felt lightheaded and then lost knowingness and downslope to the pulverization. He was brought to the Emergency Department of a major hospital by ambulance for assessment and probe.

https://www.rephraser.net/instant-paraphrasing-tool/

Further to this, one of the paraphrasing tool websites provided the suggestion that as the paraphrased text was so poor the student would do better to outsource the assignment to a third-party contract cheating site and provided a direct link to this service.

From this brief investigation we have increased confidence that it is possible to differentiate between online language translation and online paraphrasing tools, with the following criteria suggested:

Free online paraphrasing tools:

- the output is frequently of such poor quality as to render the text unintelligible,
- the language generated will be notable for the use of unidiomatic words and phrases,
- expected vocabulary such as standard medical terminology will usually be substituted with inappropriate synonyms,
- word matching software, such as Turnitin®, may not recognise the re-engineered text from the source and thus a low similarity index may not be indicative of the level of plagiarism.

Online translation tools, such as Google Translate™:

- While there may be some anomalies in the language, overall the text will be intelligible,
- there is less likelihood that discipline specific nomenclature, such as standard medical terminology, will be changed to the same extent as paraphrasing tools.

Keywords: paraphrasing tools, online language translation tools, medical terminology, plagiarism.

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Note

This material presented in this extended abstract is currently under consideration for publication in the International Journal of Educational Integrity.

ADDRESSING CONTRACT CHEATING

You don't always get what you pay for: A user's experiences of engaging with contract cheating websites

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Contract cheating and its threat to academic integrity has been the focus of a number of international studies to date. Some studies have focussed on perspectives of various stakeholders, such as: students (Bretag et al, 2018; Curtis & Vardarnega, 2017); staff (Harper et al, 2018) and those who provide contract cheated work (Sivasubramaniam 2016; Tomar, 2012). Other studies have focussed on aspects of detection (author, 2018a, 2018b; Lines, 2016; Wolverton 2016) or interventions designed to deter students from engaging in contract cheating (Baird and Clare 2017, Rogerson 2017; Walker & Townley, 2012). In 2018, Rowland et al. examined the persuasive features of 11 contract cheating websites to see how students might be influenced by contract cheating companies to engage, visit or use their services. They identified three persuasive dimensions: informativeness, credibility and involvement, which may convince students that the site is trustworthy, reliable, provides 'just-in-time' service and will protect students' privacy. Our study empirically tests the elements identified by Rowland et al. (2018) by engaging with contract cheating websites to purchase assignments and examine whether the promises made were actually delivered.

Ethical issues

An important consideration in undertaking this research was the fundamental ethical dilemma of purchasing contract cheated papers, thereby supporting businesses we believe to be morally repugnant, as others have discussed (Medway et al, 2018). This was not a palatable decision, but, like many of our colleagues in allied health, we believe this approach will put us in a more informed position to counter the harm done by cheating websites. By experiencing contract cheating websites' practices first-hand, we could, and did, unmask their promises and pitfalls. We did not undertake this lightly, we debated alternatives, such as overt or open approaches, and considered we would be unlikely to succeed. We wanted experience using contract cheating websites in the same way as student users.

Method

This study was conducted, with ethical approval, at a large Australian metropolitan university from 2017-2018. We tested the assurances of contract cheating companies' promises about on-time delivery of high quality, undetectable, bespoke work, respecting the privacy rights of student consumers against the dimensions and features identified by Rowland et al (2018). We asked the following research questions:

1. To what extent are contract cheating sites' claims about quality and timely delivery of assessment products realized?
2. What do sites' terms of use and privacy policies guarantee users?
3. What can we learn about the reality of dealing with these sites?

The authors obtained a centrally held list of 50 known contract cheating sites that students

at our university had used in the previous two years. We adopted six inclusion criteria including elements such as: providing bespoke work in the disciplines we wanted, accepting direct payment methods and providing a personal account. This reduced the number of sites from 50 to 18.

We purchased 54 assignments from 18 different contract cheating sites, across five disciplines requesting a variety of assessment tasks. We purchased 40 standard quality pieces of work from all 18 companies across 5 disciplines and 14 premium quality assignments from 7 different sites, across 5 disciplines. Assignments ranged from 825-2,000 words and we purchased both 'standard' and 'premium' advertised products at an average cost of $179AUD (111Euros). Excel records for each persuasive feature tested were kept and all tested items were mapped onto Rowland et al.'s (2018) framework. Author A independently cross-mapped items onto the same framework for inter-rater reliability.

Summary of findings

We found that there were significant differences in contract cheating website assurances about the quality of assignments provided and the actual product delivered.

Quality and cost

Our study found that 30% of orders contained poor quality work, missing sections, failure to meet user specifications, late delivery and revision requirements. Some work (15%) was so unsatisfactory that we requested that the work be revised. Twelve of the 18 sites assured on-time delivery. Three failed to deliver on time and one, in fact, delivered work up to 8 days late (despite our repeated inquiries). Three sites requested extensions to the deadline date we set and one site, even with the extended date failed to deliver on time. Students need to know that not all sites will deliver *what* they say they will, *when* they say then will. Contract cheating sites also claim they are affordable. This was not our experience. Prices quoted on the website are the lowest per page cost, with the total cost varying depending on length, spacing and whether undergraduate or postgraduate.

Privacy issues

Our gravest concerns were over privacy assurances. Many sites request photo identification in addition to email, phone and other identifying information. Contract cheating sites can marry this information to their built-in tracking of a user's site navigation and create a very detailed portrait of each user. There was a privacy policy on 88% of contract cheating sites tested. **All** sites collect user data, both personally identifiable information and non-personally identifiable information. Depending on the site, users need to be aware that the site can and will disclose/share information to third parties. Almost half the sites tested state that they can and/or will share users' personally identifiable information (47%). Only 27% state they will not share a user's personally identifiable information, whilst 26% are silent on the subject. The EU Data Protection Act is only mentioned by 13% of sites, possibly those sites based in EU countries. Additionally, we found some sites repeatedly contact users to pressure them to purchase further assignments or upgrade their orders. Students need to understand that once some websites have significant personal identity details, they have lost control of how, when and where their personal information is distributed and that their identities are no longer protected.

Conclusion

We found that many contract cheating websites do not deliver the persuasive dimensions the promise, under the framework outlined by Rowland et al. (2018). Contract cheating sites provide variable quality products (including fail grade work), do not necessarily deliver the quality paid for, may fail to deliver assignments on time and do not necessarily respond to user queries. Importantly, contract cheating sites can retain the right to share user personal details with third parties, without the explicit knowledge of the user. Additionally, when discipline-specific markers graded work, 52% of the purchased tasks failed to meet the pass standard of the subject.

This study unmasks the chasm between contract cheating sites' persuasive promises and the reality of delivery. It also exposes the pitfalls and risks for students engaging with these websites. Students need to be aware of the potential risk of: identity disclosure to third parties without their knowledge, aggressive marketing by sites to upgrade assignments and pay more as well as the potential for blackmail. Universities can draw on this study's findings to educate students around greater awareness of the risks and incorporate these findings into evidence-based deterrence campaigns around contract cheating.

Keywords: contract cheating, contract cheating websites, students, awareness, privacy, buying papers.

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Exploring low-cost contract cheating provision enabled through micro-outsourcing web sites

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Contract cheating, originally defined by Clarke and Lancaster (2006), is the concerning behaviour where a student uses a third party to complete their assessed work for them. Much of the quantitative analysis of contract cheating has focused on publicly advertised requests by students to have work completed for them. Such public requests seem to have declined in number, perhaps because students are wary of being detected. Students wanting to commit academic misconduct are now moving on to connect with providers through different means.

Although many recommendations now exist regarding how contract cheating can be addressed, for instance in QAA (2017) or Lancaster and Clarke (2015), some major challenges for addressing contract cheating remain. These include the increasing number of ways in which contract cheating providers, those companies who complete the work on a student's behalf, connect with students. Information about how providers operate is necessary to understand how students interact with them, why they buy assignments from contract cheating sites and what measures can be put into place to counteract this.

This presentation will focus on two data sets collected from the micro-outsourcing site Fiverr.com. Fiverr.com is an online marketplace which connects together providers and customers. One feature of Fiverr.com is that providers can advertise individual services that they offer. These services are known as Gigs and each are priced at a minimum of $5 USD.

Although many of the providers and Gigs on Fiverr.com have legitimacy to them, this service has also been observed as providing contract cheating opportunities to students. Unlike traditional essay mills, many of the providers on Fiverr.com are individual writers. They use the site to connect directly with students, rather than having orders go through a third party. This also means that they keep the money paid to them (minus Fiverr.com commissions) and are able to offer essay writing services at a cost that is lower than traditional essay mills.

The methodology behind this study involved the collected of two data sets of information from Fiverr.com. One data set was collected in June 2016 and information about this data set has already been reported (Lancaster, 2018). A further data set was collected in October 2018. This second data set is being explored for the first time. Both data sets were collected manually. A detailed description of the methodology is given in Lancaster (2018).

Specifically, Fiverr.com was searched for Gigs advertising using the search term "write essay". The information relating to the Gig and the provider behind the Gig was examined, taking into account the fact that some providers may advertise contract cheating services under more than one Gig. Gigs were only considered in scope if a minimum of one review for that Gig had been received during the past month, indicating that this was an actively

trading provider.

Data collected included information about the Gigs, including the pricing information, the advertising methods and number of reviews. It also included information about the providers, such as their stated credentials and advertised location.

A comparison of the June 2016 and October 2018 data sets indicates that the way in which Fiverr.com was being used by providers to support contract cheating had changed.

Table 1 presents a high level overview of observations from the two data sets.

Data Set	June 2016	October 2018
Number of active unique providers offering services under the "*write essays*" search term	93	197
Mean pricing per 1,000 words, assuming all essays were 2,000 words long	31.73	5.73
Total number of orders from active unique providers (based on number of reviews)	4294	1137
Most popular stated location of providers	Kenya (30.11% of providers)	Kenya (38.07% of providers)

Table 1. *Contract Cheating Providers on Fiverr.com*

The presentation will discuss issues raised from further analysis of this data. Some observations that may be of interest include:

- An increasing number of providers are active in the contract cheating space on Fiverr.com. This has also seen a reduction in advertised pricing.
- The majority of providers are from Kenya. In the latest data set, this is closely followed by providers from Pakistan.
- Most contract cheating Gigs on Fiverr.com no longer remain active for very long. In the October 2018 data set, 669 out of the 1137 essays produced (58.83%) were dated within the past month.
- There is a high turnover of Fiverr.com accounts offering contract cheating services. Only 2 accounts that were operational offering these services in June 2016 were still operational in October 2018.

These changes may indicate that contract cheating providers on Fiverr.com are regularly creating new accounts or new Gigs, which means that their previous feedback is no longer visible.

Taking the figure of 669 reviewed Gigs per month as accurate (this is likely to be an underestimate as not every customer leaves reviews) and assuming a typical essay order is for 2000 words, the data indicates total provider revenue of $7,667 USD per month (or $92,001 USD per year). This is not unsubstantial and demonstrates the large amount of money spent on contract cheating through non-traditional services, particularly considering that Fiverr.com is only one of many micro-outsourcing sites that can be used for contract cheating in this way.

The data analysed that contract cheating is a major problem and not one that exists solely in essay mills and through other services that are already well discussed in the academic literature. The reality is that these services are being used by students. Providers can connect with students using new and alternative methods. Many providers can be seen to operate individually and hence undercut the pricing of traditional providers, making them seem more affordable by the typical student.

The intention of this presentation is not to restate all the good advice that already exists for higher education teachers and institutions that are looking to address contract cheating. It remains that the case that teachers should remain vigilant, set assessments that are difficult to outsource and require the student to engage locally. But with low-cost providers directly marketing to students, it may be that more powerful action is needed. Some countries, such as the United Kingdom, are exploring methods to make advertising contract cheating services illegal. It may be necessary to work to require micro-outsourcing services such as Fiverr.com to voluntarily block contract cheating services from trading through them.

The difficult and challenging conversations regarding the importance of academic integrity need to be had. Students need to be made aware that their tutors are aware of contract cheating services and the changes taking place in that industry. Many people would argue that contract cheating has reached its current high levels, with potentially up to 15% of all students worldwide taking part (Newton, 2018), precisely because the early warning signs about the growth of contract cheating were ignored. The presentation will conclude by considering how educational providers can adapt to the continually changing contract cheating marketplace.

Keywords: contract cheating, micro-outsourcing, fiverr.com, academic ghostwriters.

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Attitudes to eradicating contract cheating and collusion amongst Widening Participation students in the UK: reflections from Foundation Year students at Bloomsbury Institute

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Introduction and institutional context

The following paper presents and discusses perceptions on academic integrity matters, particularly relating to the effectiveness of initiatives aimed at combatting contract cheating and collusion amongst Foundation Year students at Bloomsbury Institute.

Bloomsbury Institute is a small Alternative Provider (HEFCE, 2018) delivering undergraduate degrees (validated by the University of Northampton) in business, law and accounting. Embracing a widening participation (WP) agenda (Hubble and Connell-Smith, 2018), we are committed to the recruitment of non-traditional students who might not otherwise have the opportunity to enter higher education. Our student population (approximately 1,700 students) is unique within the UK Higher Education (HE) sector, with high proportions of students with underrepresented characteristics. For example, our institutional data shows that 80% of our students in 2017-18 were mature (compared to the national average of 46% (HESA, 2018)) and 50% were from the Black, Asian and Minority Ethnic group (24% nationally). Most of our students come from low-income households: according to Student Loans Company data, in 2016-17, 96% of our students who had submitted means testing information had a household income of £25,000 or below. Additionally, the majority of our students work as well as study, and many have young families. A high proportion of our students are speakers of English as an additional language; however, only a small proportion is classified as international students: most are British or EU citizens who have settled in the UK.

Providing such widening access opportunities to students is largely achieved through our Foundation Year (FY). As most of our students are returning to education after a long break or have limited formal qualifications, they begin their HE journey on our FY, which prepares them to study at degree level. Many British universities offer such courses in various forms (Prospects, 2019).

In recent years, like many HE providers worldwide, we have observed a rise of academic misconduct (AM) cases, particularly of contract cheating and collusion amongst FY students. In response, and alarmed by reports of the 'global rise in contract cheating in recent years, across all disciplines' (IJEI, 2017), we wanted to develop a tailored action plan to help our students avoid AM.

We understood that our WP students faced particular challenges (Crockford et al., 2017; McVitty and Morris, 2012) and, therefore, we investigated the literature for guidance on understanding and tackling the issue of contract cheating, and more broadly the subject of academic misconduct amongst WP students. Although there is an abundance of publica-

tions on academic integrity (Bretag (2016), Newton (2018), QAA (2016 & 2017), TEQSA (2017)), we were unable to find research focusing on AM within WP students. We conducted a number of informal institution-wide and FY-specific initiatives exploring the reasons why our WP students cheat, aiming to generate practical solutions to limit/eradicate the problem, and, in September 2017, we launched our Academic Integrity Matters (AIM) campaign to promote high academic standards amongst all our students.

The campaign included: academic integrity awareness sessions for all students, with additional workshops for students found 'guilty' of cheating; training sessions for all lecturers on recognising and preventing contract cheating; the development of innovative teaching materials on avoiding AM; assessment redesign; and clarification and enhancement of relevant policies and processes.

Although the AIM campaign seemed to have brought the desired results of higher student and staff awareness of academic integrity matters and lower levels of contract cheating and collusion, particularly in the redesigned assessments, it was clear that with the essay mills' aggressive online and on campus advertising campaigns (Turnitin, 2018), we have been fighting, what sometimes seemed, a 'losing battle'. Therefore, we decided to seek input from students 'at risk' of cheating to help evaluate appropriateness of preventative measures to inform future action plans.

Methodology

In July 2018, i.e. 10 months after the launch of the AIM campaign, approximately 770 2017-18 FY students were invited to complete a web-based survey. The researcher advertised the project through messages sent via our Virtual Learning Environment. The survey was anonymous, and participation was voluntary. The project had the approval of our Research Ethics Committee.

Students were asked questions relating to their understanding of acceptability and scale of contract cheating and collusion in the institution and in the UK. Students were also asked if they had ever submitted assignments which were a result of contract cheating or collusion, or if they had ever considered doing so (the survey contained the synonymous term 'contract cheating' for 'commissioning' as it was widely used in the institution and was, therefore, more recognisable). Further questions explored student motivations for cheating and invited students to evaluate the potential effectiveness of future initiatives aimed at stopping students from submitting assignments that are a result of contract cheating or collusion. Additionally, students were asked to evaluate the honesty of their responses.

Results and discussion

133 students (17.3% of all invited) responded to the survey.

The results demonstrated that approximately 70% of participants had a very good understanding of what contract cheating and collusion were, and 95.5% perceived these cheating behaviours as unacceptable. 30.8% of participants admitted they were aware of other students submitting assignments which were a result of contract cheating or collusion, 7.5% admitted to doing so with a further 14.3% admitting to having considered it.

Responses to the multiple-answer question inviting students to express their views on activities that would combat contract cheating or collusion are presented in Table 1.

Activities	Proportion of students indicating the activity			
	Overall (n=133)	Students who admitted commissioning or collusion (n=10)	Students who admitted considering commissioning or collusion (n=18)	Students who did not admit commissioning or collusion or considering doing so (n=102)
Additional English language classes	55.3%	80.0%	50.0%	53.9%
Clearer assignment instructions	50.0%	40.0%	50.0%	51.0%
Online assignments (e.g. quizzes with closed and short-answer questions)	45.5%	50.0%	50.0%	45.1%
Additional workshops on avoiding plagiarism	36.4%	40.0%	38.9%	35.3%
Stricter penalties for commissioning/collusion	35.6%	10.0%	0.0%	43.1%
More frequent but smaller/shorter assignments	34.1%	40.0%	55.6%	30.4%
More information on commissioning/collusion in classes	28.8%	0.0%	11.1%	34.3%
Exams and presentations instead of long essays and reports	28.8%	40.0%	38.9%	26.5%
Posters & videos discouraging students from commissioning/collusion	18.2%	10.0%	5.6%	21.6%
A whistleblowing policy for students (i.e. students encouraged to report those who they know submit commissioned assignments)	15.9%	0.0%	0.0%	20.6%

Table 1. *Activities that could eradicate commissioning and collusion*

An overwhelming majority of students (80.3%) indicated more than one initiative.

Overall, FY students pointed primarily to more 'practical' solutions. 77.4% (n=99) pointed to at least one 'assessment-related' initiative. Since most HE advisory bodies and researchers recommend assessment redesign (e.g. QAA (2016 & 2017), TEQSA (2017), Bretag et al. (2017), Lancaster and Clarke (2017)), it is encouraging to see that students embrace these proposals, too. In our institutional context, students who responded to the survey had already experienced two redesigned assessments and it was particularly pleasing to see that so many of them perceived such actions as effective preventative measures. It also gave the

FY academics a 'mandate' to continue to redesign our assessments.

Not surprisingly, with the large proportion of FY students being speakers of English as an additional language, calls for English language and study/academic skills support were also popular. This is in line with the findings and recommendations from Rigby at al. (2015) or Bretag et al. (2017). As additional support of this nature was widely available at the institution, it suggests that more work needs to be done to advertise this to our students.

Interestingly, nearly all calls for more information about commissioning/collusion (in class or in marketing materials), stricter penalties and calls for a whistleblowing policy came from students who did not engage in or consider commissioning or collusion. This suggests that students 'at risk' do not perceive these measures as a deterrent but indicates, perhaps, feelings of frustration with contract cheating and collusion amongst the 'honest' students.

Limitations

The completion rate was relatively low (17.3%). No questions about student demographics were asked. The survey presents perceptions of a unique cohort of students at one institution.

Conclusions

The results of this study revealed that our WP students, including those who admitted cheating or considering doing so, displayed good knowledge and awareness of the complexities of contract cheating and collusion, and provided 'generous' advice on measures that could eradicate the two cheating behaviours. This indicates the effectiveness of the AIM campaign and shows student support of the institutional efforts.

The majority of our students advise more 'implicit' methods of combatting contract cheating and collusion, including assessment redesign and broad teaching and learning initiatives, rather than the 'explicit' educational activities such as marketing materials discouraging students from contract cheating or collusion, or a student whistleblowing policy.

The input from students was enormously helpful in the evaluation of institutional efforts and deciding on further actions. It is recommended that other institutions seek similar input from their students, particularly those 'at risk' of engaging with the cheating behaviour.

Keywords: academic integrity, contract cheating, collusion, foundation year, widening participation.

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The student experience of contract cheating allegations: an international collaborative research project Deakin University (Australia) and Coventry University (UK)

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Contract cheating is the obtaining of bespoke university assignments with the intention of submitting them for assessment (Lancaster and Clarke, 2016). In recent years the scale of contract cheating in higher education has grown substantially. If left unchecked, the global £200m contract cheating industry may lead to many students incorrectly being certified as having achieved learning outcomes (Adams, 2015). This may have disastrous consequences for public safety and community confidence in higher education (Bertram-Gallant 2016; White, 2016). The Quality Assurance Agency in the UK (QAA) and its equivalent in Australia, the Tertiary Education Quality and Standards Agency (TEQSA) have made the issue of contract cheating a national priority in terms of research and suggested guidance for higher education institutions (QAA, 2016, 2018; TEQSA, 2016, 2017). Therefore universities are seeking to better understand the phenomenon and how to advise, support and safeguard students against the contract cheating industry.

Although any student can undertake contract cheating, students can be disadvantaged in their preparation for higher education in both UK and Australia if they have never before been asked to perform academic writing under certain conditions, such as:

1. writing academic assignments in English,
2. referencing scholarly academic sources; and,
3. avoiding plagiarising (Borg, 2009; Glendinning 2013, 2016; Pecorari & Shaw, 2018; Sutherland-Smith, 2008, 2014, 2018).

Such students may fall easy prey to the targeted approaches used by contract cheating websites (Dawson and Sutherland-Smith, 2018a, 2018b; Medway et al, 2018; Rowland et al., 2017). Despite recent intense focus on contract cheating in higher education, the activity itself remains a complex, partially understood phenomenon. Whilst some self-reported survey research has explored student views about contract cheating and its extent (Bretag et al, 2018; Harper et al, 2018), there is limited research, to date, into the perspectives of students alleged to have committed the act of contract cheating. This study seeks to address that gap in knowledge and, to our knowledge, is the first study in the world examining students experiences of the allegation processes and the support they receive before, during and after the formal process. It is also innovative as student advocates at both institutions are central to the research project and drive the investigation, supported by experienced researchers.

This project is a current six month study conducted simultaneously at Deakin University

(Australia) and Coventry University (UK). We probe the perspectives of students who have been through formal allegation processes at both institutions where the allegations of contract cheating (Deakin policy) or serious plagiarism (Coventry policy) have been found proven. We are exploring the students' decision-making processes leading to the breach behaviour, any factors contributing to their actions, their experience of support before, during and after the formal process. We seek to understand what interventions might have prevented students from taking this path. This is critical to institutional understanding of how to use current resources to better support students' ethical learning and integrity choices.

We investigate the following research questions:

- What attitudinal, social and/or physical barriers led to the actions taken by students?
- What experiences have students had of contract cheating companies' marketing materials and techniques?
- Did students realise the consequences of their actions?
- What is the student perspective of experiencing the formal allegation process?
- What help/services do students continue to need (if any)?
- How might the university do more to prevent contract cheating?
- What advice would students now give to other students?

Data collection is through semi-structured interviews which are recorded (with student permission) and transcribed. Participation is, of course, voluntary. Interviews are conducted by student advocates, who are members of the project team. Embedding Student Advocates in the project ensures we harness their considerable insight and understanding of the formal allegation process to better understand the issue of contract cheating behaviours. Data coding is achieved using thematic analysis. Inter-rater coding reliability occurs at both Deakin and Coventry universities, undertaken by senior researchers in the team. We wish to share insights into this project, as well as our experiences of conducting a research project across international contexts, with multiple researchers and student unions in both countries in the area of contract cheating.

The project is an innovative approach to a complex and topical issue. It addresses a vital gap in research done to date by including in the issue the voice of potentially disadvantaged and disempowered students with intimate understanding of the contract cheating process. The evidence gathered from this project will potentially help us understand how to reduce disadvantage by mitigating contract cheating and assisting more students understand the consequences of submitting work written by others. We aim to better understand what targeted student support services are needed, how investigative and decision-making processes are working when handling allegations and appreciate similarities and differences in policy context. This can inform better levels of education about academic honesty and integrity. With better understanding of contract cheating, and of Deakin and Coventry's policies and processes, the project lays the ground for the team to engage in more effective policy advocacy.

We anticipate that the findings from this study will be of interest and relevance to other educational institutions experiencing cases of contract cheating. We will share the results to date with conference participants and suggest how this evidence can be used to strengthen institutional policies and procedures for deterring misconduct, with particular focus on

the systems and processes for managing suspected cases of contact cheating.

Keywords: contract cheating, student advocates, student experiences, institutional policies, international collaboration.

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An examination of how successful essay mills and contract cheating services have been in integrating within different academic disciplines

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Essay mills, services that are helping students to cheat by completing essays and other assessed work for them, have begun to change their modus operandi by targeting their marketing towards specific academic disciplines. This means that a history student is likely to come across what appears to be a site focusing on history essays, although in actuality, this may use exactly the same writers as any other disciplines based site.

This presentation will examine how essay mills and other contract cheating services are marketing to specific disciplines, using examples of sites, their advertised services and linked social media promotion. Previous studies that identify the disciplines on which most contract cheating has been observed will be discussed. For example, Table 1 shows the three discipline groups from which most requests for contract cheating were made, as identified in a previous study of a site where such requests were visible to investigators (Lancaster and Clarke, 2012).

Rank	Discipline Group
1	Business and Administrative Studies
2	Social Studies
3	Historical and Philosophical Studies

Table 1. *Discipline groups from which most contract cheating requests have been observed*

The presentation will also explore other data that is available which indicates how far essay mills have infiltrated academic disciplines. This will include discussion of a small scale study of how visible essay mills are in the Google search engine results, which was conducted in November 2018. The study was undertaken using the UK academic discipline groups, as identified by the HESA and using the Google UK search engine, so the results are most relevant in a UK context, but are expected to share features with advertising in other parts of the world.

Searches of Google for 19 essay terms, each related to one of the corresponding HESA discipline groups, were undertaken. The search terms were determined as ones that a student looking for help or information about a subject, rather than one explicitly looking to cheat, might use. For example, for the Mathematical Science discipline group, the search term *maths essay* was used. In each case, the first page of 10 organic search engine results, those most likely to be seen by a student, was examined to determine the placement of essay mill sites within the search results.

75 out of the 190 organic search engine results were held by essay mills, between 2 and 9 results per subject group. In addition, 20 paid advertisements for essay mills were observed across those pages, across 10 out of the 19 discipline groups.

A high level analysis of the discipline groups was undertaken using a traffic light priority system. This aimed to identify those academic areas for which essay mills were already firmly embedded in the search engine results and those which essay mills could begin to exploit.

Three criteria were identified on which the discipline groups were clustered:

- The number of organic results held by essay mills from a Google search for essays in that discipline area
- The number of paid advertisements from essay mills from a Google search for essays in that discipline area
- The relative number of search engine results for that discipline area compared to the number of UK students (as a measure of competition for essay mills)

Three discipline groups scored highly on all three criteria, an indicator that those areas are already exploited by essay mills. Only one area scored low on all three criteria, indicating that it is an area that essay mills are likely to exploit in the future. Those areas are indicated in Table 2; the order of the discipline groups in the table is not indicative.

Category	Discipline Groups
Currently exploited by essay mills	Architecture, Building and Planning Computer Science Law
At risk of being exploited by essay mills	Creative Arts and Design

Table 2. *Discipline groups*

It is also worth noting that the analysis shows that two of the Discipline Groups from Table 1 (1. Social Studies and 2. Business and Administrative Studies) also appear to be at risk of further exploitation. This is of particular concern as they are already two of the three areas from which most contract cheating requests by students have been observed.

The presentation is intended to motivate the need for continued work on understanding contract cheating at a discipline level, as well as for further investigations as to the particular nuances as to how discipline specific contract cheating providers and essay mills operate. It will also raise the question of whether academic integrity principles are being taught successfully and appropriately to both staff and students in different disciplines.
Keywords: essay mills, contract cheating, academic integrity, search engines, marketing.

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Awareness programs against contract cheating at a Middle Eastern university – pathway to building campus-wide culture of integrity

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Trying to create a culture of integrity can feel like an uphill battle. Experts suggest that building a culture of integrity may be the best weapon against academic misconduct. Student cheating is not a new phenomenon and researchers and academics have grappled with this issue for generations. Every generation of teachers feel they are having it worst, with newer, sneakier ways students cheat in and out of classrooms. With the infiltration of technology in today's blended classrooms, the challenges are as complex as they are supposed to be varied. However, the problem remains the same – that of loss of academic integrity inside classrooms and what that means for the greater society.

Academic integrity is a vital part of education system. As academics we strive to instill the Fundamental Values as recognized by International Centre for Academic Integrity, these being honesty, trust, fairness, responsibility and respect. But how do we go about instilling these values in our students?

Of interest to this research is one type of academic misconduct – that of buying and selling assessments. Research has shown that there is a distinct rise in the proliferation of essay mills and number of students involved in buying assessments globally. It would seem with the rise of the internet, ease of setting up a website and e-commerce, essay mills have transformed into e-mills that are rampant, mushrooming all over the digital space, flooding students' mailboxes and hounding them on social media. Known commonly now as contract cheating, this form of academic misconduct is not new. Dated as far back as mid nineteenth century where fraternity houses hosted essay mills in their basements and encouraged recycling of submitted essays, these fraternity essay mills transformed into ghostwriting and the modern-day contract cheating that researchers and academics are vehemently opposing, calling for bans on such practices, promotion of such services and illegalizing such businesses (Singh, S. and Remenyi, D.; 2015).

Students are the target consumers of the essay mill industry. By buying and using their services, students are providing social license for these businesses to operate. If we look at this business model, then the question arises – how do we stop students from giving their acceptance and the social license, thus developing a culture of integrity in them?

In this study we compared student awareness of contract cheating, and student understanding of contract cheating as a misconduct, before and after a series of awareness activities that were carried out on the campus. This study used exploratory case report method (Yin, 1984) that has gained reputation over the years as an effective methodology particularly when investigating complex issues in areas such as social sciences, education and even business (Harrison, Birks, Franklin & Mills, 2017). The case was developed based on time series over three years of data collected before and after the celebration of the Global Ethics Day and International Day of Action Against Contract Cheating. We felt this method allowed us to go beyond the "statistical results and really understand the behavioral con-

ditions through the [students'] perspective" (Tellis, 1997), at the same time allowing us to include both qualitative and quantitative data.

The campus celebrated International Day of Actions against Contract Cheating three years in a row. We captured student feedback during the whiteboard pledge campaign based on a series of two simple questions, "Do you know what contract cheating is" and "Did you know students buying essay writing services from online sources is a form of cheating". Students were then given details on contract cheating, nature of the misconduct, why it was considered a misconduct and how the institutional policy dealt with such misconduct. They were asked to put down their pledge if they so wanted to. It was observed during the first year, that of the 30 students who voluntarily participated in the pledge campaign, none of the students were aware of the term "contract cheating" nor were they aware that such action could be "deemed" as a misconduct or cheating, let alone that it was "in the policies".

During the second year of the celebrations, the student clubs run by some of the students who had taken the whiteboard pledge the previous year decided to join in the awareness campaign and developed a week-long program for the campus. These events included psychological mind frame workshops, painting and design competitions, plenary sessions with Registrars and students on the consequences of misconduct and effectiveness of policies and procedures. All the events were carried out before the final day which marked the whiteboard pledge campaign. This time, more than 40 students volunteered to participate and more than 70% of them knew what contract cheating was and knew it was a misconduct. By the third year, more than 60 students, including post graduate students participated. More than 80% of the students taking the pledge now showed awareness and understanding.

It is also important to note here that students who had graduated by this time had begun to track companies that targeted students on social media and started reporting them to the school authorities and raised voice against such ads, pop ups and messages.

It was observed that the students speaking out against contract cheating to other students year on year had a tremendous positive impact on student attitude against contract cheating where students became advocates for integrity, posting messages against essay mills, and confronting the service providers as unethical and irresponsible businesses on open, public platforms and at events where the service providers showed up to promote their questionable services.

This case report suggests that regular, consistent awareness programs involving students as co-developers in the integrity-culture building process has a significantly high impact on student contribution, participation, and knowledge.

The next step of the project is to map how and if this attitude and awareness has any real impact on student behavior and curbing students' likelihood to contract cheat in the future.

Keywords: awareness, contract cheating, student initiatives, academic integrity, Middle East, UAE, culture of integrity.

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TEACHING EFFECTIVE STRATEGIES TO ENCOURAGE ACADEMIC INTEGRITY AND PREVENT ACADEMIC MISCONDUCT

Do university professors really promote academic integrity?

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Youth are growing up in a technological world where they can use and share, through many social media, information, opinions, images, and videos which do not always belong to them. On the internet, lines are still blurred about what can and what cannot be shared. More than just making information sharing easier, the abundance of information via electronic sources is now "central to our students' cultural and social experiences" (Park, 2004). This phenomenon can be transferred to classrooms where the temptation to plagiarize for university students is much greater. The easy access to an abundance of information on the web has persuaded more than one student to use someone else's text, words, ideas as their own. Indeed, many students feel that copying and pasting from the web is not a major infraction or even not an infraction at all, leading to surface learning rather than deep learning. "Academics are in a key position to influence the competencies and attitudes of students and future scholars toward ethics and integrity in research" (Hyytinen & Löfström, 2017), but teaching students to write papers with integrity, showing them how to correctly paraphrase or quote authors and convincing them of the value of doing the work is not an easy task at the university level. Eaton and Edino (2018) explain that there are different methods to teach academic integrity in the disciplines. To whom does this transdisciplinary duty belong? It seems like everyone throws the ball at each other. Many professors do not report plagiarism cases because it is too complicated, sanctions are too severe or they do not know themselves what plagiarism is exactly and how to detect it (Wheeler, 2010). Faculty report that they do not want to play detectives. So, what roles do professors play in teaching academic integrity through skills to their students?

Methodology

This presentation comes from a larger study which aim is to identify which digital scrapbooking strategies are taught in university by faculty members in several disciplines. More specifically, the aim is to determine how professors and instructors teach digital scrapbooking strategies and how they use them to show students how to prevent plagiarism in their writing. A semi-directive qualitative interview protocol was developed by the research team and subsequently approved by the ethic committee. Interview grid was divided in four main sections: information skills, writing skills, document referencing skills and knowledge of plagiarism. For example, we asked faculty members when and where they think students should learn the necessary knowledge to know how to avoid plagiarism. We also questioned them about their role in the promotion of academic integrity. Data collection was conducted between November 2017 and March 2018 with faculty and instructors from various disciplines and from six Quebec universities. Thereby, semi-directed interviews of

approximatively 45 minutes were conducted with 49 participants. Interviews were recorded and transcribed. Qualitative analyzes were done with the Nvivo software.

Results

Preliminary results show various perceptions of the role professors and instructors play in promoting academic integrity on a continuum from not being involved to playing a very active and collaborative role with the university librarians. Seven roles were observed: 1) The disengaged professor who takes no responsibility for the teaching and training of academic integrity; 2) The delegating professor who takes for granted that the teaching of academic integrity is carried out as part of another course, by other colleagues or learned by students prior to entering university; 3) The referent professor who refers his students to other people or resources; 4) The occasional professor who occasionally teaches about academic integrity, depending on the situation - teaching is not systematic; 5) The passive host professor who invites in his class specialists in the field - but does not take part in this teaching or training ; 6) The collaborative host professor who invites in his class specialists and also takes part in this training by collaborating with the specialist ; and 7) The responsible professor who takes autonomously the responsibility for the teaching of academic integrity. Participants' various perceptions on their role towards teaching academic integrity, and more precisely on how to prevent plagiarism are a first step to specify how professors play out their roles.

Discussion

We can say professors and instructors in this study mostly agree that academic integrity is important, but lines are still blurred on whose role it is to teach academic integrity and especially how and when it should be taught. Our findings corroborating Löfström and colleagues' (2015) research.

Firstly, "research integrity and ethics must be acknowledged in university curricula and course outlines to prevent these topics from becoming incidental in a random selection of courses. In order to assure sufficient coverage and alignment of integrity and research ethics-related content, study programs must be viewed as a whole (Hyytinen & Löfström, 2017, p.38). Indeed, we need to determine which sets of skills can be transferred from one class to another and across the curriculum in a program approach (Löfström, Trotman, Furnari, & Shephard, 2015), skills such as information literacy skills, writing skills and referencing skills.

Second, professors, librarians and other professionals working with students must be trained so they will be able to teach academic integrity with confidence through various skills. When they understand how important those skills are, they will become more than mere transmitters of knowledge, they will become engaged agents of transformation in a web-based cultural world. "Rather than just focusing on the contents of ethical codes of conduct, it is important to discuss the contents in connection with appropriate teaching and assessment methods to help teachers transfer these ideas to their teaching in practice" (Hyytinen & Löfström, 2017, p.38). Finally, the entire educational community also needs to think about what are the best moments for students to begin learning those skills: primary school, high school, college, or university?

Keywords: academic integrity, university professors, teaching, role.

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Shaping research integrity among research postgraduates via a discipline-specific approach to research ethics education

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To go in line with the significant development of research integrity education for postgraduate students around the globe and to uphold the advocacy of responsible conduct of research across the university campus, all research postgraduates (RPgs) of the University of Hong Kong (HKU) must comply with the HKU Policy on Research Integrity. Besides the fulfilment of general ethics requirements as stipulated by the Policy (e.g., seeking ethical approval before data collection, submitting the full dataset by the time of thesis submission), all RPgs are required to attend two compulsory courses related to the realm of research integrity before the confirmation of their candidature. Both courses intend to train them to become technically and analytically competent as well as sensitive to the ethical, legal, social, and environmental implications of their research. The proposed presentation is to report on these two courses, *Thesis Writing* and *Research Ethics*, which are complementary to the intensive formal and informal teaching and mentorship that comes from effective supervision of research and/or research collaboration.

The first compulsory course, *Thesis Writing*, aims to develop RPgs' systematic knowledge of how to write about their research and apply such knowledge to their writing in a professional and ethical manner both within and beyond the course. To achieve this aim, seven topics, each of which conceptualises the writing of a thesis systematically by presenting the expectations, conventions, structure and organisation of a typical thesis in a research discipline, are covered: (a) identification of a research gap and making the gap explicit; (b) the subsequent formulation of a research problem or research questions; (c) acknowledging the work of others and commenting on the literature in the field along with discourse features and language used in reviewing literature; (d) reporting and discussing the writer's own research results as well as findings; (e) the writing of abstracts, introductions and conclusions; (f) the use of verbal signposts and verb tenses across the thesis; and (g) issues of language delicacy, along with citation practices and bibliographic formats. Each lesson in the course is made up of concise input sessions from the teacher, followed by small group discussions of texts which illustrate the learning focus covered in the input sessions. Authentic examples from HKU theses, accompanied by discussion questions, are used to guide students' analysis of texts including structure and language use in a specific section of a thesis. One feature of this course is that it is run in two themes: (1) humanities and related disciplines and (2) sciences and related disciplines. RPgs choose between the two themes according to their research disciplines, and are guided to explore the course topics in relation to their own discipline-specific contexts. They finish the course within four weeks (two 3-hour lessons per week) and complete a portfolio consisting of a literature review and a critique related to their research area. At the end of the course, it is expected that RPgs' awareness of the various skills at different stages of writing a thesis will be enhanced and they will be able to move forward in their thesis writing systematically and ethically.

The other compulsory course, *Research Ethics*, which lasts for 12 hours, reinforces the importance that the University places on the preservation of the values and principles of re-

search integrity in all research conducted at the university. It is offered to research postgraduates of different faculties via five broad disciplines: (1) Faculties of Business & Economics, Education, Law and Social Sciences, (2) Li Ka Shing Faculty of Medicine and Faculty of Dentistry, (3) Faculties of Arts and Architecture, (4) Faculty of Engineering, and (5) Faculty of Science. The topics and the corresponding teaching foci/approaches thus vary according to the discipline concerned, as shown in the table below:

Disciplines	Topics/ teaching foci/approaches
Business & Economics, Education, Law and Social Sciences	issues of authorship, mentoring, and professional ethics for academics in the university, the conduct of human-subject research, with a particular focus on survey, ethnographic, archival, and qualitative research
Arts and Architecture	major texts, tenets, and topics pertinent to conducting ethical research in the creative academic disciplines, such as arts, humanities and architectures
Medicine and Dentistry	the conduct of clinical research (i.e., pharmaceutical and medical device trials, epidemiological studies, and the concepts of good clinical practice and clinical equipoise)
Engineering (and technology education)	good engineering practice, laboratory safety, human subjects research protections, conflicts of interest and good scientific conduct
Science	the conduct of basic science research in a laboratory setting, the standards of good laboratory practice and laboratory safety from the perspective of an ethical commitment

Through succinct lectures and in-class case-based discussions, RPgs will acquire essential vocabulary, principles, and practices conducive to the promotion of research integrity in general and in their relevant disciplines. They will also encounter terminology, texts, and tenets that relate to good conduct in the teaching and research professions. By the end of the course, they are required to complete a web-based learning programme on research integrity and a case study showing their understanding and application of the core concepts/ principles of research integrity in their discipline. It is hoped that the students will be able to apply principles of responsible conduct to different stages of their research project and critically evaluate their own and others' research practices in terms of potential risks and benefits.

A number of measures have been adopted to strengthen the two compulsory courses so as to establish a closer connection between the courses and the research disciplines of the postgraduates. Those measures target at the course nature/structure, the design of course materials and activities, the involvement of faculty teachers, faculty deans and the University Librarian, and the use of an internet-based plagiarism detection service and a research ethics and compliance training programme. The presentation will elaborate on these measures adopted so far, as well as their effectiveness, and highlight the challenges in running courses on research integrity in a discipline-specific manner. Ways to tackle these challenges will also be discussed during the presentation.

Keywords: research integrity education, discipline-specific approach.

A multi-pronged approach to academic integrity awareness: Methods used by a Canadian Undergraduate Business Program

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After a number of isolated but complicated academic integrity cases over the past few years, the Commerce Program at Smith School of Business determined that it was necessary to develop a renewed approach to discussing academic integrity with students and faculty members alike. Raising awareness about academic integrity was a top priority for the administration, with an emphasis put on the broad concept of integrity for the students and process-related concerns for the faculty members. In our presentation, we will set out the steps that were taken, what was learned, and how we will continue to build a culture of integrity in our undergraduate business program.

Context

The Commerce Program at Smith School of Business is one of the top undergraduate business programs in Canada (Maclean's, 2017), drawing students from across the country and around the world due to its reputation, the experience it provides its students, and the success that its graduates are able to obtain in the corporate world. Students complete a four-year Bachelor of Commerce degree, with the first two years concentrating on core courses in all business areas, and the last two years of the program allowing students to focus on their own areas of interest through electives in the business school and other faculties at Queen's University (Queen's Bachelor of Commerce, 2018). The vast majority of students participate in an international exchange during their third year in the program. Students are taught by award-winning faculty and researchers, including tenured and tenure-track professors as well as adjunct instructors and lecturers. Previous research has shown that business students cheat more than non-business students (McCabe, 1997; McCabe, Butterfield, & Treviño, 2006), which provides further incentive for us to ensure a clear understanding of academic integrity in our program.

Educational Approach for Students

Like many members of the International Center for Academic Integrity, we take a values-based approach to talking to students about academic integrity, focusing on the core values of honesty, trust, fairness, respect, responsibility, and courage (Fishman, 2014). Our educational component took place inside and outside the classroom, using a number of different formats and involving different members of the Smith School of Business Community, and consisted of the following:

- Video and Online Quiz: The Commerce Program produced a video featuring five professors talking about academic integrity and what it means for our community. All students, in all four years of the program, were required to watch the video (which was accessed through the learning management system) by the end of the first month of classes, and then complete a quiz that asked them to respond to different scenarios and recognize issues relating to potential breaches of academic integrity. Because the quiz

was done through the LMS, the Commerce Office could see which students completed it, which allowed them to follow up with those who did not. Students averaged above 80% on the quiz (Smith School of Business, internal data).

- First Year Talks: The first year students in the Commerce Program participated in talks about academic integrity twice: once in the classroom in their sections (approximately 80 students per section), and once as part of a larger lecture for all first year students (approximately 480 students). In the classroom, the Executive Director of the Commerce Program spoke to all students about academic integrity and what it means in our community, as well as the consequences of violating academic integrity. In the larger lecture, a member of the school's Academic Integrity Panel talked to the students about integrity more broadly. This talk highlighted current students and alumni who demonstrate the core values of integrity beyond the confines of academic integrity. Further, content from this talk was incorporated into an exam question in the introductory Business Management class, asking students to speak to the values and their relevance to them as Commerce students.
- Teaching Assistant Training: Many of our undergraduate business students also work as teaching assistants in the Commerce Program; as part of the educational approach, the teaching assistant training was redesigned to emphasize the role that those students play in protecting academic integrity in both of their roles (that is, as students and as teaching assistants).

Addressing Faculty Members' Handling of Academic Integrity

The majority of our faculty members agree that academic integrity is a problem in the Commerce Program, but tend to not engage in the formal process (Smith School of Business, internal data). While not done maliciously, this approach risks the violation of natural justice for the students (e.g. the right to appeal a decision) and limits the data collection and management that would allow the identification of students who violate academic integrity multiple times. Therefore, the approach for faculty members focused on education and awareness of the process, including resources to make the investigation, decision, and sanctioning less onerous for them, and consisted of the following:

- Commerce Program Update: At the end of the school year, at the invitation of the Executive Director of the Commerce Program, members of the Academic Integrity Panel spoke at a lunch for faculty members who taught in the Commerce Program. In this talk, they broadly discussed procedural concerns in the academic integrity process, as well as briefly highlighted steps that could be taken by individual faculty members to prevent violations of academic integrity in their courses.
- Dean's Retreat: At a start of the school year retreat for all faculty members in the school (including those who are not affiliated with the Commerce Program), a member of the Academic Integrity Panel shared results of an internal study about faculty perceptions of academic integrity and its surrounding issues, including process. This presentation was intended to further highlight the issues around not following the process of investigation, decision-making, and sanctioning.
- Coffee Talk: Midway through the first term of the school year, the Commerce Program hosted a coffee session for faculty members. Its intent was to highlight the messages of process and the support that could be offered therein, as well as provide some examples of cases that had been investigated by other faculty members in the previous year.

Institutional Alliances

The Commerce Program has benefited immensely from connections to other institutional groups dealing with the issue of academic integrity, both inside Queen's University and beyond. The people involved in these educational efforts sit on roundtables and Senate sub-committees in the university, and work with others in different institutions in the research and administration of academic integrity issues. For example, the quiz that all students were required to take was developed based on a similar quiz used by another Canadian school.

Assessing Success in our Approach

While we are heartened and excited by the interest and involvement of students and faculty members in our different approaches to academic integrity awareness and education, it is still early to understand the full impact of our varied initiatives. Ironically, we expect that if our approach is successful, we may see an increase in the reporting of cases of academic integrity because our faculty members will be following the full process (which actually benefits the students due to the adherence to the principles of natural justice). From the student side, we expect to see students holding each other accountable to maintain the fundamental values of academic integrity.

Next Steps

We will continue to build on the early success of our approach, but have recognized some areas that should be addressed in further initiatives to ensure that we are truly developing a culture of integrity. First, we would like to see more student involvement in the educational process (e.g. involving students in the video alongside faculty members), which would show that the issue is as important to students as it is to faculty members. Student involvement would also ensure that we are crafting messages that will resonate with that group. Second, we will take a more customized approach with faculty members. In a business school, where quantitative and qualitative courses are taught, it is necessary to acknowledge that the academic integrity issues that are faced in one type of course are not the same as are faced in another. Finally, we will continue to gather data about the perceptions of students and faculty members as well as about behavioural differences relating to academic integrity, in order to ensure that our approach meets the needs of all the involved parties.

Keywords: awareness, fundamental values, culture of integrity.

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Explaining differential cheating behavior of business vs. medical students

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It is well documented that academic dishonesty, comprising behaviors such as cheating, plagiarism, or unauthorized help; is widespread within secondary and higher education (Giluk & Postlethwaite, 2015) with scandals involving students' academic misconduct having surfaced at several leading institutions across the world (Minarcik & Bridges, 2015). Academics globally are focusing on various issues related to student academic behavior. However, despite this continued concern for ethical behavior, academic misconduct still remains a persistent problem at a global level (Khalid, 2015). Therefore, better understanding of personal and contextual factors affecting cheating behavior would be very useful for developing targeted interventions addressing cheating incidences (Gallant, Binkin, & Donohue, 2015) and "*help transform a culture of cheating into a culture of learning*" (Cronan, Mullins, & Douglas, 2018, p. 198).

In line with this, the broad aim of researchers was to explore various factors impacting academic integrity. A large scale study was conducted in a well-known university in Jordan having a Medical school, Engineering school and Business school; offering undergraduate and postgraduate courses. The survey was administered to students after receiving research ethics approval. The university website was used as a platform to inform students about the voluntary survey along with the assurance of anonymity of responses and confidentiality of data. Students who chose to participate were provided a link hosted on the Survey Monkey website where they received an informed consent form before beginning the survey. Final Sample yielded was 1170.

Data analysis findings comparing the means (t-test) for Business school and Medical school students, suggest significantly higher mean cheating value for business school students (2.63) as compared to the medical school students (1.92). Thus indicating that self-reported cheating incidence of Business students was significantly higher than the self-reported cheating incidence of Medical students; which is in line with previously reported in literature that business students cheat more than their non-business peers (Klein, 2011). However, the main significance of the study is that previous studies were done in mostly in western countries and this study was conducted in the Middle East (Jordan), which to the researchers' best knowledge is the first study in the region.

Given the strong statistical findings, i.e. this quantitative study yielding results in alignment with results of previous studies conducted in different cultural environments, it lays credence to the proposition that program of study may have an impact on cheating behavior of students. Therefore, it is important to understand the dynamics of why and how the program of study is having an influence on the academic conduct of the students. Further, what makes this investigation even more critical is the major focus of this region's educational offerings on business studies. Thus a follow up exploratory qualitative study was designed to better understand the reasons for this disparity in the student behavior.

The exploratory qualitative study was designed to be conducted in The United Arab Emirates (UAE). UAE is one of the most desirable locations for higher education in the Middle East region (Narwani, 2018; "New study highlights UAE's attractiveness to foreign students", 2017), having one of the world's highest inbound mobility ratio of 48.6% and an increasing trend of international degree-seeking students whose numbers have risen from 48,653 in 2011 to 77,463 in 2016 (Kamal, 2018). Since the aim was to probe the quantitative findings of the previous large survey and understand them better, focus group methodology was chosen as it is considered a good research design for exploratory qualitative study (Morgan, 1996; Stewart & Shamdasani, 2014). The recommended size for a focus group is generally between five to twelve respondents and multiple sessions are said to yield stronger results (Morgan, 1996; Stewart & Shamdasani, 2014). Hence, three focus group discussions were conducted for this study, with one focus group panel constituting five respondents and two focus group discussions having a panel of six respondents each.

The first focus group discussion panel comprised of five members, out of which four members had Bachelor qualifications in medical / healthcare related areas (MBBS, nursing & pharmacy) and Master qualifications in Business. Thus they were having exposure of both Medical & Business study programs. The fifth member was a professor teaching in a medical university in the UAE. Hence, all panel members shared a unique characteristic of having educational / work experience in both the medical as well as business areas. The purpose of this focus group session was to draw upon the participants' experiences in both the program areas and use their reflections to analyze further the differential cheating behavior results of the previous quantitative study.

The second focus group discussion panel comprised of six students pursuing their Master's in business. The third focus group discussion panel also constituted of six business students. Thus the second and third focus group sessions were exclusively conducted with the business students to understand in-depth the probable reasons for demonstration of high cheating behavior by business students as indicated through the previous quantitative study.

These focus group discussions led to several interesting observations shedding light on the possible reasons for the difference in cheating behavior of the business Vs. medical students. Mentioned below are key points raised by various panel members, which led to good discussion and shared general consensus with other panel members as well:

- Admission criteria – generally most of the students were of the opinion that admission criteria are more relaxed for business students as compared to medical students.
- More ethical role models in the medical fraternity as compared to the corporate setting – these were the findings from the first panel where the participants felt that there is more corruption and fraud cases in the corporate world as compared to the medical community. The participants talked about "strong focus of rules and protocols for the medical professionals" and "well developed channels for whistle blowing". Here the discussion dwelled on the industry practices creating a perception of unethical value acceptance for the students prepping to enter business. One of the participants talked about how "business grooms you for risk taking" while medical field works on risk management or "cautionary practices". The discussion here centered on cheating is a risk behavior and training students for risk taking makes them more amenable to other risky practices as well.

- Stronger legal actions taken against malpractice for medical professionals as compared to the business professionals – this point was also drawn out in the first panel discussion where the participants discussed the role of punitive measures in curbing an illegal practice. This point was in line with the previous point where the panel talked about the role models.
- Business students have more co-curricular interests – this point was raised in the panel constituting business students and they felt that lack of time due to a more "busy social life" may be reason for higher cheating especially "copy pasting or plagiarism".
- Better and more exposure of the business students to technology – this was also pointed out in the panels constituting business students. They mentioned that business students are more on social media and "techno savvy" hence they may be exposed to more "cheating temptations" available online.
- All three panels raised the point of nature of assignments and brought a number of rich observations. In first panel the point raised was that nature of assessments and exams in medical school is "more hands-on" thus it "wasn't easy to cheat". While the second and third panel discussions veered more on "same assignments recycled" and assignments not being relevant to the concepts "can't see any connection with what I learn". It was interesting to hear the students talk about cheating in business terms for copy pasting e.g. "poor return on investment with time I put in"; and contract cheating i.e. "outsourced assignments".
- First panel discussed that medical students are more exposed to ethical expectations through "Hippocratic oath" and that they are more conscientiousness because they are "responsible for human lives". Another similar point raised was "requirement of technical skills" that medical professionals needed to learn certain skills to be successful professional while in business according to the panel members, there was still "scope of being successful without technicalities". This point was substantiated by the panel earlier too in their discussion about practical relevance of assignments and curricula.

In conclusion, the focus group findings were very interesting and enabled a better understanding of the previous quantitative findings pertaining to the differential cheating behavior of the students. They also create a solid foundation to launch a more comprehensive full scale study in the UAE to supplement the previous study conducted in Jordan. Future research directions include cross country comparisons in the Middle East to understand the regional dynamics better especially due to sparse current literature in this area.

Keywords: academic integrity, cheating, discipline, program of study, medical, business.

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Medical students opinion on an open book examination

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Introduction

First year medical students of the Carol Davila Medical and Pharmacy University attend courses and workshops of medical genetics and they have to pass two exams at the end of the first term. The first examination is from the material of the workshops and it accounts for 25% of the final grade in medical genetics. It is mandatory for students to obtain a grade equal or higher than 5 at this first knowledge testing to further enter the final examination. Usually both exams in medical genetics test students' mastery in memorizing data, as do most exams they have to pass during their training to become physicians. However, in an era where information is easily available and medical genetics evolves and even changes from one year to another, memorizing certain data may be unnecessary. First year students usually find it difficult to retain or recall the huge amount of specific medical terms that describe the different genetic disorders. In fact, preclinical specialties seem to be in a contest of expecting first- year students to learn a volume of new information that surpasses the quantity of data acquired during their past 12 school years. All of this can stimulate the need to attempt cheating during tests and exams like: asking colleagues to help answer certain questions or looking under the table for answers on their mobile phones.

To discourage these behaviors and to promote learning from a newly published book of medical genetics in this academic year I have asked my students to write an open book examination as their first testing, and then to state their opinion about this kind of verification.

Material and method

132 first-year medical students of the Carol Davila Medical and Pharmacy University were tested in medical genetics through an open book examination at the end of the first term, in January 2019. The students had attended 10 workshops between October and the end of December 2018, and previous to the discussion of each subject they had received by e-mail a succinct written material that they were supposed to study and learn. After each workshop I recommended from the newly translated book Thompson & Thompson Medical Genetics 8th edition the chapter comprising the subject discussed, urging students to become familiar with the specific language. The open book examination from subjects discussed and analyzed during the workshops took place at the Department of Medical Genetics. The students were examined in groups in three different days and were allowed to borrow the book from colleagues. The questions of the open book examination were the same for all 132 students; some questions asked them to analyze pedigrees drawn in the book, but from a different point of view than explained in that chapter, while other questions just asked theoretical facts. 4 students sat at a rectangular table, each one of them receiving a paper with a different set of multiple-choice questions. Each time only 12 students entered the examination room. They were not allowed to talk to their peers or use any other source of information beside the specified book. Mobile phones were not allowed on the table and books were not verified whether being marked during reading and learning.

After writing their open book examination all students who have had workshops under my supervision, received a questionnaire and I explained its purpose: their answers would guide me in organizing the exams at the end of the workshops in the following academic year. The questionnaire consisted of 8 questions, three of them being analyzed in this paper. Two of the questions addressed eventual academic misconduct, like: copying from whatever source and talking to peers during examinations; the third question asked students to grade the difficulty of the examination. Students were also asked to motivate their choice for a certain answer.

Results

113 students considered the open book exam a good method against cheating by copying and only 13 students were against this view. One of the latter group motivated his/her answer by writing that "students in difficulty of answering would still turn to the easier way: the mobile phone"; while one of the former considered as motivation the fact that "everyone is concentrated on the book, knowing that all the information is in there, thus leaving the mobile phone to the side". From an interesting experience to a learning tool, from useful to easier, or from being supported to being reassured, students stated the benefit of an open book examination instead of the usual testing of their memorized knowledge. Some of them recognized that having a limited time to answer the examination questions, or because not finding the exact answer by using the index or general content, the cheating opportunity was diminished up to being eliminated.

When asked to grade the difficulty of this type of examination, the students chose as follows: 9 students – 'very easy', 37 of them - 'easy', 5 of them - 'difficult', 3 of them – 'very difficult' and 59 chose neither easy, nor difficult.

The last question presented in this paper asked students to choose as answer one of the following two statements:

a. *Since I was allowed with the book, I did not feel the need to talk to my colleagues during the exam;*
b. *Although I was allowed with the book, I still felt the need to ask my colleagues when the answer seemed difficult to be found.*

110 students did not feel the need to talk to their peers, while 19 still wanted their support even if having permission to look in the book.

Discussion

The present study aimed to investigate whether students chose to abandon the usual cheating methods and felt more at ease with an open book examination. Anonymous questionnaires were answered by 132 students revealing their opinions about the degree of difficulty of the questions and the need to cheat during an open book examination. Their motivations are scares and differ, suggesting their answers were sincere and without influences from their peers' opinions.

The overall high rate of answers in favor of the absence of copying (89.68%) or the ab-

sence of the need to ask a colleague for the right answer (85.27%, despite the fact that each neighbor at the table received a different set of multiple-choice questions) showed that one could successfully implement an open book examination to eliminate such types of misconduct.

Because the exam took place in three different days and students were divided in 11 groups to enter the examination room, they could talk to one another about the subjects. There is no agreement to a statement of nondisclosure of exam subjects to peers signed by students or at least discussed with them. Also they could have easily made marks inside the book when studying, or in case of finding out the questions from peers, or if the book was previously used in the examination by its owner or somebody who borrowed it, or they could even prepare a sheet of paper with answers from home, as each student writes the answers on his/her own paper brought in the examination room. Supervising during the examination I observed only one marked book (a drawing that was subject for a question) in the last examination day. Also there was a student who did not have a great performance during the workshops and who answered correctly all questions in a surprisingly short time, although I never saw him writing anything, suggesting he knew the questions from his peers or had the answers already written on a sheet of paper before entering the room.

When asked about how difficult the examination was for them, the seemingly neutral position of students (52.21%) shows that such verification of genetic knowledge acquired during the first year of study is not burdensome but perceived as balanced. Feeling less pressured during the examination can lead to less attempts to cheating and this is shown by the few students (7.07%) who perceived the exam as difficult and very difficult. In comparison to previous academic years students' achievements were skewed to the right, suggesting questions were too easy, and the feedback given by students' opinions (40.71% answered the examination was easy and very easy) did still not entirely support this fact, because if some knew the answers before entering the examination room, this interpretation of their results and the difficulty of the examination could have only been spurious. But the limitations of the present study can be surpassed in a new design that considers their elimination, like: changing questions for each group of students entering the room, or having all students answer them simultaneously; the supervisor having access to all corners of the room for viewing if mobile phones are used under the table and signing all papers students use; not allowing students to leave the room with their answers written on paper.

Conclusions

The open book examination was perceived by the first-year medical students of the Carol Davila Medical and Pharmacy University as an assessment tool that could diminish their misconduct.

Keywords: open book examination, medical students' opinion, cheating.

Establishing good laboratory practices in a basic science research group

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A good laboratory practice is an essential for academic integrity especially in natural sciences. We attempt to bring fundamental aspects of good scientific practices from both the laboratory, data analysis, reporting and writing in a research group and at a undergraduate level. Errors owing poor practices in basic sciences of protein three-dimensional structures [1] which are invaluable in drug-development or in biomedical sciences can be of immense patient damage [2,3].

Many universities lack formal courses on good scientific practices in their curricula. This in turn has tremendous burden on the research groups that later have to retrain the students on good laboratory practices that are essential for maintaining fundamental integrity to conduct proper science. We are on track (from summer semester 2020) to conduct a course work entitled 'Good Scientific Practices' at the undergraduate level at Goethe University Frankfurt at the Department of Organic Chemistry and Chemical Biology. This course work will have clear guidance on conducting experiments and general scientific work based on the recommendations issued primarily by the German Research Foundation [4,5].

The complete course is in the form of a obligatory lecture series with one hour seminars for 15 weeks in the fourth-semester (of a Bachelor study) followed by an written examination at the end of the semester. In every lecture, a theme is chosen, for example, 'data collection procedures', and an optimal way is practiced in detail (for 45 minutes). Later we plan to have a discussion with *junior research group leaders* from the campus with their experiences on the topic in their field. This would give the students first-hand knowledge on the academic way of doing work and serve as an example. It is also strictly necessary in experimental sciences to follow the regulations as dictated by state and federal laws, especially for safety, environmental and ethical reasons biologically relevant experiments. The course work will make aware of the individual and team responsibilities in scientific work.

In parallel, we have built a 'online' examination in the form of a questionnaire to be used by Bachelor, Master, PhD students or postdoctoral fellows at our laboratory. The participation of this online quiz takes about an hour or two. It is built into several modules and begins introduction to research integrity as a core module. Though it is primarily aimed at life-sciences, the modular setup allows for each research group to adapt it their needs. At the our research group every new member needs to complete this 'online' questionnaire that builds rules, awareness, and reporting which will go a long way in avoiding poor science work either by dishonesty or accident. We do note that there are 'commercial' providers that offer similar but very broad training. Unfortunately, they are prohibitively expensive and therefore not accessible to every research group. In addition our modular architecture (and open source) means, any research group can adapt this to serve their specific needs. A few groups in our campus want to base their questionnaire on our templates as a part of 'induction of new member'. We believe that introducing such a training at an early stage in the career would have immense benefits from proper experimentation, data collection,

documentation leading to improved reproducibility, originality, avoid poor ethical behaviour like that of overinterpretation, authorship, plagiarism and data manipulation. The system will also include an anonymous reporting system modelled on CIRS (Critical Incident and Error Reporting System) [6]. There are many universities and research institutes devoid of specific courses on 'good laboratory practices'. In such cases, this complete questionnaire could be treated as a 'GLP in a box' - (Good Laboratory Practices in a box) and could be offered in a 'plug-n-play' model everywhere.

Keywords: good laboratory practices.

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INTERNATIONAL AND NATIONAL PROJECTS RELATED TO ACADEMIC AND RESEARCH INTEGRITY

Retrospective analysis of plagiaristic practices within a cinematic industry in India – A tip in the ocean of icebergs

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Enhanced focus in establishing/practicing a culture of integrity within academia, research, industry and politics has been a promising development of this decade. Most importantly, the public awareness on "integrity" and avoiding plagiarism has tremendously increased in the developed countries whilst the concept is welcomed and wilfully embraced by many developing counties, especially by academics and legislative think-tanks. Doctoral thesis of many high profile politicians have been retrospectively analysed, resulting in their public humiliation and resignations. However, it is not clear whether similar focus has been made in the music industry. Music plagiarism is defined as using tune, or melody that would closely imitate with another author's music without proper attribution. It may occur either by stealing a musical idea (a melody or motif) or sampling (a portion of one sound, or tune is copied into a different song). Several world famous names within English pop, such as George Harrison, and the Gallagher brothers (Oasis) have been accused of "borrowing" musical tone, and/or rhythms from others. In fact, there were some, memorable law suits against many American pop stars.

Unlike the Western countries, the music industry in the East, especially in India has different domains. On one hand, those based on traditional music rhythms that are believed to be originated in ancient times. These include carnatic (Southern India), folk (culture-specific rural songs) and Hindustani (Northern India) music's. On other hand, music that is inter-woven within cinematic industry. The second type is mostly a mix of traditional and Western music forms. Film industry has been thriving in India more popular than the Hollywood industry. The industry has been well established in different cities based on respective languages (such as Hindi, Tamil, Telegu, Malayalam etc.). Almost all the Indian films have at least 4 to 8 songs, may they be duet, or be the ones with philosophical message. Unlike the traditional music, the cinematic music is extremely popular amongst the community. The industry has become profitable and many new (so called) "music directors/composers" are being born almost every year. Since the expectations of the general public for songs that are enjoyable and/or would make everlasting impressions are high, many music directors are seeking elsewhere to "*borrow*" tunes. Whilst a vast majority of Indian cinema-goers may not have noticed these plagiarised tunes or "*songs that were written inspired by another tune*", some journalists and vigilant music lovers have started noticing these activities and publicising these on main media including YouTube®. However, these types of small scale publicising have not resulted in a mass propaganda against these rogue music directors.

This study has taken the initiative to investigate the extend of plagiaristic activities within

one Indian cinematic music industry. In this working paper, authors would highlight some of the example plagiarised music and the responses from the music directors/composer to the confronting vigilantes or media reporters. As for "excuses" given by these composers, they varied from mere denial to blatant acceptances claiming, "*nothing really comes from scratch*". This retrospective study was carried out using YouTube® searches for "comparative videos" made by the vigilant music lovers and published news articles about accused/detected music plagiarism. Some of these individuals (vigilantes or otherwise) were also interviewed to understand their views on this. This together with authors own research on the extent of this theft forms the basis of this initial study.

It should be noted that there are at least 20 different cinematic industries established in respective languages in India. Therefore addressing the issue in all these industries would be a Herculean task. Therefore, this study focussed on cinematic songs in one Indian film industry only. During the investigation, it was possible to identify a vast amount of plagiarised tunes, snippets, or even the full song melodies that have been plagiarised. In fact, some of these examples dates back to 1954, during the era when no one would have noticed plagiarism (mainly due the limited cross-world music experience/exposure). Authors have compiled an example list of songs that have been (accused of) plagiarism. The paper would highlight the similarities of these music files (videos and/or audio recordings for comparison). It will also show some examples of the excuses/denial given by the composers and would try to highlight the attitudes of general public towards these type of activities.

Keywords: music plagiarism, film industry, plagiaristic activities, Youtube-videos.

Academic integrity amongst students and faculty in Serbia

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The aim of this paper is to investigate views on academic integrity amongst students and faculty in Serbia, as well as to examine whether there are differences between these two groups.

Research has shown that attitudes towards academic integrity and misconduct vary across national cultures. Several studies have indicated that there are differences between attitudes toward academic integrity in Eastern Europe compared to Western Europe that imply a need for being sensitive to the specific cultural context (Mahmud et al., 2018). In comparison to the West higher tolerance to misconduct and a more widespread engagement in cheating behaviour has been shown in several Eastern European countries: Ukraine (Magnus et al., 2002), Russia (Stephens, Romakin, & Yukhymenko, 2010), and Croatia – a country with a past shared with Serbia (Hrabak et al., 2004). These studies provide several reasons for this attitude: discrepancies in the cultures and the educational system, and the coordination effect, i.e. the correlation between cheating and the attitude towards cheating. The behaviour is also often connected to general corruption problems.

In 2017, the Transparency International Corruption Perception Index available on the www.transparency.org has placed Serbia at the 77th place of 180 countries. Corruption in higher education is not unheard of in Serbia (OECD, 2012). In 2007, 87 faculty members from the University of Kragujevac were accused of selling exams and diplomas, but the legislative procedure has to this day not been finished (Milanović, 2018; Roknić, 2016). Corruption in higher education is frequently discussed as several prominent politicians have allegedly plagiarised their theses (Lazarević, 2014; Milanović et al., 2014; Robinson, 2014).

Earlier general research on academic integrity has indicated that there are differences between students and faculty when it comes to responses to student engagement in behaviours identified as academically dishonest (Stevens, 2012) as well as the frequency of plagiarism (Fish & Hura, 2013; Hard, Conway, & Moran, 2006). In Serbia the SEEPPAI project has noted a discrepancy between students' and faculty's approach to academic integrity regarding ways to improve academic integrity: "Students believe in education, whereas teachers prefer sanctions" (Foltýnek et al., 2017), but the SEEPPAI project has not examined other possible differences.

Method

Surveys that are analysed in this paper were sent as a part of the project "Strengthen Integrity and Combat Corruption in Higher Education" co-funded by the European Union and Council of Europe as part of the European Union – Council of Europe programmatic framework "Horizontal Facility for Western Balkans and Turkey" and implemented by the Council of Europe Education Department in cooperation with the Council of Europe Programme Office in Belgrade. The analysis does not reflect the opinion of the Council of Europe or Eu-

ropean Union, but the author's opinion.
Online questionnaires were distributed to faculty and students respectively. The request was made by e-mail distributed to universities in Serbia. Respondents were recruited on a voluntarily and anonymous basis. Responses were obtained from 729 faculty members (693 total and 36 partial answers) and 1741 students (1704 total and 37 partial answers).

In order to enable a future comparison with the conditions at other universities, relevant questions that were not area specific were taken from a survey that was sent out to a university in Sweden (Bjelobaba, 2018). The survey instrument has thus been previously tested in Sweden, and later translated in Serbian. The surveys' face value was established by Serbian experts that have pointed out the need to specifically address some cases very uncommon in Sweden and thus not included in the Swedish survey (i.e. attitudes towards selling and buying an exam or a diploma).

In order to find out whether there are differences between students and faculty regarding the view on academic integrity nine questions (beside the demographics) were identical for both groups. Students were asked four additional questions that did not concern the faculty, while faculty had five additional questions that did not concern students.

Questions that were the same for both students and faculty included 19 cases where respondents were asked to describe whether they considered described behaviours to be misconduct and how often they think that those behaviours occur. A large part of the survey focuses on plagiarism. 7 different cases were described in order to illuminate the respondents definition of plagiarism, and in several questions, attitudes to, knowledge of, prevalence, the perceived reasons for someone to plagiarize, and the prevention were investigated.

In addition, only faculty members were asked to describe the ways of detection and the reporting procedures regarding plagiarism while students were asked whether they have ever been engaged in any of the 19 cases of misconduct, if they know any student who has plagiarised, if they were ever accused of plagiarism, and on the main reasons why they study at the university.

While the majority of students and faculty members identify different types of misconduct as either cheating or serious cheating, 10.77% of students do not know that plagiarising is cheating. Even more alarming is the fact that additional 22.84% of the students – as well as 4.67% of the faculty members – state that getting someone else to write one's essay for free is not cheating, while 20.65% of the students do not consider that looking at stolen exam questions before an exam is a misconduct. 23.66% of the students – as well as 6.60% of the faculty members – consider submitting someone else's work as one's own text after receiving the author's permission not to be cheating.

When discussing the frequency of different cases of misconduct, 20% of the students and 30% of the faculty declare in their answers that they do not know, in particular regarding the most serious types of misconduct – buying and selling an exam or a diploma. Cheating on exams in various forms (providing answers to another student, copying answers from another student, collaborating with another student during an exam when that was not allowed) on the other hand, is something that both faculty and students think happens often

or very often.

The students' answers on the question concearning how often they themselves have engaged in different types of misconduct confirm that cheating on exams is indeed very frequent. The three most common types of misconduct that they themselves admit to have done concern exam situations: 67.36% of the students have at some point provided answers to another student in an exam; 58.89% have collaborated with another student during an exam when that was not allowed; while 46.38% addmited copying answers from another student in an exam. Approximatelly 1% of the students confess purchasing or selling an exam, and buying or selling a diploma.

Seven different cases of possible plagiarism show great differences between students' and faculty members' attitudes. Faculty members in general find the described cases being plagiarism to a considerably higher level than the students. Rules considering auto-plagiarism in particular seem to be challenging: 39.87% of the students and 24.20% of the faculty members believe that it is not cheating to copy a paragraph from your own earlier published text word by word without acknowledging a source, while 40.06% of the students and 21.61% of the faculty members think that it is ok to submit a work previously submitted to another course without specifying that.

Both students (70.34%) and faculty (65.92%) consider laziness to be the major reason for plagiarism. But while 52.92% of the faculty blame the internet for making it easy to cheat, only 34.42% of the students think the same. Other resons that students and faculty consider important are that students want to pass the course at any price due to the pressure from family, friends, etc. While students stress lack of interest in the topic, faculty sees insufficient knowledge on academic writing and of what plagiarism is as important reasons.

The results of this study show a need for further education in academic integrity. A clear majority of the students (88.73%) and the faculty (97.88%) in Serbia consider academic integrity to be an important question and several respondents stress in free text answers that pedagogical preventive work is required.

Although 69.35% of the faculty members state that they have informed students about plagiarism in the context of their teaching, the lack of information seems to be a problem. When asked whether they have received enough information on plagiarism in their course/program, only 13.58% of the students stated that they indeed did receive such information and this that it was sufficient, while 55.89% answered no. Only a minority of students (23.67%) and faculty members (46.15%) think that they have enough knowledge on plagiarism. Both groups consider making information about academic integrity a natural part of education at all levels from undergraduate to postgraduate one of the most effective ways to prevent plagiarism. The usage of the technology for the detection of plagiarism is limited: merely 17.91% of the faculty members have used a text matchning software, which might be seen as a potential area of improvement.

In order to enable the participants to write freely about their views on academic integrity, at the end of the survey several questions were posed as free text questions. In these answers, several students and faculty members comment on the plagiarism cases amongst the politicians and faculty members, and are annoyed with the lack of the punishment of the misconduct in such cases. Overall problems of corruption in higher education in Serbia reflect in attitudes towards academic integrity.

Keywords: student, faculty, disparate views on misconduct, academic integrity.

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The RRING project: Aspirations, achievements and challenges

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The presentation is aimed at presenting and discussing the Horizon2020 project RRING – Responsible Research and Innovation Networked Globally (duration: 2018-2021). As the project has not yet produced any outputs at the abstract submission, the aim of our presentation is to increase the awareness of international academic society of the efforts undertaken by academic institutions to relate outcomes of other international (e.g. EC-funded Horizon2020 project MORRI) and national projects and initiatives in 18 countries to promote responsibility in the research and innovation field both in academia and industry globally. The aspects that we intend to bring into the academic discussion relate to state of the art of RRI in the regions and gaps in institutional practices and public attitudes towards RRI.

The overall aim of the project is to bring RRI into the linked up global world to promote mutual learning and collaboration in RRI. This will be achieved by the formation of the global RRING community network and by the development and mobilisation of a global Open Access RRI knowledge base. These activities will be carried out by 29 partners from 18 countries, including 7 third party countries subcontractors from India, China, Canada and the USA. The partners represent industry, research performing and research funding organizations.

RRING will align RRI to the Sustainable Development Goals (SDGs) as a global common denominator. The RRING project acknowledges that each region of the world is advancing its own agenda on RRI. Therefore, RRING will not be producing a Global RRI framework or strategy that is meant to be enforced in a top-down manner. Rather, increased coherence and convergence will be achieved via a bottom-up approach, learning from best practices in RRI globally and from linkages, via the new RRING community, to develop the RRI linked-up world.

Six Objectives of the RRING:

Objective 1: Promote a linked up global world of RRI by creating the global RRING community network, thereby enabling mutual learning, collaboration, mobilisation of RRI concepts.

Objective 2: Mobilise, promote and disseminate a global open access knowledge base of RRI based on the State of the Art (SoA) and comparative analysis across the key geographies, all stakeholders and sectors. It will cover key platforms, spaces and players, role and influence of stakeholders, drivers and policies for R&I, regulation in public, private sectors and nation states and international organizations.

Objective 3: Align RRI to the UN Sustainable Development Goals (SDGs) to provide a global common denominator for advancement of RRI, and address Grand Challenges globally.

Objective 4: Determine the competitive advantages of RRI and also understand how and where RRI is perceived as a barrier and/ or disadvantage.

Objective 5: Create high level RRI strategy recommendations for the seven geographic

zones, trial RRI best practice learning in 2 EU case studies.

Objective 6: Promote inclusive engagement of civil society and researchers.

Expected outputs and outcomes of the project include improving the benchmarking of European RRI initiatives, developing 28 case studies of good practice from other regions and incorporating those good practices into European policy briefs, creating a knowledge database, overseen by UNESCO and training materials on knowledge base. The areas of expected impact include improvement of innovation capacity, development of social innovation and social entrepreneurship, creating new market opportunities, strengthening competitiveness and growth of companies, addressing climate change and the environment and other benefits for society.

Keywords: responsible research and innovation, global networks, ethics, gender.

Developing guidelines for academic integrity

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This presentation aims to present the international experience of developing general guidelines on academic integrity under the Erasmus+ project “European Network for Academic Integrity”. These general guidelines serve as a supportive document for the glossary for academic integrity developed by the project. They serve to help build common understandings of integrity issues in both academia and business. The guidelines outline minimum requirements and responsibilities of various stakeholders in academia, such as national ombudspersons, judicial authorities, compliance officers, research project managers and other related bodies or units in academia (such as policy units, educators/instructors, senior administrator/managers/coordinators) as well as students, the business sector and others. Many of the guidelines are necessarily general, but, where relevant, we provide country-specific examples as well as adjusting to meet to the needs of different fields of study/research.

The presentation is two-fold. In the first part we give a comprehensive snapshot on how they were developed while in the second part we as an international team share experiences and challenges originating from this exercise.

The development of the guidelines was divided into four stages. First, each guideline development group (GDG) member selected terms from the Glossary for Academic Integrity for which they have expert knowledge. At the end, 46 out of 208 terms remained free of guidelines as self-explanatory. Second, within the project aim and output description, GDG agreed on criteria for general guidelines development, such as: 1) a guideline should be country-and discipline-specific where appropriate; 2) a guideline should be concise; 3) a guideline should help avoiding misinterpretation of the words used in a term's definition; 4) a guideline should help make a distinction between terms; 5) if a guideline is inherent to particular stakeholders, it should be clearly stated; 6) only reliable sources should be included in guidelines; sources should be properly acknowledged, i.e. in-text citation and the list of cited sources; and 7) a guideline might provide short and clear examples/illustrations. Third, each GDG member made his/her contribution either individually or within a smaller group of those members who selected the same term for guidelines development. Fourth, all contributions were refined in relation to the definition of a term provided in the glossary for academic integrity and to the set of predefined criteria in order to ensure consistency of a guideline. Each guideline contains an excerpt from the glossary for academic integrity, i.e. only definitions of related terms are used in the box while the source could be consulted within the glossary for academic integrity. Each guideline is formatted with a few sub-headings, such as definitions of terms related to the guideline, additional clarification on glossary definition(s) (backed by reliable sources), related examples or requirements (where possible backed by reliable sources), recommended reading and references. In summary, general guidelines for academic integrity explicate 111 terms related to academic integrity that are further grouped thematically into i) guidelines about fundamental terms, ii) guidelines about institutional culture and practices, iii) guidelines about science and research, iv) guidelines about academic writing and publishing, and v) guidelines about academic integrity breaches. Finally, even though the GDG members come from various countries and disciplines, development of particular guidelines was done in smaller groups. This might have led to examples that are discipline-specific or country-specific. We believe this does not threaten usability of the guidelines in other contexts, but it has to be taken in account.

The second part of the presentation informs about the positive and negative experiences related to the development of general guidelines as well as challenges remained in this regard. Overall seven feedbacks from 12 authors of the report of general guidelines was received by filling an anonymised online questionnaire. Among positive experiences authors of the report of general guidelines list:

- *knowledge improvement* (e.g. hearing their [partners'] different interpretations of terms (R1), inter/transdisciplinary confrontation (R2), we all extended our understanding of the related terms considering different fields (R3), understanding different perspectives from other subjects and countries (R7));
- *collegial environment* (e.g. sharing of experiences (R2), sharing workloads (R5), collaborative and positive attitude of whole team (R6), working collaboratively with colleagues (R7));
- *community culture* (e.g. it was good to have a consensus on the guidelines (R3), a possibility to discuss and look for common agreement on academic and research integrity related

issues with partners from different scientific fields (R4));
- *task management* (e.g. surprisingly effective to take decisions when communicating via Skype (R1), timely reminders with manageable deadlines (R5), constructive feedback from reviewers (R6)).

Among negative experiences authors of the report of general guidelines identify:

- *complexity of a work* (e.g. it was very hard work, over a considerable time (R1));
- *engagement and commitment* (e.g. challenging to produce guidelines by the involvement of several colleagues because each of us wanted to prioritise different aspects or several colleagues wasted time producing similar guidelines to each other (R3), efficiently coordinate input from each partner (R4), occasional delays in partners contributions (R5), not all partners (fully) sharing the workload (R5));
- *structure of a guideline* (e.g. we often tended to start with some (philosophical) discussion rather than explanation (R6));
- *writing style and size* (e.g. since writing styles of academics at different fields are different from each other, we experienced some difficulty in adopting a common style (R3), too long texts from some partners (R6)).

Authors of the report of general guidelines point out few present challenges, such as usability of these guidelines in terms of completeness (e.g. we have no idea yet how useful this will prove to be, which terms we have missed and whether there will be disagreement about our definitions and interpretations (R1), there are still many aspects of academic integrity that seemed important to discuss but because of limit of human resources and time were not covered in current version of guidelines (R4), new terms coming into use all the time (R7)) and practicality (e.g. make guidelines more practical and applicable to daily issues (R2), the guidelines are not tested in practice yet. It would be great to have feedback "from the wild" (R6), we have no idea whether our efforts will be appreciated and used by others as intended (R7)) and fair contribution (e.g. equal contributions (R5)).

Bearing in mind all positive and negative experiences as well as challenges remained, the need to discuss efficiency and effectiveness of international project management is relevant.

Keywords: academic integrity; guidelines.

Lithuania: The Code of Ethics for educators

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The Code of Ethics for Educators was approved by Minister of Education and Science of the Republic of Lithuania (11 June, 2018, order No. V-561). The Code defines the key requirements of professional conduct and obligations for pedagogical staff and freelance teachers (hereinafter referred to as Educators) to pursue ethical and professional conduct with pupils, their parents (carers, guardians) and other family members, colleagues, and community and the main principles of conduct and activity for educators such as respect, justice, recognition of human rights, responsibility, fairness, care and solidarity.

The presentation reflects both on a legal basis for preparing this document or namely – amendments of The Law on Education (June 30, 2017) (e.g. „teaching is prohibited to a person whose conduct brings the profession into disrepute"; „a teacher must follow the Norms of Conduct of the Educational Institution" etc.) and the main steps, methods and approaches of its developing. It outlines that discussions and openness towards different opinions of stakeholders, NGOs, associations of teachers, university researchers and teacher trainers, school leaders, trade-unions have been the main method of developing the Code and guiding approach in the procedure towards an agreement and the order by the minister of Education and Science. A number of activities of a dissemination process and a few implementation issues of the document into the practice of education institutions reflected in this presentation paper as well.

Keywords: Code of Ethics, educators, Lithuania.

The role of quality assurance and accreditation agencies in reducing corruption in education: results from a global study

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As part of their leadership role in quality assurance, in 2017 the Council for Higher Education Association's International Quality Group (CHEA/CIQG) commissioned a global study of accreditation and quality assurance agencies (AQABs) for higher education (HE) to investigate what actions they are taking to identify and respond to corruption in the HE sector. The study built on an advisory statement created the year before, informed by a panel of experts convened by IIEP / UNESCO and CIQG (IIEP & CIQG 2016). The advisory statement set out recent examples of corruption in HE and suggested actions that could be taken by different stakeholders to discourage or reduce such conduct.

The scope of the 2017-18 study was to explore responses to corruption in different parts of the world under six categories of HE:

- Regulation
- Teaching
- Admissions and recruitment
- Student assessment
- Credentials and qualifications
- Research and academic publishing

The definition of corruption adopted for the study was based on a rather narrower interpretation than that given in the advisory statement: "dishonest practices … undermining the quality and credibility of higher education around the world" (IIEP & CIQG 2016: 1), by focusing on deliberate "actions of individuals or groups rather than misconduct through accident, incompetence or ignorance" (Glendinning et al 2018: 6).

By AQABs we: "… *include organizations that*

- *conduct institution-wide audits to evaluate quality assurance systems and standards;*
- *evaluate specific subjects or programs for disciplinary rigor, quality and standards;*
- *accredit programs leading to professional qualifications or license to practice*
- *provide oversight of research institutions;*
- *focus on quality assurance and standards at specific levels of education;*
- *are established to provide access to sources of funding for institutions and their students*" (Glendinning et al 2018: 6).

The study was undertaken by a team of three researchers from Coventry University, the authors of this paper. Ethical approval was granted for the research by the University. A review of relevant literature continued throughout the study period, with non-traditional sources such as blogs, press and media evidence featuring prominently in the resources referenced. Mainly quantitative data was captured using an on-line questionnaire, targeting over 300 AQABs. More detailed information was captured through semi-structured

interviews with key players in HE quality assurance and experts in the higher education, research and academic publishing in different parts of the world.
A total of 69 valid questionnaire responses were collected. In addition 17 semi-structured interviews and a further 5 less formal discussions were conducted either face-to-face, via Skype or by email. The interviews were audio-recorded with permission from participants, then later transcribed. It was possible to conduct the whole data collection process in English, given the language skills, expertise and roles of the people involved. Documentary evidence was also analysed, to explore policies and evidence of activities and progress in different countries in addressing corruption.

Questionnaire responses were anonymised before analysis. However, with their permission, interview participants were identified in the final report. Thematic analysis was used for the qualitative data and descriptive statistical analysis was conducted on quantitative data. A draft copy of the relevant parts of the report was sent to those interviewed to allow for corrections and updates.

Very few of the AQABs that responded expressed serious concerns about the types of corruption under the scope of the study. Some respondents said that responsibility for identifying and dealing with corruption lay elsewhere (typically with HEIs or government departments). Some said national legislation or local policies had eradiated such corruption. However these reported experiences do not align well with evidence from the literature that demonstrates the ubiquity and variety of corruption in higher education and research, across almost every country globally.

It was encouraging that some AQABs respondents expressed awareness of the threats from corruption to quality and standards and some ABABs are proactively implementing strategies to address corruption, either directly or via partner organisations (including examples from Nigeria (O'Malley 2017a), India (Varghese 2017), Russia (Denisova-Schmidt 2017), Lithuania (Glendinning et al 2018: 52), Germany (Weber-Wulff 2016), Kosovo (ORCA 2017), Australia (TEQSA 2017), UK (QAA 2017) and Ireland (Government of Ireland 2018)).

In addition to many good practice examples provided by interview participants and from literature, many examples came to light about the scale and nature of corruption in some countries. Examples include the discovery of over 5,000 fully plagiarised PhD theses in Russia by the group Dissernet (interviews), serious sexual harassment of students in Uganda (McKie 2018) and the revelation that about 60% of HEIs in India have no oversight or checks for quality and standards (interview). Fortunately, in both Russia and India there are signs that these problems are beginning to be addressed.

The recommendations to AQABs arising from the research include the need for proactivity in engaging with HEIs to help strengthen their responses to corrupt practices, such as appointing staff or admitting students with fake qualifications. There is also great value in AQABs networking and communicating with other agencies and organisations in their locality, including NGOs, to better understand and respond to threats from corruption, as exemplified by Lithuania's quality assurance agency working closely with the ombudsperson interviews).

It is worth reflecting that corruption in higher education is not confined to countries that rate low on Transparency International's Corruption Perception Index (CPI, TI nd). Recent examples of corruption in HE from countries perceived to be relatively low in corruption, including Sweden (Abbot 2016), Japan (Forrest 2018), UK (Watson 2017), Australia (Besser & Cronau 2015), USA (Fox News 2018), remind us that all nations and their AQABs need to be vigilant in identifying and reducing corruption affecting higher education, whatever form it takes.

This research provides important new evidence about strengths and weaknesses of AQABs in helping to fight corruption and malpractice in higher education. It is anticipated that the findings about the global nature of corruption in higher education will encourage AQABs to be more open about the problems in their community. Most of the respondents indicated that they would like to communicate with other AQABs to more effectively serve their higher education providers.

There are also crucial messages to other players in HE, not least national and local governments and professional bodies responsible for establishing and resourcing AQABs, about the dangers of ignoring corruption and the need for adequate funding and support for AQABs. Responsibilities of HE institutions in instituting robust internal quality assurance processes are highlighted as a critical component of the overall QA regime for addressing malpractice, eliminating corruption and encouraging integrity in education and research.

The final word must be about individual responsibility, whether a member of an audit panel, a lecturer or institutional leader, a student leader or fresher, the integrity of individual members of a community influences that of the community as a whole. We are all responsible for fighting corruption in HE to protect the value and quality of education and research provided by our HE institutions.

Keywords: academic integrity, corruption, quality assurance, accreditation, higher education providers.

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Where are students really getting their assignments from? An international study

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Changes being proposed in legislation suggest that student outsourcing from third parties, usually described as contract cheating sites and essay mills, is an international problem of growing concern. PayPal recently announced that they would be removing its service from essay mills, meaning that companies would have to use alternative means for seeking payments from buyers (Coughlan, 2019). Last year the Irish government announced the proposal of a bill which would make it illegal to advertise contract cheating services (McKie, 2018). Australia and the UK are debating the introduction of legislation which could make the advertisements and/or sale of work to students for academic credit, a criminal offence (Department of Education and Training, 2019; Smith, 2018); New Zealand and the US already have the ability to take legal action against these types of companies/activities (Draper & Newton, 2017).

Irrespective of the direction which legislation takes, higher education providers will need to continue to work towards being proactive and promoting ethics and academic honesty to instil integrity in the student body, whilst also having some reactive actions. If wanting to reduce the amount of outsourcing of assignments in higher education, it is necessary to understand what the prevalence of these types of cheating are, whether some students demonstrate usage with certain methods and through what mode (money, exchange or for free) and what motivates students to utilise different outsourcing methods. These data may also alert educators (by language or country) to the possibility of students studying in their language/country having more propensity to assignment outsourcing from a specific type of third party, as well as possible motivations which could be minimised. Combining these data with research on the business models of these sites, locations of writers, target audiences etc. (Ellis, Zucker, & Randall, 2018; Lancaster, 2018), could greatly empower the higher education industry to assess outsourcing behaviours and work collaboratively and globally, to improve strategies against it.

This paper will present data from the Global Essay Mills Survey (GEMS) project conducted during 2017-18. The survey was released at universities in various countries in twenty one languages, and was the first known study of its kind which sought to gather information on student assignment outsourcing methods from respondents in different countries, using the same survey tool, concurrently. This allowed for a wide international investigation into assignment outsourcing behaviours in tertiary education. The survey used mixed methods with mostly quantitative questions, and other open-ended qualitative responses to provide additional data to triangulate some of the quantifiable survey items. Included in the survey were questions exploring university students' experiences with sites which sell or provide work for academic credit. Usage of different site types was asked of respondents (with associated definitions), to gather data on engagement with peer-sharing sites, essay mills,

assignment bidding sites, bespoke contract cheating sites, as well as obtaining assignments from peers and family members. Respondents were asked whether they submitted the work entirely as they got it, if they edited it before submission, or used it only for reference purposes; and whether they obtained the work with money, through exchange of some form of information, or for free. The paper will provide readers with an overview of the whole data set combined (incorporation of all languages together, or cross-language comparison).

10,495 surveys were returned in twenty one languages. There was an average completion rate of 61%. Seven languages returned less than ten complete surveys and therefore only fourteen were used in analysis. We found that the most common type of outsourcing behaviour that student's engaged in was by obtaining work from friends and family. In relation to the differing site types and modes, the top three most commonly used methods for obtaining assignments were: for free through peer-sharing sites; for exchange through peer-sharing sites; and for free from essay mills.

We tested which variables could account for variations in outsourcing behaviours and which could therefore be considered to be predictors of cheating behaviours. Survey items were designed to include dependent variables (three cheating behaviours – outsourcing from sites, friends and family, other students) which could be tested against the independent variables. Independent variables included some nominal/categorical: knowledge of others cheating; level and discipline of study; gender; or whether they thought contract cheating sites were illegal in their country; ordinal/ranked, such as whether their tutors knew them by name; and continuous variables, such as the reasons why they were at university; and the proportion of students which they believed outsourced their assignments.

The internal consistency for all positive responses to engagement with outsourcing was high (0.894) (Cronbach's Alpha), and when the last two items (obtaining work from friends/family and other students) were removed, internal consistency was higher (0.922). Due to these differences, statistical testing was subsequently done in three groups by outcome variable: all outsourcing, site only outsourcing, and other outsourcing (to include only positive responses to the outsourcing from friends/family, and other students). Bivariate analysis was conducted to determine which of the independent variables had an effect on our dependent variables. Whilst most of the correlations were statistically significant, 'Rate' was the only continuous predictor which explained more than 1% of the total variance for any of the three outcome variables. This demonstrates that the rate at which students felt that others were using outsourcing sites, positively correlated with their own engagement with any type of outsourcing. 'Rate' accounted for the biggest variance. The reasons why students were at university also demonstrated some statistical significance for all three dependent variables, although at a lower level than the rate at which respondents felt others' outsourced their assignments. These were separated by response option into two categories (relating to intrinsic versus extrinsic motivations). Extrinsic motivations showed as a negative/inverse correlation; a predictor indicating that the more intrinsically motivated a student, the less likely to cheat.

One of the most significant predictors from the categorical variables for engagement with any of the three outcomes, was whether respondents thought that other people were using these sites. Effect sizes were small, and from a one-way ANOVA test, the 'Awareness of

others' variable was found to be statistically significant (p<.0005). Students who reported knowing others who had used these sites were significantly more likely to use outside sources for their own work. Country was also statistically significant for all three dependent variables (p<.0005). The Ukraine had the highest mean score (significantly higher) for all types of outsourcing, followed by the United Arab Emirates, Slovakia, Turkey and Montenegro. The countries with the lowest means were Bulgaria (with only one respondent having reported any outsourcing), followed by the United Kingdom and Sweden (Australia was fifth). However, when considering 'Other' outsourcing (friends/family, students), Hungary had the second highest mean to the Ukraine.

When separated by language, Ukrainian had the highest mean score for all three outcome variables (which was not surprising as the largest country mean). Slovakian was the second highest language by mean for all types, and site only outsourcing. Swedish and English had some of the lowest means for all the three outcome variables. By discipline, Hospitality and Personal Services had the highest mean for all outsourcing with Health having the smallest mean. Agriculture, Information Technology, and Management/Commerce had the 2nd to 4th highest means respectively.

The data provided the ability for us to consider some predictors which can be aligned with higher engagement with different types of assignment outsourcing. As language and country demonstrated high effects, this could imply general cultural differences which may refer to the educational systems, or opinions around ethics/honesty. Knowing that others are cheating, as well as predicting high rates of engagement in dishonest academic practice by others, were also some of the stronger predictors of self-cheating behaviours; implying that these behaviours may be normalised amongst certain groups of students. The paper will present further predictors and information to allow people in different countries, or teaching in different languages, to consider these when working on the positive proactive elements of education to promote ethics and academic integrity.

Keywords: assignment outsourcing, essay mills, peer-sharing, cheating.

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SUSTAINABLE HIGH EDUCATION AND HIGHER EDUCATION

Tracing the journey of two students' trajectory to becoming advocates of integrity – a case study

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Developing a culture of integrity on campus is a goal we all strive to achieve, albeit a difficult one in the era of mistrust, political turmoil and questionable role models. Current research has shown time and again that fighting misconduct isn't easy. Academics and researchers believe developing a culture of integrity is a constructive, educative mode of beating misconduct (Stephens, 2016; Bertram-Gallant, 2011). Being proactive is believed to be the key. Teaching in itself is a time-consuming and challenging task. We are teaching students critical thinking skills and preparing them for the real world which in itself is a difficult task, particularly when we are constantly battling for their attention against smart phones and other digital distractions. Add to this, our own career progression, research, publications, other governance and administrative tasks including marking, assessment setting and so on that bog down academics' world over. Amid this, developing a sense of integrity in students before they hit the workplace so that they take with them a strong understanding of right and wrong is an added responsibility. But how do teachers go about developing this culture of integrity in their students? This study tracks the journey of two students and demonstrates the use of mentoring to transform them from being passive to active advocates of integrity on campus.

Clutterbuck, Devine and Beech (1991) mention that mentoring is an efficient form of developing talent and suggest that a good mentoring program helps people to recognize their abilities. A "mentor" is someone who "advises, counsels, or helps (younger) individuals" (Feldman, 1988). Murray (2002) defined mentoring as "a deliberate pairing of a more skilled or experienced person with a lesser skilled or experienced one, with the agreed-upon goals of having the lesser skilled person grow and develop specific competencies" and the backdrop where this occurs is called a facilitated mentoring program, i.e. a structure and series of processes designed to create effective mentoring relationships, guide the desired behavior change of those involved, and evaluate the results for the protégés, the mentors and the organizations (Murray, 2002)

Obtaining a mentor is an important career development experience for individuals (Eby et al., 2000). Rodger and Tremblay (2003) were among few researchers who investigated the positive impact of mentoring on student performance. They used an experimental design to examine the effects of participation in a year-long mentoring program for first year students and found that students who participated in the mentoring program got significantly higher grades than non-mentored students.

Based on the widely reported effectiveness of the mentoring program for improving performance, the researchers undertook to mentor two students on their journey towards self-improvement. This process is discussed through a case methodology. The study uses qualitative case study method, telling the story of the students' experiences. It began with the mentors attempts at recruiting students who started as volunteers for various academic integrity projects. The case highlights obstacles faced both by the mentors and students such as time, governance and influence and attitude of peers (other students and academics) among others. For instance, both students reported positive support in terms of parents, religious beliefs and

upbringing that added to the experience and helped them transition from students to academic integrity advocates under the mentorship they received from the researchers. Mentors used cultural socialization to help use the positivity from the students' lives to provide them with a support system that guided their understanding of integrity.

Among barriers they faced, one student shared negative experiences faced by them such as other students mocking the mentee to disassociating with the student to flagrant disregard for practices and messages shared by the mentee. The second student shared demotivating experiences of seeing other students with unethical practices get awarded more grades or low turnouts at events that were organized to raise awareness on integrity. In both these cases, the mentors played crucial roles in ensuring the barriers did not become hindrance to the students' mindset and progress. Mentors designed one-on-one sessions, creating opportunities for mentees to actively reflect and participate in, so that they would become more metacognitively aware, guiding them to think about why and how they were growing as individuals from the experiences, and how they could go back to face and spread their message to other, less convinced students on campus.

The case study traces the progress of the students from such volunteer assistantship experience to becoming research assistants for several academic integrity projects from whence they became co-authors and finally advocates of integrity at university and into the workplace. One mentee continues to be an advocate on campus as the student pursues graduation completion while the second mentee graduated and joined a workforce where the mentee has established the importance of referencing and citation into all phases of the work, such as data handling, slide preparations etc.

The case study through this journey mapping provides proof of effective mentoring towards developing a culture of integrity in students that they can then become advocates on campus and into the workplaces.

Keywords: mentoring, academic integrity, student cheating, culture of integrity.

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MAKING AN EFFECTIVE UNIVERSITY ETHICS INFRASTRUCTURE

Academic integrity: The gap between university's policy and practice in the study process

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Typically, higher education institutions that care about honest, responsible and trustful conduct of academic and research activity introduce a relevant academic integrity policy as a part of their set of core university policies. According to Tauginienė et al. (2018), academic integrity refers to "*compliance with ethical and professional principles, standards, practices and consistent system of values, that serves as guidance for making decisions and taking actions in education, research and scholarship*" (pp. 7-8). The academic integrity policy usually specifies the university's ethical principles and values, forms of honest and dishonest academic behaviour, penalties for academic malpractice, and procedures for handling violations of academic integrity. Different organizational and technical means like responsible bodies, text-matching software, reporting forms, training activities, and other tools support the policy. Prenshaw et al. (2001) emphasize that the policy on academic integrity alters "*the culture and social dynamics of the university*" (p. 204). However, the critical question is either such a policy remains only a declarative one, or it is consistently and effectively applied and implemented, or, in other words, if the everyday practice aligns with the policy defined by the university.

While the academic integrity policy typically concerns all members of the university's community, students are those who determine the reputation of the university in society to a large extent. East (2009) points out that a university approach to academic integrity should be multi-pronged and systematic: it is not enough to inform students that the policy exists, but it is also necessary to take actions with the aim of applying the policy. Morris and Carroll (2011) pay attention that students will not necessarily read and understand the policy. Thus, nowadays the policy is attributed to the broader institutional approach that informs and educates students about academic integrity through workshops, induction events, forums, and specially developed handbooks (Devlin 2003; East 2009; MacDonald and Carroll 2006; Morris and Carroll 2011). McCabe et al. (2001) even stress that it is necessary to create an "ethical community" in university campuses where the code of conduct is firmly embedded in the student culture. Prenshaw et al. (2001) emphasize that the academic integrity policy not only manages violations of academic integrity but also frames students' perceptions of them. In this context, it is quite surprising, that studies on student awareness of the university policy on academic integrity have received little attention so far. Gullifer and Tyson (2013) point out that "*no research to date has actually asked students if they had read the institution's policy*" (p. 1203). In reality, there are few research works concerning this aspect.

Prenshaw et al. (2001) have studied if student perception of cheating could be related to the characteristics of a university policy (the level of details, accessibility and existence of legalistic structures). The series of McCabe's surveys conducted in North American universities and colleges (McCabe and Trevino 1993; McCabe et al. 1996, 1999) and similar research works that adopted his approach, for example, one described in (Florida State University 2015), have asked students about the ways they are informed about academic

integrity policy and have provided useful insights into institution-level variables that influence student cheating behaviour. Bretag et al. (2014) have surveyed six Australian universities (n=15304) by asking students about their awareness of academic integrity policy and satisfaction with the way of communicating the policy to students. On the one hand, they found that the majority of students have a good awareness of academic integrity and relevant policy and are satisfied with the information they receive about them. On the other hand, the researchers have also highlighted the need for a more broader approach that incorporates effective support and training about academic integrity. Gullifer and Tyson (2013) conducted a survey of all domestic students in one Australian university (n=3405) with the aim of investigating how well the students understand plagiarism as defined in their university policy. One of four questions defined in research is relevant to the study presented in this paper - how many students have read the policy on academic integrity? The researchers have found that only half of the students had read the university academic misconduct policy.

The research presented in this paper applies a case study approach with the aim of studying to which extent the policy defined by one of the Latvian largest universities is put into practice in informing and educating students on academic integrity. On the one hand, it addresses the question of student awareness of the university policy on academic integrity and adopts some questions from the previous research works. On the other hand, it extends the already acquired knowledge base as it focuses also on a relationship between student awareness level and student tolerance towards breaches of academic integrity, as well as student perception of academic integrity as an important aspect both for the academic community and student personal life. Moreover, such research presents a kind of unique experience for the country as academic integrity issues typically are not discussed widely in Latvian society.

We start by providing a detailed description of the university's policy and presenting tools and mechanisms that apply primarily to the study process and students' academic behaviour in the institution. The university's legislation regarding academic integrity includes Study agreement, Code of Ethics, University's Internal Rules for students, availability of Ethics commission, and Code of Academic Integrity. The most comprehensive document is the Code of Academic Integrity. Its main goal is to strengthen the academic culture and honesty in the university's academic environment, to clarify the concept of academic integrity and the related activities and to define main procedures used when considering breaches of academic integrity.

After that, we go ahead with the results of the quantitative research that was performed by surveying by surveying two groups of respondents: domestic students of the 1st year bachelor studies (914 respondents from 47 study programs that comprise 33.5% from the survey population) and directors of corresponding study programs (20 respondents that comprise 48% from the survey population). Both surveys were based on the authors' developed questionnaires that were delivered to both groups of respondents electronically through the university's internal portal and e-mail. We asked for the response from students to understand how much they are aware of the university's policy in the field of academic integrity (7 questions) and what are their own attitude towards academic integrity (3 questions).

Surveying the directors of study programs allowed us to learn out if a specific study pro-

gram uses general university's tools and mechanisms for defending academic integrity and to identify other means used for the same purpose. The questionnaire consisted of two parts. The first one was intended for revealing director's standpoint about the necessity to inform and educate students about academic integrity and time most appropriate for such activities, as well as about the responsibility of different groups of academic community (university's administrative staff, faculty administrative staff, director of the study program, and academic staff) in this process (3 questions). The second part of the questionnaire examined the experience and practice of a particular study program concerning mechanisms used to inform and educate students in the field of academic integrity (3 questions).

However, it is necessary to take into account also serious limitations of this research: it focuses on the first few months after the beginning studies in only one Latvian higher education institution and therefore the results acquired are not generalizable to a wider context. However, results of the research make a foundation for a wider discussion of academic integrity issues in the country. They can also serve as an impulse for similar studies in other Latvian universities and especially research taking an international comparative perspective.

In general, the paper is structured as follows. Introduction presents our motivation to undertake the research and define the aim of the research. After that, a literature overview is provided with the focus on related work, as well as significance to inform and educate students about academic integrity and a necessity to align university's efforts with the defined policy. Further, we describe a methodological approach in detail (sample, research questions, methods of data acquisition and processing, and other aspects) and present our findings together with their interpretation. At the end of the paper, conclusions are provided.

Keywords: academic integrity policy, plagiarism, higher education.

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Encouraging online faculty to engage in the universities academic integrity process: faculty perceptions and tips to keep them interested

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The Open Learning Division of Thomson Rivers University is now 14 years old. Thompson Rivers University (TRU) is the product of an amalgamation between the University College of the Cariboo (UCC) and the British Columbia Open University (BCOU) in 2005. All programs and courses of BCOU became part of TRU under the newly created Open Learning division of TRU.

Open Learning (OL) at TRU is BC's leading open and distance education provider. Today, through its legislative mandate, Open Learning provides open, accessible and flexible learning and recognition of all types of learning.

The flexible education environment offered by OL includes a continuous enrolment schedule and an open admission policy that sets it apart from other BC institutions. OL's openness also extends to students at other colleges and universities who can choose to stay at their home institution and register with OL for the courses they need.

Currently, the Open Learning Division has 250 Open Learning Faculty Members (OLFMs) located across the province of British Columbia, an area 14 and a half times the size of Lithuania. These individuals may be employed full-time by other post-secondary institutions, industry or community organizations.

TRU is facing the same academic integrity issues as other higher education institutions but OL has additional challenges as our OLFMs, as well as our students, operate at a significant distance.

TRU has always considered academic integrity a priority and we have a very clear AI policy and reporting system for the whole University. The forms and processes used are currently slightly different for the Open Learning side of TRU compared with that for the campus students but ALL cases are adjudicated in the same way and at the same time by the same Academic Integrity Committee.

In 2017 we carried out an anonymous survey of our 250 OLFMs to try to understand why some OLFMs were reporting academic integrity violations but the majority were not.

This presentation will provide an overview of the results of that research survey.

We discovered that many OLFMs were unaware of the AI process at TRU, others were unsure that reporting cases made a difference or they believed they were better placed to educate the students rather than 'police' them.

We will show how we used those survey results to develop our strategy to raise AI awareness with the OLFMs, many of whom were completely unaware of the issues the being

faced across the globe and the importance of reporting cases.

We will discuss how we have attempted to engage OLFMs with the academic dishonesty process and reporting procedure. We will show how this has been successful in terms of the number of cases reported but how that also creates new challenges for a University.

We will discuss our examination procedures and AI detection strategies we are implementing in both our face-to-face Examination Testing Centers and with our newly introduced online invigilation examinations.

We will share some examples of our most interesting AI cases and some of the challenges we have had in bringing those to the Committee.

Keywords: academic integrity, percecptions, faculty engagement, case reporting.

Development of academic integrity self-evaluation tools for higher education institutions

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In the framework of Erasmus+ Strategic Partnerships project European Network for Academic Integrity (ENAI) a Handbook for Improvements has been developed. It aims to help Higher Education Institutions (HEIs) to check their policies, procedures or environment settings in terms of academic integrity as well as reflect upon enhancement of academic integrity in an institution. The handbook consists of an array of outputs such as Glossary of Terms Related to Academic Integrity, General Guidelines for Academic Integrity and other.

This presentation focuses on one of the outputs, namely, a set of Self-Evaluation Tools. A working group consisting of partners from different countries, HEIs and scientific fields is involved in the process of development of the output. Overall, we are constructing four self-evaluation tools targeted at different actors of HEIs: self-evaluation tool for students; teachers; researchers, and institutions / faculties / departments. We constructed the tools based on previously developed survey tools, relevant literature and experience of each team member.

The set of Self-Evaluation Tools will be available via ENAI website for individual HEIs and their actors to use them for monitoring and reflecting upon current status of academic integrity as well as possible further implications for prevention or improvement.

Self-Evaluation Tools are questionnaire-based. Each tool is constructed in the following way: it consists of sections of questions that we found most relevant for each target group; answer to each question is scored and scores are linked to feedback. Scores and feedback are provided at three levels: for answer to each question; for answers to all questions in each section, and overall feedback for the tool.

The presentation will cover general conceptual idea behind the set of tools and reasoning of selection of target groups. Also, it will introduce the dimensions of self-evaluation tools, give an idea what the tools aim to find out as well as how they can be used efficiently by HEIs or their actors. The presentation will also shortly discuss the process of development of the tools and share experiences of looking for common grounds among the partners coming from diverse backgrounds and institutional contexts.

Keywords: higher education institutions, self-evaluation tools, students, teachers, researchers, European Network for Academic Integrity.

CHALLENGES IN RESEARCH INTEGRITY

Inconsistent responses to notifications of suspected plagiarism in Finnish higher education

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Plagiarism in higher education has long been a hidden and silenced topic in Finland. The aim of this conference paper is to describe the current Finnish practices in defining and dealing with plagiarism in published Master´s theses, especially those published in universities of applied sciences. The IPPHEA (Impact of Policies for Plagiarism in Higher Education Across Europe) report on plagiarism in Finland based on statistics and interview data showed the problematic situation (Glendinning 2013), but the publication and content of the report raised no interest or public discussion. The only national attempt to clarify the extent of plagiarism was the article based on a conference paper in Plagiarism across Europe and beyond 2013 (Moore 2014). It was found that 12% of theses published in Theseus (common publication forum of universities of applied sciences) contained at least two paragraphs of plagiarized text. This study, however, has later been invalidated and ignored in a statement by The Ministry of Education and Culture. The Ministry's letter to YLE (Finnish Broadcasting Company) states that "*there is no research, knowledge or statistics to show that plagiarism in higher education studies has increased*" (Ahjopalo 2019).

There is a national policy to deal with suspected violations of good scientific practice, but research on the extent of plagiarism or other violations is still absent. All higher education institutions are committed to following the guidelines presented by the Finnish Advisory Board on Research Integrity (TENK 2012). The aim of these guidelines is to promote the responsible conduct of research and ensure that the handling of suspected violations is competent and fair to all parties. These guidelines are applied to research practices and Master's and PhD theses in higher education. The violations of good scientific practice are divided into disregard for the responsible conduct of research and misconduct. Plagiarism is categorized as one of the forms of misconduct. The guidelines, however, are found to contain poorly elaborated definitions that leave room for (mis)interpretations and allow diverse interpretations of plagiarism (Räsänen & Moore 2016).

There is only one known case in which a former student was stripped of his Master's degree due to plagiarism. In this case the student had appealed to Administrative Court after he did not accept the university's decision to revoke the degree due to plagiarism in his Master's thesis. The Administrative Court decided that the university cannot revoke a degree and based the decision on the principle of '*protection of confidence*'. The university filed the case to Supreme Administrative Court which decided that the degree is to be revoked due to public interest.

The data of this conference paper consist of 29 written notifications of suspected plagiarism in Master's theses sent to the rectors of universities in 2018 and decisions on these 29 cases. The notifications were all similar providing evidence of copied text, and most rectors started a preliminary inquiry. Inductive content analysis is used to classify and typify first the decisions, second the definitions of violation of good research practice and third, the outcomes or sanctions rectors place on misconduct or disregard. All the decisions, following

the guidelines by TENK, have been made locally in the institution in question. Due to inconsistency and perplexity in some of the decisions, classification of the definitions is overlapping. The main actor in the process is the rector of the higher education institution, who, in the case of universities of applied sciences is also the managing director, as universities of applied sciences now function as corporations.

Another important actor in decision making is that of preliminary enquirer who is appointed by the rector among the staff of the named institution. In the decision, the rector refers to the report and findings in the preliminary inquiry, but the report itself is kept internal and in most cases not attached to the decision. Some of the rectors, however, did not see plagiarism in the suspected thesis, and ruled the text comparisons to represent (mild) disregard or merely carelessness. In four cases the rector refused to start the preliminary inquiry due to a long time having passed since the publication of the thesis (3-6 years).

The outcome of detection of plagiarism in the thesis for the author varies from nothing to an attempt to revoke the degree in Supreme Administrative Court. As an outcome, statements have been added to the covers of some of the theses stating that this thesis contains plagiarism or a violation of good scientific practice. Some theses were re-evaluated, but not failed, after plagiarism was found. Plagiarized theses were not retracted, the pages containing plagiarism were not marked, and it is up to the reader if (s)he notices the line notifying about plagiarism at the bottom of the cover page. However, some of the theses have later disappeared from Theseus. Comparisons of the severity of misconduct is not possible as investigations proper were not performed and the preliminary inquiry reports in most cases are not public.

Finnish universities started to use electronic plagiarism detection 5 - 10 years ago, and generally these e-tools are only used at the final stage of university studies to examine whether a thesis, which is commonly but not always published electronically, contains plagiarism. There is no statistics or research available either on how widely plagiarism detection is used or on the findings of these e-tools. One case in the data shows how the plagiarism detection system for addressing academic misconduct was used in a reverse purpose. After the plagiarism detection system had showed “too much” plagiarism in the student’s thesis text two times, the thesis was not accepted, but the third time was successful. The text had been changed just enough that electronic plagiarism detection gave a “low percentage” and the thesis was accepted and published.

The results of this study show that a new practice in applying the misconduct guidelines in cases of plagiarism has taken over in universities of applied sciences in case of suspected plagiarism in theses: preliminary inquiry has replaced investigation proper. The procedures are kept internal and local. In media coverage this is manifested as a so-called ‘admit and forget’-policy. Merely conducting an internal preliminary inquiry and possibly placing an extra sentence on a plagiarized thesis does not promote responsible conduct of research or scientific writing and this policy does not prevent misconduct in research. One of the underlying reasons for accepting theses that contain plagiarism could be the financial system by which higher education institutions obtain part of their finance based on the number of degrees granted and the amount of credits given in the higher education institution. Therefore, every thesis leading to a degree counts, whether it contains plagiarism or not. In conclusion it is worth mentioning that there is currently no sanction for higher education institutions

that accept and publish theses containing plagiarism.

Keywords: plagiarism, theses, higher education.

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Knowledge and perception about research integrity and misconduct: A survey among young scientists attending a school on methodology, ethics and integrity in biomedical research

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The scientific community is facing a so-called "replication crisis" that seriously tarnishes the reputation of scientists, as well as the credibility of research institutions, and public confidence in science, especially in biomedical research where collective and individual health and well being are directly involved. Irreproducibility of findings may be attributable not only to scientific misconduct including fabrication, falsification and plagiarism (FFP), but also and above all to questionable research practices (QRP). Among the factors which may induce researchers, in particular young scientists, to FFP and QRP, factors related to individual researchers (such as pressure of competition for external funding, need for publications, need for recognition, lack of knowledge/preparation about the realities/stresses of a scientific career etc.), as well as the evolving nature of science and the research enterprise (e.g., the negative aspects of fragmentation, isolation and specialisation, the lack of awareness of the rules and standards of proper scientific conduct, etc.) do stand out (OECD, 2007).

In Italy, there are no guidelines for ensuring proper research conduct, and studies on scientific misconduct are disappointingly lacking. The University of Insubria is a small size university in northern Italy organized in 7 departments with over 700 staff and 10,000 students, offering study programmes in law, economics, business administration, engineering, information and communication technologies. The main focus area is however biomedicine, with courses in medicine and surgery, dentistry, more than 24 post-degree medical schools of specialization and 3 different PhD programs in biomedical sciences. In order to promote knowledge about proper research practices among young researchers, an "Insubria School on Methodology, Ethics and Integrity in Biomedical Research" has been established. During the 2018 edition, participants were invited to take part into a survey conducted by means of a well-established Scientific Misconduct Questionnaire (SMQ, Broome et al., 2005). The aim was to assess their perceptions and attitudes towards research integrity and misconduct, as well as to determine factors related to their research environment, which may contribute to misconduct in research. The association between perceptions of scientific misconduct and commitment of questionable research was measured as well.

A total of 65 young scientists mainly females (56.9%) and PhD students (43.1%), completed the questionnaire. Most of them were working in an academic institution (53.8%), and were directly involved in research (81.5%) since (mean±SD) 3.0±2.9 years. They published 5.1±7.7 papers and have already attended a lecture, workshops or conference on ethics before (55.4%).

With reference to their immediate work environment, study respondents rated as low or very low the severity of penalties for scientific misconduct (33.9%), the chances of getting caught for scientific misconduct if it occurs (44.6%), researchers' understanding of rules

and procedures related to scientific misconduct (38.4%), their own understanding of rules and procedures related to scientific misconduct (33.9%), researchers support of rules and procedures related to scientific misconduct (38.5%), and the effectiveness of institution's rules and procedures for reducing scientific misconduct (32.4%).

With reference to their workplace, 24.7% of respondents were aware about an investigator involved in scientific misconduct during the last five years. The commonest sources from which they became aware of the instances of scientific misconduct were from other researchers (36.4%), and less commonly from the institution's ethics committee (4.5%) and from study monitor (0.0%).

When asked about how frequently they believed that specific types of misconduct and questionable practices occur in their workplace, respondents rated as from seldom to frequent occurrences of disagreements about authorship (52.3%), selective dropping of data from outlier cases (46.2%), plagiarism (37%), data falsification (33.8%), falsification of biosketch, resume, references list (29.3%), and pressure from study sponsor (21.5%), intentional protocol violation related to subject enrolment (20%), intentional protocol violations related to procedures (20%). A few participants admitted to having been involved seldom or occasionally in disagreements about authorship (21.5%), selective dropping of data from outlier cases (18.4%), intentional protocol violations related to procedures (10.8%), plagiarism (6.1%), falsifying data (4.6%), intentional protocol violations related to subject enrolment (4.6%), pressure from study sponsor to engage in unethical practices (4.6%) and falsification of biosketch, resume, references list (1.5%).

69.2% of respondents were concerned about scientific misconduct. The majority (73.8%) however believed that the responsibilities for scientific integrity of a study lies with the principal investigator only, and only some participants (10.8%) acknowledged they were uncomfortable talking with researchers about ethical behaviour. Nearly all (93.8%) agreed about the need for training on standards of research ethics. 81.5% of young scientists disagreed with the view that dishonesty and misrepresentation of data is common in society and doesn't really hurt anybody.

Among factors contributing to scientific misconduct, respondents indicated need for publications (95.6%), pressure for external funding (93.9%), conflict of interest (90.7%) and need for recognition (84.7%), and unclear definition of what constitutes misconduct (84.6%).

As a whole, results of the survey suggest that young scientists perceive misconduct and questionable research practices as frequent in their workplace, producing a sense of concern and a need for training. Caution is however required when interpreting this finding since it is rather a daunting task to estimate the real frequency of FFP and QRP among researchers, and even if these were to be detected, it is hard to prove them (Fanelli, 2009). In any case, there is still a great need for avoiding QRP and spreading scientific misconduct awareness in order to reach scientists and researchers at all career levels. Prevention of scientific misconduct and training in research methodology will primarily result in more scope for both scientific and personal achievement, as well as will also meet ethical and social obligations and responsibilities (Cosentino and Picozzi, 2013). Research integrity must be ensured by research institutions which should consider introducing specific courses on scientific misconduct and ethics in order to have prepared students and PhDs. An important

remark is that, together with undergraduate and PhD students, Professors and Researchers should be educated about research integrity and methodology. Furthermore, academic institutions should also help in establishing integrity assessment procedures, in order to verify adherence to academic integrity and ethical principles, and, if need be, intervene.

Keywords: research misconduct, research integrity, training, survey, young scientists, Italy.

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LINKAGE BETWEEN ACADEMIC AND PROFESSIONAL ETHICS

Real-life examples of academic integrity issues in professional practice

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Introduction

Many teachers struggle to convince students that moral and ethical principles are not limited only to the academic world, but that they are tightly related also to the future professional life of all individuals. Many students see for example the referencing and citation practice just as an annoying obstacle they have to overcome on the way to finish their thesis (and get the degree). Some consider exam cheating as an optimization of learning process...

Hence, how to explain well the practical benefits of scholar rules? How to show students that breaking the rules (which in scholar world leads only to a zero mark or a warning) might have serious life-changing impact in reality? How to manifest the importance of building an individual personal integrity from early ages?

European Network for Academic Integrity (ENAI) is working on a set of ready-to-use real-life examples of academic integrity in professional practice. The common objective of all these examples is to show that academic integrity does not finish with the moment of obtaining degree. Academic integrity consists of rules and principles which are everlasting and should be a part of everyday life of any individual. The examples are based on real stories and (whenever it is possible) contain anchors to these real cases on which they are built to endorse the possible learning outcome of the example.

The aim of this contribution is to introduce this set, share methods of how this set was created, and provide inspiration on how it should be used in classroom.

Methodology

The above-mentioned set of real-life examples is a part of an output of an Erasmus+ funded project European Network for Academic Integrity (KA2 Strategic Partnerships project 2016-1-CZ01-KA203-023949) named “Toolkit for cross-sector cooperation in terms of academic integrity”. Methodology for creating the set “Manual on how to get relevant real-life examples and include them into courses of academic integrity” is another part of the same output.Third part of the cross-sector cooperation deals with secondary schools and education of academic integrity in this level. Hence some of the real-life examples can be used also in the high-school environment.

Manual on how to get relevant real-life examples

This manual serves for anybody who intents to create his own examples and needs to collect data for them. It contains three tools for collecting data, ideas or inspiration for the real-life examples, focused on different stakeholders – students, professionals and professional organisations. In particular, following tools were created:

- Students:
  - ◊ A short questionnaire to identify students who might have a suitable experience from practice. The identified students will be interviewed later. This questionnaire can be sent to the students of the particular institution who have experience form a practical internship or a training. The provided answers help the author identify students who might have interesting experience and are willing to share. The author can meet them individually or organize a focus group.
  - ◊ A scenario for a focus group about academic integrity issues experience in their internship.

- Professionals:
  - ◊ A scenario for a (rather informal) small talk about the academic integrity issues from his/her professional experience. The form of an informal small talk was chosen rather than an official questionnaire as we presume that the easiest way for potential authors is to contact their friends or other rather personal contacts.

- Professional organisations and companies' representatives:
  - ◊ Questionnaire about academic integrity issues.

All these tools are general and transferable, may be used in any study or professional field, so anybody can benefit from them. Anyway, the tools are provided with a strong recommendation that any information obtained through them MUST be handled and kept as strictly anonymous and can be used only to create educational examples about the importance of (academic) integrity in practice. ENAI recommends any author to obtain an ethical approval from his institution before collecting any personal data.

However, experience of the ENAI authors of the real-life examples show that great source are publicly well known cases covered by media stories, which can be adapted.

An important part of the manual is also a PowerPoint template with instructions for the authors of the new examples.

Results

The real-life examples are case studies with a story containing an academic integrity issue and its consequences in professional life, accompanied with activities for target audience, and didactic notes. The examples are in a form of a presentation and a document with the text of the story. One of the most crucial part is so called "anchor" showing a real case(s) used as an inspiration for this examples. Some anchors reference to publicly known cases covered by trust-worth media, the ones that are based on confident stories are anonymized.

ENAI is going to deliver more than 30 examples - intended for different target audience (undergraduate students, graduate students, researchers, scholars,..), from different fields of expertise (business, computer science, finance,...), covering different forms of misconduct (contract cheating, exam cheating, hacking,...) and leading to different consequences (ruining professional carrier, financial losses,...).

The Manual, the template and the examples are available through ENAI web portal www.academicintegrity.eu/wp/all-materials under keyword "real-life". The template is available in PPTX and ODP format under Creative Commons License CC-BY-SA, most of the real-life examples are also in editable format, so anybody can adjust them for his own needs.
Within the conference presentation we will share also our experience using these examples within the education and also experience and best practices from the production of the examples.

Conclusion

The main goal of this activity is to spread the examples among the teachers and bring them to classes. We would like to ask everybody to comment on the materials at the ENAI web portal. ENAI would also welcome all new materials which are based on the template or created using the manual. Therefore if you create your own material and you are willing to share it and have it spread, please send it to us and we will publish it at the portal.

Keywords: academic integrity, professional integrity, real-life examples, case studies, education, European Network for Academic Integrity.

ETHICAL ISSUES IN ACADEMIA AND THEIR INFLUENCE ON BUSINESS

Unethical practices within medical research and publications – A narrative commentary of unreported "unethical ethics" within research communities

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High quality science depends on efficiently planned innovative research coupled with truthful reporting. The data produced by the scientific community impacts on the academia, clinicians, and the general public; therefore, the scientific community and other regulatory bodies have been focussing on ethical code of conduct (or behaviour). Actually, the concept is built-in from the early stages of research grant application processes until the submission of the manuscripts. Many funding organisations and publishers have established their own ethical code of conduct and expecting the researchers to strictly follow this code. For example, many journals are now expecting details of author contributions, funding details, conflict of interest etc. Likewise, research councils are insisting on to ensuring consistency of the ethical approach in reporting research methodologies, patient recruitment etc. Despite these measures, unethical research, reviewing and publishing behaviours are still going on. The commonly known unethical practices include duplicate submission, falsification and/or fabrication of data, plagiarism, ghost writing, ghost authorships etc. Unfortunately, in some instances, these are being perceived as conventional research behaviours. This short paper considers some of the current unethical practices, their reasons and explores the ways to discourage these within research and other professional disciplinary bodies.

Through collegiate discussions, sharing experiences and by examining previously published/reported information, authors have identified several less reported (not well-known) behaviours. Some of these practices are mainly influenced either by the undue institutional expectations of research esteem or by the change in the journal review process. These malpractices can loosely be divided into three different categories relating to (a) personal practises - individual/researcher linked behaviours, (b) research linked practices - methodological malpractices including data management, and (c) publication related practices - those that contravene publishing ethics. Individual or researcher linked unethical behaviours are mostly related to "committed bias", by which author selectively uses the data to suit their own hypothesis or what they perceive as ground-breaking studies. This is often result in conducts in which research (and in some cases the data/results) were statistically manipulated to suit the perceived conclusion.

On the other hand, methodological malpractice relates to selection of out dated protocols that are not suited for the intended work. Although these can be unintentional (which would be picked by the reviewer/editor during publication process), the incidences of intentional

manipulations have been reported to authors of this study.

For example, carrying out investigations without positive (or negative) controls; but including these from previous study. Another unreported behaviour is the use of ghost negative controls (i.e. purposely omitting steps in negative controls). Other methodological malpractices such as unfair repetitions or selective inclusion of repeated data to gain statistical significance, retrospective ethical approvals etc. In addition, authors have identified several unacceptable behaviours relating to publishing ethics. The paper will elaborate these behaviours in details and propose the ways by which these can be minimised

Keywords: ethical code, research practices, misconduct, publications.

WORKSHOPS

USING E-TOOLS AND TECHNOLOGIES FOR ADDRESSING ACADEMIC MISCONDUCT

A game-based learning approach to academic integrity education

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One of the central values motivating Ryerson University's academic integrity policy is education. Research has shown the value of an educative approach to academic integrity with a focus on prevention (Cellier & Krenkel, 2014). Ryerson's Academic Integrity Office (AIO) is a centralist facility that works to support the Ryerson community by promoting a culture of integrity and educational excellence by informing, inspiring and educating the university's community. It is a neutral party whose role is to ensure that Ryerson's academic integrity policy is carried out in a fair and transparent way and to provide educational resources to the Ryerson community regarding academic integrity and misconduct. However, Ryerson is a large institution with approximately 40,000 students and 900 full time faculty. This can present a challenge in terms of reaching the entire community.

One of the ways in which the AIO achieves this is through the use of a number of online resources. These resources include a set of online video episodes and associated quizzes that focus on numerous topics relating to academic integrity, namely, plagiarism, buying or borrowing course work, cheating on tests and exams, misrepresentation, contributing to academic misconduct, unauthorized group work and group work. Studies have shown the effectiveness of tutorials in academic integrity education (Stoesz, & Yudintseva, 2018). Ryerson's current online episodes can be viewed here http://www.ryerson.ca/academicintegrity/students/tutorial-episodes/.

These online episodes and associated quizzes, which are non-facilitated, can be assigned to students by faculty members, or can be accessed voluntarily. Previous studies (e.g. Eriksson, Adawi & Stöhr, 2017; Xiong 2015) have demonstrated that existing digital self-initiated learning is disengaging, with low completion rates and is associated with low retention and low motivation. With this in mind, the AIO decided to develop a new online, interactive educational resource that would increase students' knowledge of academic integrity. We decided that the developed learning materials should not be tied to our academic integrity policy and thus would not need to be updated each time our policy changes and to allow ease of sharing this resource with other institutions. We were conscious of developing an accessible resource with built in interoperability for easy integration into learning management systems including tracking and analytics.

The AIO, in collaboration with Digital Education Strategies (DES) at Ryerson, decided to replace the existing video tutorial episodes with a game-based learning (GBL) solution. Our objective was to create a game that motivates and engages students to complete the self-study training and to build their understanding of academic integrity. GBL has a potentially positive impact on student engagement, knowledge acquisition, content understanding and motivational outcomes (Bellotti et al., 2013; Ibrahim, et al., 2010). A multidisciplinary and iterative approach to GBL design was taken, involving many stakeholders from across the university, including Ryerson's Student Game Union.

Accounting for the added layer of complexity in the development of a digital educational game (Rooney, 2012; Petrillo & Pimenta, 2010) and due to the need to incorporate best practices of educational game design and learning theories (Oblinger, 2006; Amory & Seagram, 2003; Klopfer, 2008), the Art of Serious Game Design (ASGD) methodology (de.ryerson.ca/games/research) was used to help our game development team effectively design serious games (SGs) during the conceptual stage. An iterative product development approach was used during the game production stage.

Briefly, ASGD methodology is based on the Mechanics-Dynamics-Aesthetics (MDA) framework, which supports a formal, iterative approach to design, improved game mechanics and ensures that game activities meets core elements to support engagement and motivation (e.g. goals of the game are clear, there is an engaging narrative, frequent feedback, positive reinforcement) (Hunicke et al, 2004). Also, Winn (2009) proposed the Design, Play and Experience (DPE) Framework, which is an adaptation of the MDA framework, thus providing a formal process to guide the game design and a clear structure to analyze educational games. Using ASGD helped the multidisciplinary team to improve game design by ensuring that all game elements (learning, narrative, user experience and gameplay) are optimally merged and ensure that game activities meet core elements to support engagement and motivation through the game's engaging narrative, frequent feedback, and positive reinforcement.

The series of game modules that were developed focus on plagiarism, contributing to academic misconduct and cheating. The narrative for the game was designed from the first-person perspective of a student. It was decided that non-human characters should be used in the game to avoid any potential issues relating to equity, diversity and inclusion. Hence, the game is set in space and the characters are aliens. In each module, the student is faced with a number of scenarios as relating to academic integrity, and is being asked to provide advice to a peer on how best to proceed with an academic integrity dilemma. A number of options are presented with one option being the best course of action, while the others serve as detractor options. The decision that the player makes and the advice they provide to their peers affects their progression through the game. The consequences associated with their decisions are revealed, while best practices for success as a student are embedded throughout.

Taking into account that narrative plays an essential role, as fantasy and role-play fosters learning and engagement (Prensky, 2001), and that from a cognitive load perspective, the reach narrative may distract learners from the learning and degrade the learning outcomes (Mayer et al., 2008), as well as that a complex game environment might have a heavy cognitive load and negatively impact the learning (Kiili et al., 2014) and reduce engagement, the game development team was challenged to keep the story as engaging as possible while keeping the student tasks within the game focused on the learning to ensure the game's learning effectiveness.

There are a number of learning objectives associated with each module. For each module, upon its completion, the student should be able to define and describe behaviours that constitute plagiarism, cheating and contributing to academic misconduct. However, with the digital story or narrative in this game, we are hoping to educate students beyond an understanding of what constitutes these behaviours, but rather why they may not wish to

engage in academic misconduct more broadly speaking (Camara et al., 2017).

For the purpose of assessing how players interacted with the game, and identify and address any issues in usability, the game underwent user experience testing before production. User experience testing is according to Moreno-Ger et al. (2012) and Olsen, Procci & Bowes (2011) essential for providing a positive, overall experience to player and ensures easy interaction with a digital application, such as a serious game.

Our plan is to implement the game university-wide. It will be available for any student to access at any time. In addition, the game will be promoted to incoming students at orientations, by their program departments, and by the AIO. We expect that individual faculty members will adopt the game and embed it into their classes and into their course shells hosted by our learning management system, allowing for tracking of attempts and completion rates. The GBL approach to the design of this educational resource should serve to engage students and to assist with their understanding of the content (Bellotti et al., 2013; Ibrahim, et al., 2010). The narrative approach that we have adopted will hopefully go beyond simply providing information to students but will affect students' behaviours and attitudes towards academic integrity and misconduct.

In this interactive workshop we will take participants through the process of developing these games. Workshop participants will assume the role of student/player and will have the opportunity to play the game, in real time, at the various decision points that the student or player will have to make, along with the associated consequences, will be demonstrated. Also, the results of user experience testing, and associated improvements to the game will be shared. Participants will gain insights into gamification as an approach to academic integrity education and have an opportunity to provide feedback on the game-based learning modules.

Keywords: academic integrity education, game-based learning.

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Plagiarism detection software in higher education - best practice or misconduct?

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In this workshop objectives, possible application scenarios, advantages and disadvantages as well as risks, critical side-effects and framework requirement for the use of so-called plagiarism detection software are presented and discussed.

Frequently the use of such software lacks consistent and holistic concepts, which may include educational beneficial settings, sufficient support for users, solutions for related legal questions, integrative decision-making or a sound communication strategy. Thus, prerequisites for a reasonable use of software will be suggested as well as alternatives and complementary tools.

Based on this input the participants may evaluate their own institutional approach and develop and discuss ideas, which could improve it.

Keywords: plagiarism detection, text-matching software, critical aspects and procedures of software use, educational concepts.

The significance of metadata at theses collection

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Prevailing model at plagiarism detection is that the theses are collected to be processed by plagiarism detection software. No metadata are collected. This results in the fact that the only output is the originality protocol and there is no space for deeper analytical outputs.

If theses collection at plagiarism detection is accompanied by metadata collection then there are possibilities to analyse detected similarities at more detailed levels. The use of uniform collection methodology of theses and metadata in Slovakia allows to exploit deeper analytical views for MinEdu, higher education institutions, faculties. The spectrum of analytical outputs will be demonstrated on real data from the nationwide SK ANTIPLAG (Slovak Central Repository of Theses and Dissertations and Plagiarism Detection System) which is mandatory for all Slovak higher education institutions operating under the Slovak legal order since April 2010. Today there are about 600 thousands of theses and dissertations with metadata stored in the SK ANTIPLAG. Different analytical views on theses and dissertation are available, for example by key words, by thesis types, by faculties, by higher education institutions, by study fields, by language, by year etc. Some of them point to non-standard academic behaviour.

Keywords: theses, collection, metadata, plagiarism, detection, analyses, higher education, academic misconduct, behaviour.

TEACHING EFFECTIVE STRATEGIES TO ENCOURAGE ACADEMIC INTEGRITY AND PREVENT ACADEMIC MISCONDUCT

Need concise academic integrity lessons? Try these!

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Benefits of Concise Academic Integrity Lessons

Integrity is a core value in the Student Code of Conduct at Suffolk County Community College (SCCC) that aligns with the desire to improve academic integrity competencies. While promoting academic integrity is recognized as essential, the perennial shortage of class time often interferes with faculty's ability to incorporate academic integrity instruction into their courses. Seeking to ameliorate this situation, I developed concise academic integrity lessons that can help students develop sound academic integrity practices and help faculty interweave brief academic integrity lessons into their courses. This workshop provides an opportunity for participants to consider the pros and cons of this educational initiative and how it could be adapted for their institutions.

For students, concise academic integrity lessons interspersed at opportune times throughout the semester can help prevent academic misconduct. The lessons are based on the principle that mastering skills, understanding concepts, and applying practices is an incremental process. Students do not master writing skills, or research skills in one lesson, nor can they master academic integrity practices in one lesson, such as those offered to first semester college students at many colleges. While academic integrity lessons for freshmen are essential in higher education institutions the persistence of academic integrity breaches makes it evident that that other approaches also need to be implemented. Concise academic integrity lessons targeted to specific assignments during the semester are one such approach.

From the faculty perspective, brief, ready-to-use academic integrity lessons are appealing. As faculty explain an upcoming assignment, they can devote five minutes to engaging students in a conversation that cultivates an understanding of discipline-specific academic integrity concepts. No one lesson, or policy, or sanction is the magic bullet that will result in zero academic integrity breaches, but the approach of utilizing concise lessons throughout the semester is based on the premise that timely, incremental lessons will further the academic integrity competencies of some students.

Theoretical Background & Goal of Concise Academic Integrity Lessons

Academic integrity literature notes many reasons that educational initiatives are an essential component in improving academic integrity outcomes (East, 2015; Morris, 2015). While studies do not focus on concise academic integrity lessons, they note that students develop academic integrity practices and understand academic integrity concepts through targeted incremental instruction (Bretag et al, 2011; Carroll, 2009).

I have explored various models in developing academic integrity lessons that classroom faculty can incorporate into their daily lessons (Bealle, 2017). Over the years, based on feedback from faculty regarding maximizing the use of class time, I have developed ever

shorter lessons, until most recently I created the brief lessons explored in this workshop. The lessons are designed with the goal of encouraging classroom faculty to intersperse academic integrity lessons in their courses. Although the impact of these lessons has not been systematically studied, personal reports from SCCC students and faculty convey an appreciation for this educational approach. In addition, a 2017-2018 qualitative assessment of SCCC students in library research classes emphasizes that students value academic integrity instruction. Of the 95 students who participated in the study, 64 noted that instruction regarding academic integrity practices such as joining the scholarly conversation through synthesizing information and citing sources improved their confidence and competency with successfully completing college research projects. The data from this study is being analyzed and an article will report on the findings.

Institutional Fit

The premise of incremental improvement of academic literacy skills is particularly appropriate for community college students in the United States. Open-admission policies at community colleges result in student populations that demonstrate a wide-range of academic preparedness; the Center for Community College Student Engagement notes that 68% of students take at least one developmental course (2016). Consequently, community colleges provide extensive services to improve student academic literacy skills, including academic integrity conventions such as understanding plagiarism and documenting sources (Maddox, 2008).

As a library faculty member at a community college, I teach library instruction sessions that engage students in the scholarly conversation, including how and why we cite sources. The sessions aid the students who attend, but the sessions are not systematically infused throughout the curriculum and consequently don't reach all students. Therefore, as chair of the college Academic Integrity Committee, I seek opportunities to disseminate additional avenues for educational initiatives promoting academic integrity instruction. In particular, I share lessons at Professional Development workshops and at other venues with the goal that some classroom faculty will incorporate them into their courses.

Future Implications of the Workshop

Developing a holistic academic integrity strategy at SCCC has been a long-term goal, but it is slow going. In the meantime, educational initiatives such as concise academic integrity lessons can be a step towards promoting a culture of integrity and improving academic integrity outcomes. This workshop is an opportunity to discuss how viable this approach might be at other institutions.

Workshop Aim and Activity

Main aims of the workshop are to explore concise lessons and consider with the participants how this approach could improve academic integrity outcomes for students at their institutions.

Individual lessons are designed to take about five minutes of class time. The lessons engage students in focused conversations about working with integrity and strive to:

- increase student's academic integrity knowledge
- heighten student's academic integrity awareness
- provide academic integrity conversation starters for the classroom

The lessons are question-based prompts that can be used at opportune moments throughout the semester. For example, when students are preparing for an exam, the academic integrity lesson can pose a question regarding exam cheating at their institution as pictured in the menti slide in figure 1. With a simple poll, the professor gains a glimpse into the students' perceptions and has the opportunity to heighten student's academic integrity awareness.

It is powerful to engage students in a conversation regarding personal reactions when a student:

- knows that a classmate has cheated;
- appreciates that his professor implemented anti-cheating precautions;
- realizes that in her new job she may be working with individuals who cheated on their accounting exams in college.

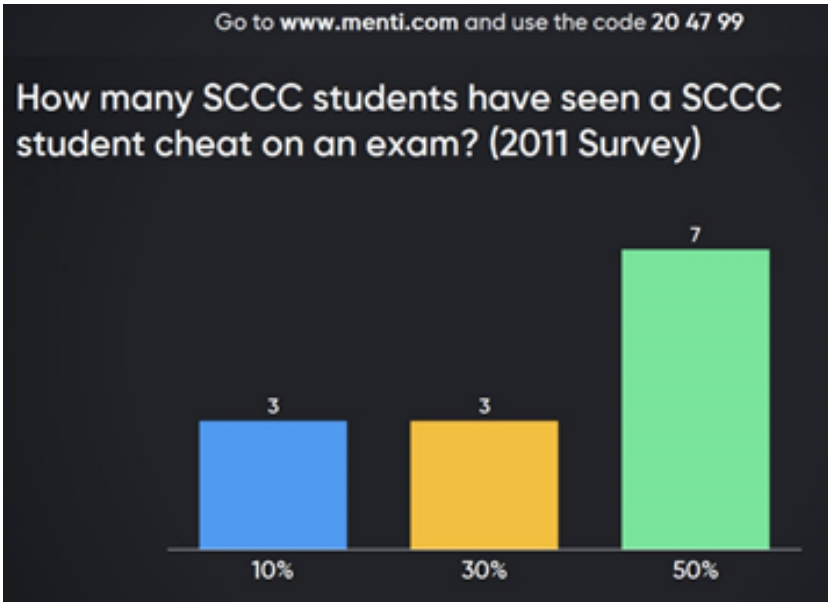

Figure 1. Menti question

Or as another example, when students are writing lab reports, a lesson can offer simple scenarios about copying homework as in the LibWizard question in figure 2. The scenario broaches many discussion points including the:

- purpose of writing lab reports;
- ability to evaluate the extent to which students have mastered the content if they copy their homework from classmates;
- effect of the relative worth (5% for example) of a weekly lab report on how students should approach the assignment from an academic integrity perspective.

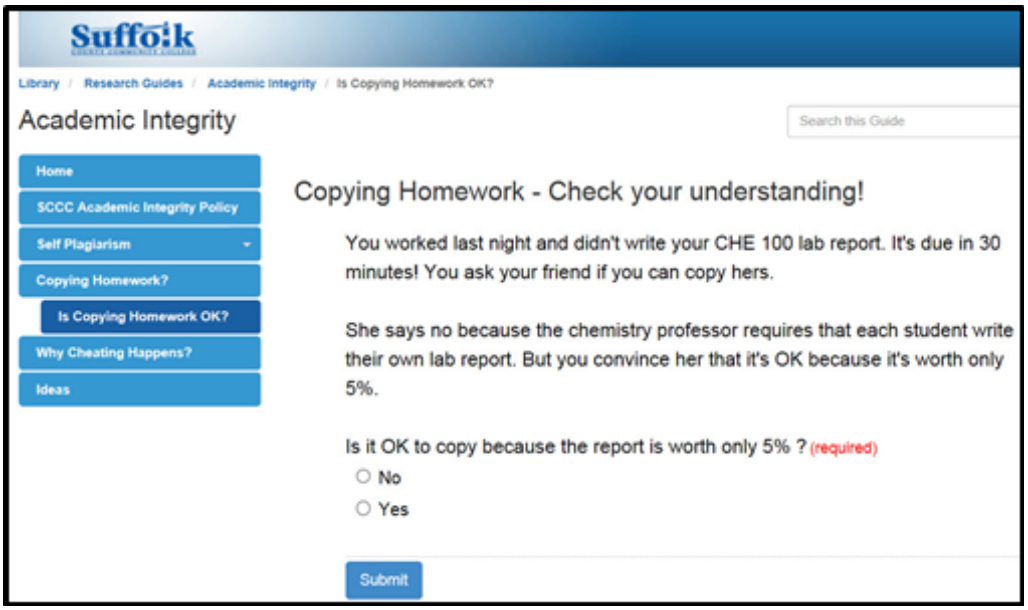

Figure 2. LibWizard question

While exploring sample lessons, workshop activities will ask participants to converse and reflect as they consider:

- How could this educational approach apply (or not) to your institution?
- What are the benefits of class-based lessons, rather than asking students to master academic integrity practices and concepts outside of class time?
- Which of the specific lessons would be relevant to your student body, or your discipline?
- What are specific academic integrity questions that would be relevant to your discipline?
- Workshop participants will gain insights regarding the lessons and these questions. They will consider how these lessons and questions could apply at their home institutions.

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Prevention of plagiarism in computer graphics projects

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In recent years, a great attention has been paid to detection of plagiarism in essays that students write within the study of various courses. A great deal of work has been also done in the field of prevention of plagiarism and the formulation of rules of good practice. However, there are still areas of detection and prevention of plagiarism that need to be strengthened. For example, essays are not written in all courses. In some of them, there are outputs in the form of graphical data instead of text data. Courses like Computer graphics or Graphic design are taught not only at art schools. In the Czech Republic, students can often attend these courses also at economic or technical schools.

Instead of written essays, the students process practical projects on a given topic created in various graphic programs (e.g. Adobe Photoshop, Adobe Illustrator, Cinema 4D, Rhinoceros, 3D Studio Max etc.). Unfortunately, there are a large number of servers on the Internet where these projects can be downloaded very easily and it is often very difficult to reveal the student's deception from the position of a teacher. Especially when the course is attended by a large amount of students.

Workshop participants will get an inspiration on how to limit plagiarism in a series of graphic projects aimed at verifying students' skills in areas of vector, raster and 3D graphics. The inspiration is based on our many years` experience from the course Computer Graphics taught at the Faculty of Business and Economics at Mendel University in Brno (Czech Republic). The final part of the workshop will be dedicated to discussion and exchange of the best practices.

Circa 120 students attend the course Computer Graphics every year, the students` majors are mainly computer science and economics and management. The aim of the course is to introduce theory of the computer graphics and also provide working knowledge of basic techniques in vector, raster and 3D graphic programs. The end of the semester is devoted to art informatics and fractal geometry. The students prepare three practical projects in different graphic programs during the semester. The first project is implemented in a vector editor (Adobe Illustrator/Affinity Designer) and is focused on creating a series of pictograms. The second project is implemented in a raster editor (Adobe Photoshop/Affinity Photo) and is focused on creating digital photo collage. The third project is implemented in a 3D editor (Rhinoceros) and is focused on creating a 3D model. Students have an opportunity to improve their evaluation by submitting a fourth optional project from fractal geometry. The points from this project are added to the final exam test.

In the past, teachers of this course had to deal with a large number of cases when students downloaded the projects from the Internet. One of the reasons was that teachers put high demands on students. For example, as a part of vector graphic project, students were supposed to create logos and logotypes, which was very difficult for the students of computer science and economics without artistic talent, aesthetic feeling and experience. The goal of the project was to master basic techniques in the vector editor, not submitting a good-look-

ing project. Even though the students knew it, they preferred to download projects from the logo bank on the Internet. They obviously did not want to be ashamed of their work. As a solution of this situation - instead of a logo, students were given task to create a pictogram. Why the pictogram? The pictogram is one of the paths leading to the creation of a logo. There is a quite simple technique for constructing a pictogram based on a real-life photo (method of circles). This procedure can be handled by everyone (even without any talent or art knowledge) with good results. An important finding for students was that they knew in advance that they were able to create the project by their own strengths. Following this change, the number of detected fraud cases has dropped considerably. However, teachers still had to deal with cheating in a 3D graphic projects.

The situation with the three projects and the cheating of the students was finally solved by their thematic interconnection. Students choose a certain topic at the beginning of the semester, and this topic stays the same for all three projects. Everyone chooses mostly a topic that is close to him or her (e.g. automobiles, aircraft, animals, plants, means of communication, well known buildings etc.). Some students choose a topic, which is close to the company they work in during their studies or close to the subject of their own business. It significantly contributes to greater engagement of students in the projects. In the first project students create a series of three pictograms according to already existing pictures in a digital form. These images are used by the students to process the second project and to create the digital collage in the raster editor. The theme is also transferred to the third project. Students create a 3D model of one of the three objects that has been transformed into the pictogram. This concept has been maintained in the course of Computer graphics since 2006. All this time, only a few cases of cheating have been dealt. In the case of a suspicion that a student did not process the project himself/herself, he or she is invited to explain used the techniques that led to the result project. If a student downloaded a 3D graphic project from the Internet, it would be very difficult to get the appropriate digital collage and the series of pictograms.

Examples of students` work, including the cheating attempts will be available at the workshop as illustration. Although it is almost impossible to detect all cases of cheating, teachers of the course significantly reduced their number. On the other hand, we are aware of the limits of our approach, hence the final the workshop will be dedicated to an exchange of best practices among the participants in detecting and prevention of students' fraudulent behavior in the processing of graphic projects. Participants' findings may help to generalize the recommendations.

Keywords: computer graphics, projects, prevention, plagiarism, best practices.

MAKING AN EFFECTIVE UNIVERSITY ETHICS INFRASTRUCTURE

Aggie Honor System Office – A one-office approach to academic integrity

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Introduction. As educators, we at the Aggie Honor System Office serve to guide students by providing resources to educate them on academic misconduct and integrity to ensure that they are given the tools necessary to perform at their peak. We rely on volunteer faculty, staff, and student members from across the university to fulfill this mission. To be able to do that effectively and efficiently, members of the Honor Council must have a complete and thorough understanding of how the university defines academic misconduct, and how that definition applies to sanctions and student education. By working together and learning from each other, and from the process itself, we continue to evolve the way we handle cases of academic misconduct at one of the world's largest universities.

Presenters: Aggie Honor System Staff and Graduate Honor Council Student

About: Texas A&M University has one office that handles all cases of Academic Misconduct. Texas A&M University also has over 64,000 students - so how do they do it? Come learn how this office educates their community, promotes academic integrity, and adjudicates over 800 cases of academic misconduct a year

Benefit to attendees: The Plagiarism across Europe & Beyond; and Shaping Ethics in Academia & Society Conference strives to equip all practitioners in the higher education field with tools to assist in understanding common academic misconduct issues, critically think about ways in which to combat academic misconduct, and address the best practices to adjudicating academic misconduct. This conference presentation falls under three conference themes for this year: Social Responsibility; Teaching effective strategies to encourage academic integrity & prevent academic misconduct; and Making an effective university ethics infrastructure-including research and development on how to address honest errors. This conference presentation will address how the Aggie Honor System Office works within these realms of themes as well as their efforts for proactive education.

How *it fits within the Conference Theme*:

- *Social responsibility*: We encourage our students to uphold the code on a daily basis by requiring the code to be included on course syllabi, and encouraging faculty members to include the code on exams as well as major projects with a signature of acknowledgement from the student. This directly holds students accountable for their actions and leaves no room for doubt as to where the university stands on academic integrity. We encourage our students to self-report as well as turn fellow peers in through education of integrity and the importance of upholding the integrity of the university.
- *Teaching effective strategies to encourage academic integrity & prevent academic misconduct*: Framing our office as a resource on campus and talking about the proactive ways that our office is connecting with the student body to talk about academic integrity. Resource tables, brief seminars, and giveaways encourage students to come learn

more about what we do and how they can be involved. During our presentations we talk about the easy ways students accidentally engage in academic misconduct, especially with the ease of access to social media platforms. We also give lots of real-life examples so that students can see themselves in potential situations. Additionally, we encourage our students to think about their own ethics and morals, and how they align with the university's core values.

- *Making an effective university ethics infrastructure-including research and development on how to address honest errors:* We are a single office that has broad definitions of academic misconduct so that faculties can narrow the definitions to match their individual courses. By allowing faculty to determine what is considered "wrong" in the scope of their own courses, it assists us in understanding the many different forms that dishonesty can take, without trying to compile a comprehensive list of items that would constantly need to be revised and edited as technology evolves and students find loopholes. Allowing the faculty to be part of the process also encourages and teaches them how to notice and report academic dishonesty.

Conference Presentation: The Aggie Honor System Office (AHSO) is currently made up of a Director, Assistant Director, three Academic Integrity Administrators and one Administrative Associate. With this there are six full-time staff members. The AHSO also oversees approximately 100 Honor Council Members. Honor Council Members are unpaid and serve on a volunteer basis. They are trained by the AHSO to properly educate students about what is considered academic misconduct and how to avoid it, and how to effectively educate and sanction students to hold them to Texas A&M's high standards of honor. We equip them with the tools and confidence necessary to be ambassadors for integrity both in and out of the classroom. The main role of the AHSO is to facilitate the process of alleged misconduct. This presentation will talk about the way the office works, the adjudication strategies and our proactive initiatives. The AHSO strives to be seen as a resource for students not just an office they interact with when they have an allegation against them. Through discussions and showing the attendees our office's website and procedures, conference attendees will gain an understanding of our office's approach to not just adjudicating cases but how to proactively engage their faculty and students.

Closing: To conclude, our one Honor System office is charged with the responsibility of upholding the university's academic code of honor through an impartial process which utilizes volunteers from all departments of the institution. We educate faculty, staff, students, and our panel of AHSO members on how to better conduct their academic matters with integrity and honesty, connect with the student body to promote these values, and constantly refine and develop methods for accomplishing those tasks. Attending this presentation will address three key conference themes and how our office approaches academic misconduct. Conference attendees will walk away with how the Aggie Honor System Office works and some practices they can implement to hopefully reduce academic misconduct within their instruction.

Keywords: integrity, academic, misconduct, university, office.

Surveying academic integrity: Methodological issues and lessons learned

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Questionnaire-based survey is an efficient method for collection of large scale, longitudinal, comparative quantitative data. Therefore, we can find numerous examples of research on academic integrity that have employed surveys. However, there are cases when surveys on academic integrity do not properly consider methodological principles and requirements that would allow collecting valid and reliable data. Following a previous study on quality and methodological issues found in surveys on academic integrity, in May 2018 we established a Survey Working Group (SWG) under the frame of the European Network for Academic Integrity (ENAI). The group aims to conduct a critical review of currently ongoing international surveys on academic integrity and ultimately to develop an international survey toolkit as well as guidance principles for how to use it. During the workshop, the working group members will present their progress to date and invite input from participants to establish what types of surveys are seen as valuable and why.

The credibility of any survey mainly depends on the tool used for data collection. In order to make accurate measurements, it is therefore vital to use a valid and reliable instrument for data collection. Although there are several sub-categories of these two terms, the most common ones appear as content and construct related to validity, and stability and consistency related to reliability. Although measurement error might be due to participants and/or researchers, using valid and reliable instruments help researchers avoid measurement error that might be due to the instrument. Within this perspective, well designed surveys can be used to capture key information in educational research about conduct and perceptions of different players. Triangulating the responses, for instance comparing responses from students to those from their teachers, can provide insights into differences in viewpoints and

the underlying reasons. Survey designers need to be mindful of the aims and objectives of the research, target audience, ethical constraints, the level of detail needed and how the responses will be captured, analysed and interpreted.

Following topics will be covered during the workshop:

Key questions to guide survey related decisions

WHY is a survey being conducted and HOW can surveys on academic integrity be useful? WHEN is it appropriate to conduct a survey (e.g., at the beginning of the process, at a later stage, a longitudinal perspective)? WHO will be the target group or groups (i.e. students, faculty, administrators, librarians)? WHAT do we want to know from the target groups (focusing on different aspects of academic integrity)? HOW should a methodologically sound survey be conducted?

Selected highlights of methodological issues

Ethics in surveys. An *informed consent* form should be prepared and the research team should provide full details about the processes to be followed. This, together with methodological interventions, should be *approved by* a recognised *ethical committee*, which will be institutional, if the survey involves just one institution. If multiple institutions or external bodies are collaborating in the research, approval is needed from each institution. Similarly, there is a need to take into consideration roles such as research assistants, volunteer researchers and such, who may facilitate administering the survey or handling the data. Anyone who plays a role in determining validity and stability of data should also be approved by an ethical committee.

The ethical approval should check a range of details about the research design, such as ensuring risks are identified and mitigated, the process for informed consent for research participants is clearly defined, measures are in place to *anonymise* the participant information and how the results will be managed where this is not possible. This workshop will highlight the ethical implications of conducting surveys and show the importance of GDPR *compliance*. Moreover, the participants will also be engaged in a mock decision-making process for ethical clearance.

Survey questions as measurement tools. Questionnaire-based surveys rely on quality of each question included. If a questionnaire is of poor quality the data collected cannot be considered reliable. Construction of good questions starts with the process of proper conceptualisation. Then, concepts must be translated into measurable empirical indicators. Therefore, we will discuss the key methodological requirement for good questions. Based on examples we will show how *wording* of a question may be misleading or biasing an answer, or differently interpreted by respondents (and what consequences it has for the quality of data), we will discuss issue of double or even triple questions and answer alternative, how to construct *mutually exclusive* answer alternatives and avoid too *complex* formulations of questions.

The workshop will include discussion of examples from two international surveys that have been conducted, with involvement of some of the authors of the workshop.

Global Essay Mills Survey (GEMS) is an international project, which was focused on students' unethical behaviour, specifically on contract cheating. Thanks to this project a questionnaire was developed, which was translated into 22 languages and spread around the different countries. Despite the great potential of the project and a lot of effort, however, insufficient data was collected to make the results in all countries statistically significant. The reasons for this are a long questionnaire, complex questions, difficult translations, irrelevant questions (or answers) for some countries, not consistent organization, weak (impossible) control and many others.

An Erasmus project Impact of Policies for Plagiarism in Higher Education Across Europe (IPPHEAE, 2010-2013) included a survey of 27 EU member states. The survey made use of three separate questionnaires (for students, teachers and managers), translated into 15 European languages, supplemented by documentary analysis, national level interviews and student focus groups. Although the research results from this project continue to be useful and influential, the limitations of the survey design reduced the amount and quality of data collected. Flaws in the survey include: lack of clarity in some questions, especially when translated into different languages; questionnaires not available in all European languages; asking too many questions, some very complex; difficulties in separating language, nationality and study/employment location of the participants.

Details from these two examples, and what has been learnt from them, will be used to inform discussions and activities in the workshop about more effective ways to design, test and conduct surveys on topics relating to academic integrity. The workshop will employ the following *methods of delivery*: oral presentation; demonstration of examples prompting discussion from participants; practical tasks for participants and collecting feedback and ideas.

Keywords: surveys, academic integrity, higher education, academic misconduct, ethical approval.

INTERNATIONAL AND NATIONAL PROJECTS RELATED TO ACADEMIC AND RESEARCH INTEGRITY

Open educational resources for plagiarism prevention

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The participants get to know, test and review open educational resources for plagiarism prevention. They will also discuss possible options for course designs and how these resources could be used within already existing courses.

First, general prerequisites for effective didactical designs will be addressed (How, with which methods and conceptual formulation can I teach students about referencing and good scientific practice?). Second, a few examples for exercises and tasks for students will be given a try e. g. case discussions, self-evaluation quiz, referencing exercises. Finally, ideas for course designs will be discussed among the participants and suggestions will be presented.

The presented open educational resources and ideas for course design are results of the respective working groups of the Erasmus+ project (strategic partnership) “European Network of Academic Integrity (ENAI)” 2016-2019 (see www.academicintegrity.eu). Suggestions for improvement of the resources, contributions as well as ideas for further resources to be developed or integrated into the ENAI activities are welcome and will be discussed in the workshop.

This workshop is especially beneficial for student instructors, writing trainers, trainers of academic staff, developers of study programmes and other disseminators.

Keywords: didactics of integrity, educational design, open educational resources.

ETHICAL LEADERSHIP IN ACADEMIA AND SOCIETY

Assisting you to advance with ethics – A workshop by ethical advisory group of European Network for Academic Integrity

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Ethics and ethical behaviour (often linked to "*responsible practice*") are the fundamental pillars of a civilised society. The focus on ethical behaviour is indispensable in certain fields such as medicine, finance, law or anything that would include, affect, transform, or impact upon individuals, communities or any living creatures. Therefore, many institutions within Europe have set up their own committees to focus on or approve activities that have ethical impact. In contrast, lessor developed countries (within Europe or beyond), are trying to set up these committees to govern their academia and research. As the first European consortium established to assist academic integrity, we felt the importance of guiding those institutions and communities that are trying to teach, research, and include ethical principles. Therefore, we have set up an advisory group to support matters related ethics, setting up ethical committees and assist on ethics related teaching activities.

This short workshop will focus on ways by which we could help those who are in need of advice and assistance to develop their own institutional practices. The workshop will start by introducing to the recent developments in the international code of ethics for educators and its domains. We will discuss basic needs to set up an institutional ethical committee that function's as an independent body to implement ethical behaviour in academia and research. The workshop will also show some examples of problem-based learning approach to teach ethics.

In summary the workshop would highlight and discuss:

- the important aspects of "international code of ethics for educators"
- the basic needs of an ethical committee within an institution.
- a typical ethical approval process with information
- the ways to obtain informed consent with some examples
- some problem-based learning case studies that can be used in teaching ethics

Keywords: ethics, problem-based learning, ethical committee, academic integrity.

ADDRESSING CONTRACT CHEATING

An analysis of legal and quasi legal approaches to contract cheating in the UK and beyond

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The author is a member of the Academic Integrity Advisory Group (the Group) of the Quality Assurance Agency (QAA) in the UK. The author is also a consultant expert with the ETINED platform of the Council of Europe.

In a letter sent to the UK Education Secretary in September 2018, vice-chancellors from across the sector and representing many of the UK's largest and most successful universities, as well as the chief executives of major sector bodies, called for a legal ban on the basis that"*essay mills undermine the integrity of UK Higher Education and are unfair to the vast majority of honest, hard-working students.*"

Ireland, New Zealand and 17 US states have already introduced or are introducing a ban. In the letter the university leaders say"*it is time for the UK to also take the necessary action to demonstrate that the UK is not a safe haven for Essay Mills to do business, and so to safeguard the reputation of the UK Higher Education sector.*"

Freedom of Information requests have found that more than half a million emails were delivered directly to university inboxes over the last twelve months, a number likely to be a significant underestimate.

University leaders called upon for the Government to:

- Commit to introducing legislation to ban the provision and advertising of essay mills.
- Commission the Quality Assurance Agency (QAA), the higher education standards body, to develop and publish a draft Bill by or before the beginning of the next Parliamentary Session, building on their existing work with academic and legal experts.
- Support efforts by the QAA and Office for Students to tackle this issue, including through the QAA's proposal for a UK Centre for Academic Integrity, with a formal remit to research, analyse and combat academic misconduct.

The letter sent to the UK government directly cited research undertaken by the author.

Consequently in November 2018 the author was invited to produce a paper for the QAA on Essay Mills and contract cheating: Options on a Legislative response.

This paper considered a legal response to essay mills and contract cheating with the following options discussed:

1. Take no legal action
2. Take action under the Fraud Act 2006
3. Enact new Legislation: knowledge and intent
4. Take action under the Companies Act 2006

5. Enact new Legislation: strict liability
6. Recommendations

In accordance with the recommendations of the options paper in 2019:

- The Group and the QAA will carry out a survey of UK Institutions to determine impact of the 2017 QAA Guidance to Universities on combatting contract cheating
- The Group and the QAA will contact the Crown Prosecution Service to determine whether a test case is possible and/or likely following a change in the law of dishonesty
- The Group and the QAA will prepare a policy document for review by to submission to policy makers and politicians proposing a new strict liability offence

ETINED is a network of specialists appointed by the 50 States Parties to the European Cultural Convention (ECC) and meeting once a year to oversee the Council of Europe's work in this area and assess the progress made in the field. Its mandate stems from the 2013 Helsinki Education Ministerial Conference and has been shaped and agreed upon by the 50 States Parties to the ECC, represented within the CDPPE. It is based on the assumption that issues regarding quality education and corruption can only be effectively addressed if all relevant sections of society commit fully to fundamental positive ethical principles for public and professional life rather than rely only on top-down mechanistic regulatory measures. ETINED proposes therefore a principles-based approach to ethics, transparency and integrity in education.

At the Council of Europe ETINED platform in November 2018 it was confirmed that the evidence produced over the last year by consultant experts may lead to the drafting of a Convention in relation to academic integrity and contract cheating. The Council of Europe works mainly through conventions. By drafting conventions or international treaties, common legal standards are set for its member states. The work will begin in February 2019 with a plenary in October 2019.

Contract cheating is a serious threat to the quality and standards of Higher Education around the world. Current laws are not fit for purpose. In this presentation I offer proposals for a specific new law to target contract cheating. I will assess a number of issues that would need to be considered before any legal approach could be successful; would changing the legal status of contract cheating make it less likely to happen? Could this be achieved in a specific way? If so, who should actually be prosecuted and what offence are they committing? Would it actually address the causes of contract cheating? Are there unintended potential consequences?

The UK Advertising Standards Authority (ASA) have recently upheld complaints about the advertising used by essay mills. There is a profound mismatch between the advertising used by essay mills and the legal "small print" deployed in their terms and conditions. The work of the ASA is based on a European Directive applicable across member states and which allows for cross border enforcement though an existing legal framework.

This presentation will argue that a legal response is required because academic fraud poses manifold dangers to students, providers and the wider public as follows.

- Students committing academic fraud benefit from an unfair advantage over their peers in their academic attainment and subsequent employment or further study.
- Students committing fraud are liable to significant penalties if caught, including being disqualified from practicing in particular professions.
- Employers are vulnerable to employing graduates who lack the skills, knowledge and competencies which they (rightly) believe higher education qualifications ought to provide.
- In some sectors (for example health and social care) the public may be at risk of harm if they come into contact with people practicing on the basis of fraudulently-obtained qualifications.

Academic fraud undermines Europe's reputation for world-class academic standards The most successful approach would be to focus largely on a law targeting the providers of contract cheating, in particular commercial services and avoiding the criminalisation of students.

A legal approach to contract cheating is possible, and, on balance desirable. Using the UK as an example and the experience of the ASA and work with ETINED, I offer a specific suggestion to lawmakers across Europe, for how this might be achieved. This would make a significant difference to the legal and cultural status of contract cheating.

The aim of the presentation will be to work through the issues identified in the options paper, consider the results of QAA action in 2019 and identify issues for action in relation to any proposed Convention by the Council of Europe in 2019.

Keywords: contract cheating, plagiarism, fraud, essay mill, law.

ETHICAL ISSUES IN ACADEMIA AND THEIR INFLUENCE ON BUSINESS

A proven case of academic plagiarism which is rewarded. Governmental and academic insufficiencies that prevents the plagiarist

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Introduction: Governmental, academic and ethical discordance for the detection and correction of plagiarism causes a free unethical environment. Legal issues must be similar to academic ethic rules in European countries to prevent academic and scientific corruption.

Case: An associated professor who needs scientific articles and papers for becoming a professor in Obstetrics and Gynecology choose a unethical way and produced a book section as an author although he did not write them. Originally these book chapters were Turkish translation of a well-known international textbook of Gynecology. Original chapters were only translated chapters of an international textbook and Turkish version of this textbook was published in Turkey with repeating editions. This plagiarist used this translated chapters in his cv and collect points for professorship due to the academic upgrading rules of Turkish Higher Education Council. Just one year later he published the same chapters in an another original Turkish textbook of Obst & Gyn like he wrote them. By this fraud some chapters of Novak's Textbook of Gynecology (LWW, USA) became published in two different and famous Textbooks in Turkish. One is the original Turkish version of Novak's Textbook of Gynecology and the other was a domestic textbook named "Basic Obstetrics and Gynecology". These two textbooks were sold separately and the domestic one became the bestseller by time until this plagiarism was detected by the author of this article.

This fraud was noticed by the author of this abstract and a legal and academic lawsuit was launched with several delations to different authorities. Turkish Medical Association, Turkish Higher Education Council, Turkish Ministry of Health and the publisher (Lippincott Williams Wilkins, USA) were all informed with enough evidences. The plagiarist was changing his university three times during these lawsuits and by this way none of universities were able to punish him for his fraud. Every university made a plagiarism evaluation by competent juries and all decided that this case is an exact plagiarism that must be punished but none could. The plagiarist used an effective tactic by the gaps in laws and he did not let any authority to have legal right to penalty him. The one and only authority that went to the result and decided a penalty of Professional ban for 15 days and a money fine. The plagiarist was found guilty by his professional organisation and 98% plagiarism was detected by a software. He was still working in a new university saying that "I made a new application for professorship that does not include that plagiarism proven chapters in my cv" and his "new" university found this enough to be cleared.

At the end of 5 years period after the beginning of lawsuit, person who stole the chapters of an Australia based known professor become professor despite the decision of two different universities and Turkish Medical Association as he made plagiarism.

Universities could not drawback the professor title of the plagiarist saying that he is no more their staff while Turkish Higher Education Council states that only universities can punish him.

Only Turkish Medical Association made a true and honourable lawsuit and banned him from medical service for 15 days. The university he is still working did nothing saying that this guilt was before his application to their university and Turkish Ministry of Health stated that this is a problem related to education and they can not judge academic ethical problems. And finally a plagiarist is totally free and working in academic environment although he confessed the plagiarism he made. His only plea was the 10 years passed after the plagiarism and time out should be accepted.

National press, television channels and social media are all aware of this unethical professorship and plagiarism. Results and penalties were all announced to public but nothing could stop this plagiarist carrying unhonourable post and position in university.

Legal authorities could give a penalty to him saying that one of universities should be the complainant to trigger a court case. Normally, in developed countries and western World, any university itself can judge and penalize the plagiarist if that university made the academic upgrade of him. Problem may be diagnosed but cannot be solved unless one of the parties is stated as the major responsible and authorized one.

Result: Competent and authorised academic ethics departments are not enough to prevent plagiarism. Laws, legal methods, coordination between industry, universities and legal councils must be created and simultaneously operated to block academic plagiarism.

Keywords: medicine, plagiarism, textbooks, detection, punishment, law.

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