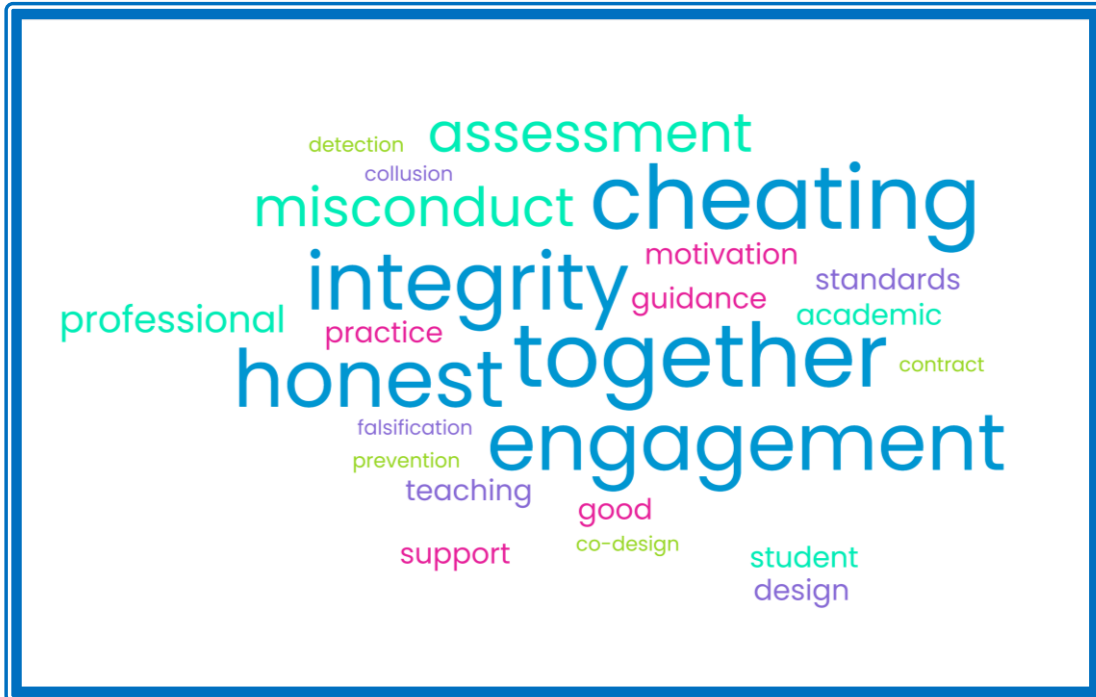




**Northumbria  
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# Exploring Approaches to Combat Contract Cheating, Collusion and Falsification Amongst Computer Science Students

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## Executive summary

*“Integrity is doing the right thing even when no one is watching”.*

C. S. Lewis

### Introduction

This is the final report from the CPHC funded project led by Northumbria University to explore approaches to combat contract cheating, falsification and collusion among computer science students in the UK. The project ran from July 2022 to February 2024.

### Research Approach

The study adopted exploratory research using a mixed methods approach. The initial literature review informed the design of the subsequent practical research work. A student survey (response rate n=26) was conducted at Northumbria University between March and April 2023. Analysis from this informed a follow-up face-to-face student focus group (n=7) in June 2023. In parallel, a survey was conducted with CPHC members (response rate of n=16) in May 2023 followed by a set of in-depth online individual interviews (n=5) in September 2023. Survey data was analysed both quantitatively (descriptive statistics) and qualitatively (exploratory and thematic analysis) with the interview and focus group data analysed qualitatively to provide further insights and deepen understanding.

### Main Findings

Staff and students feel academic misconduct (AM) adversely affect academic standards. They also feel the institutional guidance on good academic practice is generally clear and helpful. Students feel penalties are rather severe whilst academic staff tend to view them as more lenient. Students outline that effective and high-quality teaching together with clear guidance and support for their assessments and on what constitutes good academic practice, can help students be honest in their studies. Staff highlight that students have different motivations for studying, and that there is a growing range of opportunities available for them to produce their assessments in a dishonest fashion. Both staff and students emphasise the need to focus on prevention, not detection, providing a range of approaches that form the basis for the key recommendations. Staff, students, their departments and wider institutions need to work together to provide a high-quality ethical learning experience.

### Key Recommendations

1. **Promote Student Engagement and Honesty** by creating ‘a sense of belonging’ and the motivation to ‘learn’.
2. **Provide Effective Assessment Design and Delivery** that reduce the opportunity for cheating whilst providing an effective learning experience.
3. **Deliver High Quality Teaching and Support** so that students understand the subject and the associated assessments.

4. **Ensure Professional Staff Attitude and Development** so that staff are honest and are consistent in detecting and following up cases of AM.
5. **Design Student-Friendly Guidance and Support on Academic Integrity** so that it is easily understood and accessible to all students and addresses discipline specific needs.
6. **Develop Effective University Processes and Systems** so that the university approach to the prevention and detection of AM is clear, equitable and supportive to both staff and students.
7. **Share Good practice Across the Sector** with national bodies such as CPHC taking a leading role to provide a central hub to disseminate good practice and discuss and address emerging issues.

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# Main Report

## 1 Introduction

The authors wish to state from the outset that their main ethos and interest is to encourage honesty and to uphold the values of academic integrity among staff and students across the computing discipline. This supports the notion of professionalism. However, in doing so, it is necessary to look at the antithesis of academic integrity, and to understand some of the reasons and complexities behind why some students are being dishonest in their studies.

Academic dishonesty has a long history although it was only in the twentieth century that research evolved to investigate this area of education (Riad, 2023; Zachek, 2020). Many UK universities use the term Academic Misconduct (AM) to encompass cases of academic dishonest practice by their students. AM can take several forms with plagiarism [*defined as: representing other people's work as your own*] one of the most common. However, in recent years, contract cheating [*defined as: when others complete work for a student, often in exchange for money*], collusion [*defined as: unauthorised collaboration between more than one student which is then submitted as their own individual work*] and falsification [*defined as: when information (including data/results) is faked for an assignment*] have witnessed a worrying increase globally. Although precise estimates are difficult to obtain, a recent study across 12 Australian higher education institutes estimated that 7.9% of students were engaged in contract cheating with 11.4% obtaining pre-written work from commercial file sharing sites (Curtis et al., 2021). Newton (2018) reports that the percentage of students admitting to paying someone else to undertake their work globally could be as high as one in seven students. Both highlight the difficulties of 'self-reported' studies which may under-report the level of incidents. In the UK, both the Quality Assurance Agency (QAA) (2022a) and the Office for Students (OfS) (Lapworth, 2021) have recognised that the prevalence of these types of AM have become a serious issue.

The growth in number and types of AM coincides with the global expansion of students in Higher Education (HE). UNESCO reports that there are 235 million university students across the world, double the number from 20 years ago (UNESCO, 2023). The UK Computer Science community has also seen an increase in student numbers particularly for postgraduate taught (PGT) students, with a rise of 88% from 25,225 in 2019/2020 to 47,410 in 2021/2022 (HESA, 2023). Furthermore, the number and percentage of these UK students that are international has increased from 14,820 in 2019/2020 (equivalent to 59% of all 19/20 computing PGT students) to 32,900 in 2021/2022 (equivalent to 69% of all 21/22 computing PGT students) (HESA, 2023). These students can find it challenging to adapt to education in the UK (Cowley and Hyams-Ssekasi, 2018) and often have varying levels of abilities including digital literacy (Newman and Gulliver, 2023; Aljabali et al., 2017).

As HE has expanded and been recognised as a key area of economic growth for many countries (Valero and Van Reenen, 2019), there has also been growth in the number of essay mills and similar services. This was particularly noticeable during the recent Covid-19 pandemic with the UK's QAA (2022b) indicating that UKTopWriter reported a total of 635 essay mills in 2018, rising to 1090 in 2022.

Many of these 'services' use aggressive marketing strategies to target students when they first arrive at university. They also often disguise themselves as a proofreading, academic skills and/or plagiarism checking service (QAA, 2022a). Some national governments, including the UK, have legally banned these services, but as many of these services are offered online, it is difficult to enforce this in practice; and many other countries do not have any such restrictions in place.

### *1.1 Research Questions and Aim*

The aim of this project is two-fold: firstly, to provide a more in-depth understanding of the extent and types of contract cheating, collusion and falsification that Higher Education institutions are experiencing in relation to computer science students. This includes an exploration of the student perspective at one institution. Secondly, to bring together and share the best practice across the sector in terms of combating these forms of AM and to identify areas where further work is still required. This led to the following research questions:

RQ1: What are the factors that lead students to cheat and engage in AM?

RQ2: How are UK computing departments and their institutions addressing student cheating?

RQ3: What are the key challenges for CS? academics and their computing departments in tackling student cheating and cases of AM?

RQ4: Which effective practices can be shared to improve academic integrity across computing departments?

## **2 Literature Review**

The research into academic integrity and its counterpart AM has grown considerably over the last decade compared to the previous decade (Mahmud and Ali, 2023), with much of the more recent research centred on the USA, Australia, Canada and the UK. Periodically this work is synthesised (McFarlane et al., 2014; Holden et al., 2021) and of particular relevance to this project are four of these papers (De Maio and Dixon, 2022; Eaton et al., 2019; Mahmud and Ali, 2023; and Parnter, 2020). Drawing on these and the wider literature, this section outlines the key recent findings on academic integrity and academic dishonesty, including research on who cheats and why, and the actions that can be taken to mitigate this. This is followed by a focus on the issues relating to contract cheating, collusion and falsification on the discipline of computer science within HE. The findings from an earlier version of this literature review helped shape the final design of student and staff surveys and interviews about their views and experiences of AM.

### *2.1 Academic Integrity and Academic Misconduct*

Based on the research they examined, Mahmud and Ali (2023) found an increasing emphasis on the promotion of academic integrity in recent years. This demonstrates a shift away from AM detection and punishment to a focus on honesty and ethical conduct (QAA, 2023), although this still needs to be applied in practice within many institutions (Miron et al., 2021). Various studies have explored the reasons for and

conditions in which students engage in dishonest practice, with these largely falling into three categories: individual, motivational and contextual (Makarova, 2019). Under individual factors, both Eaton et al. (2019) and Parnter (2020) found that dishonest practice is widespread among students regardless of their age, gender, level of academic study and achievement. De Maio and Dixon (2022) noted the focus on international students but also concluded that AM cases are often easier to detect where a student's native language differs from their language of study. Birks et al. (p.6, 2020) provided mixed staff views on this. For example, one staff member stated that "*domestic students are as likely as international students to [commit AM]*" with another outlining that "*international students are more likely to commit plagiarism particularly. And in certain cultures, mimicking staff is seen as a good thing and respectful*". In Wang and Zhang's (2022) study of Chinese students, they found that honesty, humility and being law-abiding were key facets that stopped students engaging in AM.

On motivational factors, Murdoch and Anderman (2006) highlight that those students with intrinsic motivation, who are keen to learn, are less likely to cheat than those with extrinsic motivation, such as wanting to gain the qualification with little interest in the learning process itself. Students often do not perceive that they are cheating and can find it acceptable to cheat in certain situations, particularly when there are sufficient multiple reasons: "*enough competing motivations can push students to cheat when they otherwise might not have done so*" (p17, Waltzer and Dahl, 2023). Interestingly the authors observed that after the event, the students often would accept that what they had done was cheating. Drawing on a range of literature, these seem to be the key reasons why students cheat: time constraints including poor time management, lack of understanding of the subject/assessment, poor academic skills, lack of understanding of what constitutes AM, stress and mental health issues, feeling a lack of support/disengagement with their studies, family pressures to succeed, language barriers (De Maio and Dixon, 2022; Parnter, 2020, Tindall et al, 2021).

Contextual factors also play a part, with Makarova (2019) emphasising the importance of the educational environment, especially the behaviours and attitudes of staff towards academic integrity. She also highlights that the behaviour and sometimes pressure from peers can be a contributing factor to how students feel about cheating, a view echoed by De Maio and Dixon (2022). Moss et al. (p8, 2018) outline that some students will plagiarise if they feel "*their behaviour cannot be detected*".

So, what have HE and universities been doing to address these challenges? HE bodies in Australia (TEQSA, 2022) and the UK (QAA, 2023) have provided useful toolkits and guidance, with the International Centre for Academic Integrity (2023) taking a global lead on providing a central place for sharing resources and guidance. De Maio and Dixon (p2, 2022) provide a useful summary from recent research outlining the need for a holistic approach focussed on "*maintaining and promoting a culture of academic integrity*" with "*all stakeholders doing their part.*" In their research into institutional approaches, QAA (2023) highlights the benefits of framing academic integrity as a supportive mechanism rather than a form of discipline. There has also been an increasing interest in restorative practice and justice and that this can foster "*civic responsibility, engaged citizenship and ethical decision making in*



students”, and provide “an experiential learning opportunity to all involved” (Sopcak and Hood, 2022). Rosilie (2007) concludes her paper by stating that “It takes a community to raise integrity” emphasising the need for institutions, staff and students to work together to tackle this issue. This sentiment is echoed by Rettinger

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*“In the next 30 years, higher education is likely to become even further commodified, leaving students with even less guidance from society about how to get the most out of their education. At the same time, online and automated instruction will gain traction in the next decades, creating pressure on in-person and human-delivered education to differentiate itself as a value proposition. Cheating will look quite different in these machine mediated settings, and future research must address those changes. Lastly, artificial intelligence will allow students to outsource their work not to others, but to automated test-takers and essay writers. The default response of faculty and institutions to such developments may be to engage in a technological arms race but it will become increasingly difficult to prevent and catch misconduct using technology. So, the future of academic integrity must rest not on outside technologies, but on the relationships between institutions, staff, faculty, and most importantly students.”*

Rettinger and Gallant (2022), p.95

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and Gallant (2022) in their special issue examining 30 years of research into this area.

## 2.2 Contract Cheating, Collusion and Falsification

In recent years, plagiarism has been increasingly accompanied by other types of AM such as contract cheating and falsification (QAA, 2022b). This coincides with the emergence of low-cost essay mills and, more recently, generative AI tools such as ChatGPT. Manoharan and Speidel (2021) illustrate how easy and cheap it is to use an essay mill. They also outline how the resulting assignments are often individualised to the student, can be of high quality and typically do not flag as AM anywhere in the process.

There are many methods by which students can ‘outsource’ their assessed work (Awdry, 2021). Common approaches include:

- ‘contract’ sites where users can request work written to their specifications and timelines;
- bidding sites, where students can upload their requirements and then select the most suitable ‘bid’;
- peer-sharing sites where students can upload previous assessments to gain credit towards a future download; and
- essay mills: these often have pre-written assignments for purchase.

Furthermore, the people providing these ‘services’ are using advanced methods such as social media feeds and search engines to target and sometimes predate on students (Crook and Nixon, 2021). These authors further observe that the marketing

strategies of these services can damage the student perception of the HE sector; a warning that universities should heed. Bretag et al. (2019) also highlight that there are less formal methods in operation, for example using a friend, family member or another student to complete the assignment work for them, with Awdry (2021) finding this the most popular approach to 'assignment outsourcing' in her survey across multiple countries.

The Covid-19 pandemic also appears to have affected students and their attitudes particularly to contract cheating, collusion and falsification. Many universities moved to online teaching during this time accompanied by a move to online assessment and exams, often open book and less time-constrained than traditional in-person exams. Students also reported higher levels of stress and mental health issues during this period. Essay mills and other contract cheating services grew and became more persistent in marketing their services to students, looking to take advantage of the situation and of student anxiety (Ahsan et al., 2022). Students were also able to utilise social media such as WhatsApp to exchange messages and answers with each other in real-time, including during exams (McDonnell and Tantong, 2023).

Many universities appear to be ill-equipped to deal with contract cheating as it is difficult to detect (Ahsan et al, 2022) and many staff are frustrated knowing that it is happening but finding it challenging to get the evidence to back this up. There is also evidence that staff find university guidance and policies too onerous to use and that these are not keeping pace with the changes in AM practice:

*"I have concerns that technology or modern students are continually changing ... and I'm not sure our policies reflect that change well enough and I think ghost-writing is a prime example of that".*

(Quote from NZP2 in Birks et al., 2020, p4)

### 2.3 Academic Integrity and Dishonesty in Computer Science

As a discipline, computer science is subject to many of the same challenges and practices around AM that have already been highlighted earlier. For example, Pierce and Zilles (2017) highlight the difficulty of detecting plagiarism in programming assignments; demonstrating that within the context of their study, one tool was not sufficient to detect all the cases of plagiarism. They also found a modest negative correlation between computing students who plagiarise and their final learning outcomes, concluding that further research is needed to understand whether weaker students are more prone to plagiarism and/or whether engaging in plagiarism limits a student's academic development.

In recent years, computer science HE in the UK has seen a growth in both absolute student numbers and those coming from overseas. Some international students can be less familiar with the concept of academic integrity, and particularly what might be considered as 'cheating' in the UK. These students are also subject to exploitation with Lancaster (2020) reporting computer science as one of the top 3 disciplines targeted by essay mill providers.

Furthermore, due to its technical nature, the computing discipline has witnessed a surge in services and tools designed to provide 'model' answers to technical assignments such as coding and data analysis. Manoharan and Speidel (2020) illustrate how easy and cheap it is to access online contract cheating services. They used an online tutoring company to purchase solutions to their computer science

assignments, highlighting that the provided solutions were of good quality, able to be produced in a relatively short timescale (often 30 minutes or less) and were not identified or flagged as AM anywhere in their university process. A further study, following the advent of ChatGPT, showed that GPT could provide answers of equal or improved quality compared to the human experts from these online tutoring services (Manoharan et al., 2023). Qadir (2023) also explored the pros and cons of ChatGPT within HE engineering programmes, concluding that there is a current lack of understanding not only about its use but also about what would be perceived as acceptable use and what might be considered as cheating. Computer science students should have a basic level of digital literacy and thus are likely to be familiar with and able to use ChatGPT and other generative AI tools.

Tackling these challenges is not easy. An earlier study by Sheard et al. (2017) advocated for a combination of discouraging and preventing students from cheating whilst also reducing their motivation to cheat. They concluded by outlining the need for further research in this area, particularly around the effectiveness of different approaches. However, recent research into academic integrity in the computer science discipline remains scant. This further supports the need for this study and its emphasis on exploring the student and staff perspectives on academic integrity and AM; especially in the light of recent changes to the sector, the discipline, the students themselves and the nature and types of support and services, including digital technologies, that students can draw upon to 'cheat'.

## 3 Research Approach

### 3.1 Exploratory Research

Exploratory research was adopted using a mixed methods approach based on two different case studies to gain student and staff perspectives on academic integrity and AM including contract cheating, collusion and falsification. Initially a literature review was undertaken (for the updated review, see Section 2) to inform the design of the subsequent surveys.

The student case was focused on one university to enable an in-depth exploration to be conducted among the students at that university. The case was the cohort of full-time campus based PGT students enrolled in Semester 2 of 2022-2023 on computing related programmes within a large university in the north of England (n=358). The demographics of these students are in line with national figures, with a significant percentage of students originating from India and Nigeria. The student case study comprised a survey to the whole cohort and a follow-up focus group with a subset of the survey respondents.

The staff case was focused on the CPHC community. This community can be considered to be representative of the senior academic leaders of computing departments across UK Higher Education. The staff case study comprised an online survey distributed to the CPHC community (n= 770) with a set of follow-up interviews (n=5) with individual CPHC academic members to enable an in-depth exploration of the academic staff perspective.

Given that a large element of this study was based on an exploration of the student perspectives in relation to a potentially sensitive topic, it seemed sensible to include PG students within the research team. Two PG students were recruited through an

open call to all PG computer science students at the student case study university and were subsequently employed to be part of the research team alongside two members of academic staff. The two student researchers helped with the literature review, the design and implementation of the staff and student surveys, the student focus group and the data analysis. This approach proved to be invaluable by providing a more student-centred approach to the study from the outset. It also helped to create a safe and trusted environment for the student survey and the student focus group discussion.

### 3.2 Student Case

**Survey Design and Implementation:** Bringing together the research questions with the research team's experience and the results of the literature review, a survey, comprising 11 closed and 9 open questions (see Appendix A), was developed to explore the following areas:

- (1) The Student's Opinion on AM (including contract cheating, collusion/falsification) and why it occurs
- (2) The Student's Perspective on the University's Approach to AM
- (3) The Student's Opinions on Promoting Academic Integrity and Preventing AM

Students were also asked to rate their honesty in answering the questions.

The survey used Google Forms and was designed with a mandatory information and consent form at the start, with all other questions offered as optional. The students (n=358) were contacted via email in April 2023 with an overview of the research study and a link to the main survey. Further reminders were sent via email and the survey closed in May 2023. 26 students responded.

**Focus Group Design/Implementation:** Initial analysis from the student survey results indicated that it would be useful to explore some of the issues raised in more depth. The team decided to use a focus group as it has been shown to provide an interactive, dynamic and supportive environment for exploring sensitive topics (Roller and Lavrakas, 2015). For example, as participants discuss issues, they can also listen to, and therefore also consider, other viewpoints and how these align with their own. This can provide the basis for a more constructive discussion than an individual interview. It was decided to use the two student researchers as the focus group facilitators, with no academic staff involvement at the session. As the two student researchers are regarded more as peers, this allowed a more conducive environment in which students would be more inclined to open up and express their opinions freely.

A purposive sample was used for the focus group to ensure it was broadly representative of the student cohort in terms of involving students from different countries of origin and different stages and types of computing programmes. This sample was drawn from the survey respondents who had indicated their willingness to take part in a follow-up discussion. The focus group (n=7) was conducted in June 2023 and focused on the same three areas as the survey, exploring each in more depth (see Appendix B for focus group guide).

### 3.3 Staff Case

**Survey Design and Implementation:** Bringing together the research questions with the research team's experience, the initial analysis from the student survey and the results of the literature review, a survey comprising 12 closed and 10 open questions (see Appendix C) was developed to explore the following areas:

- (1) The Academic's Opinion on AM (including contract cheating/collusion/falsification) and why it occurs
- (2) The Academic's Perspective on the University Approach to AM
- (3) The Academic's Opinions on Promoting Academic Integrity and Preventing AM including any examples of good practice

The survey used Google Forms and was designed with a mandatory information and consent form at the start, with all other questions offered as optional. CPHC members (n=770 approx.<sup>1</sup>) were contacted through an email distribution list in May 2023 with an overview of the research study and a link to the main survey. Further reminders were sent via the email distribution list and the survey closed in June 2023. 16 members responded, all from different HE institutions across CPHC.

**Individual Interview Design/Implementation:** Initial analysis from the student and staff survey results indicated that it would be useful to explore some of the issues raised in more depth. The team decided to use individual semi-structured interviews with academic members of CPHC to enable an in-depth 1:1 conversation with each participant. This approach facilitates the use of probing open-ended questions with an individual and the opportunity to follow up on their responses (Adams, 2015). A convenience sample was used drawn from the survey respondents who had indicated their willingness to take part in a follow-up discussion, and who indicated they would be available for an online interview during September 2023. Individual interviews (n=5) were conducted between 4<sup>th</sup> and 15<sup>th</sup> of September 2023 using Microsoft Teams, each lasting between 30 and 45 minutes. Each interview focused on five themes identified as requiring further exploration from the initial analysis of the survey data (see Appendix D). The themes were:

- (1) Assessment Design
- (2) Education of Students
- (3) Motivation and Engagement of Students
- (4) Institutional Policy and Practice
- (5) Staff Development and Approach

Interviewees were also encouraged to share any good practice under each of these themes during the interview.

### 3.4 Approach to data analysis

Data from the staff and student surveys was analysed independently using descriptive statistics (quantitative data) and exploratory thematic analysis

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<sup>1</sup> This is an approximation based on information provided by CPHC and noting that the distribution list is constantly changing with members leaving/moving institutions.

(qualitative data). The student survey was conducted first and results from the initial data analysis of the responses informed the follow-up focus group and the staff case study. The student focus group data was analysed using thematic analysis and triangulated with the student survey data analysis. The staff survey analysis was conducted in parallel with the focus group analysis and the results used to develop the plan for the semi-structured individual interviews, including the identification of the five themes and initial set of questions (see Appendix D). The staff interviews were analysed using thematic analysis and each set of data was then triangulated to provide the final set of findings and discussion. At each stage the main analysis was undertaken by one of the research team with a further member allocated to undertake independent verification.

### 3.5 Ethics

This research project (Submission Reference 1644) has been approved through Northumbria University's Ethics Online system and was conducted in accordance with the university's policies, practice and guidance around research ethics (see [Ethics & Integrity | Northumbria University](#)). Information sheets and consent forms were developed for each survey, focus group and interview and each participant consented to take part. Data collected from each participant was analysed and managed in a safe and ethical manner.

## 4 Main Findings

### 4.1 Student Survey

Each question from the student survey was analysed independently and the findings were summarised by each of the three areas of key focus: (1) The Student's Opinion on AM and why it occurs; (2) The Student's Perspective on the University's Approach to AM; and (3) The Student's Opinions on Promoting Academic Integrity and Preventing AM.

#### 4.1.1 Student Opinion of AM:

When asked whether they thought academic misconduct was a serious issue in universities today, 46% (n=12/26) of the student respondents agreed strongly, with a further 46% (n=12/26) agreeing, one respondent strongly disagreeing and one expressing no opinion. Every respondent felt it affected academic standards with the following reasons provided for why students felt this was the case:

- Those that cheat will not have the required knowledge for their future careers “it produces half-baked and unqualified graduates” and “students won't get the required knowledge to get a job in this competitive market if they don't study honestly”.
- It lowers the quality of the student work.
- It negatively affects teaching staff and teaching quality.
- It negatively impacts on the university itself plus the integrity of the awards, and can tarnish their reputation with graduates, employers and government.

- It can disincentivise students, meaning they are less motivated to participate in their module and assessments: “students that are honest can feel more negative about their studies when they know others have been cheating particularly when they are not caught and achieve better marks”.
- It can affect a student’s confidence.
- It can make a student “lazy intellectually”.

One student commented that “academic misconduct affects academic standards because giving the degree to someone who doesn’t understand the work is not good”. However, one student provided an alternative view: “The contents of the course is not applicable to the industry so there is no difference between passing, good mark, ... so as students spend a lot of money, it is not fair to punish them as well.”

Column 2 of Table 4.1 outlines the student responses to a list of reasons provided in the survey on why students commit AM. Respondents were also asked if there were other reasons and listed the following:

- sometimes they get in to trouble without knowing, so they have a lack of awareness about what academic misconduct is;
- no clear understanding of the topic;
- unclear teaching approach or an unknowledgeable teacher;
- lack of confidence in the subject;
- what is termed AM is the norm or acceptable in other climes;
- laziness;
- pressure to submit;
- a lack of understanding of the materials;
- a last resort (they feel they have no other option)
- a huge difference between what is required for the assignment and what was taught.

<b>Provided Reasons</b>	<b>Student Survey Participant Responses (n=26)</b>	<b>Staff Survey Participant Responses (n=16)</b>
Because they feel they will not get caught	6/26 (23%)	12/16 (75%)
It’s an easy option	8/26 (31%)	11/16 (69%)
Lack of time	15/26 (58%)	11/16 (69%)
Lack of confidence about the assignment	20/26 (77%)	10/16 (63%)
Lack of understanding about the assignment	20/26 (77%)	8/16 (50%)
The subject has not been taught well	10/26 (38%)	1/16 (6%)

**Table 4.1: Participants Responses to Student and Staff Surveys on List of Potential Reasons on why Students Cheat**

When asked if the university clearly defines what it considers to be AM, 85% (n=22/26) of student respondents agreed or strongly agreed with 4% (n=2) neutral and 4% (n=2) disagreeing. The majority of respondents also felt that university guidance was helpful, with 38% (n=10/26) feeling that it was very helpful, 54% (n=14/26) somewhat helpful, and only one person indicating that it was not helpful, with another indicating that they had never seen or used it.

Responses were more mixed about whether the university deals appropriately with cases of academic misconduct, with 42% (n=11/26) answering 'yes', 31% (n=8/26) responding 'sometimes', 8% (n=2/26) answering 'no' and 19% (n=5/26) answering 'no opinion/don't know'. On the penalties, the university can impose for AM, only 19% (n=5/26) felt they were about right, with 27% (n=7/26) feeling they were very severe and a further 8% (n=2/26) somewhat severe. Only one person felt they were very lenient with a further 12% (n=3/26) feeling they were somewhat lenient. 31% (n=8/26) had no opinion or did not know.

The majority of students, 62% (n=16/26), responded that they had never known anyone who had cheated during their university studies, with a further 19% (n=5/26) stating they had seen it a long time ago and only 19% (n=5/26) indicating they had seen it recently. When asked about contract cheating specifically, 73% (n=19/26) said they had never experienced it, and 27% (n=7/26) responded that they had experienced it.

When asked about collusion, a similar percentage of respondents, 73% (n=19/26) said they had not experienced it, with 23% (n=6/26) saying they had, and one student given no response. Even more students had not experienced falsification (85%, n=22/26), with several indicating that they did not know what it was and only 15% (n=4/26) indicating they had experienced falsification.

Table 4.2 lists the reasons provided by respondents on why students engage in contract cheating, collusion and/or falsification. When asked what elements help students be honest and not engage in AM, the following responses were received:

- Good teaching
- Encouragement to engage in their studies
- Requirement to attend the timetabled sessions
- Commitment to be ethical and honest
- More seminars and tutorial sessions
- Better help and guidance on assessment such as sample examples
- Strong and effective punishment when a student does cheat
- Good understanding of the subject matter
- Good understanding of what is acceptable practice and the consequences of AM.

One student commented *"To be honest I want to help students to easily cheat without plagiarism detection. You should help them as well. They spent lots of money. They deserve help."*



Reason	Contract Cheating	Collusion	Falsification
Lack of knowledge about academic integrity and what is allowed or not.	✓	✓ <i>"students clarify doubts with friends &amp; do not know this could be seen as AM"</i>	
Lack of understanding around the assessment	✓	✓ plus tutors not available to help in the time left	
Lack of engagement/attendance in their programmes/modules		✓	
Poor teaching	✓	✓	
Lack of understanding of the subject matter	✓	✓	
Mismatch between what is taught and then what is expected for the assessment	✓ <i>"they teach the alphabet &amp; then expect Hamlet"</i>		
Lack of confidence	✓		
Do not think the assignment is worth spending any time on/too much work	✓		✓ <i>"I have seen multiple instances ... where my classmates changed data to get appropriate answers ... because they felt it would be too much work to repeat the experiment"</i>
Lack of time	✓		
The tutors do not check for AM so easy to get away with		✓	
Belief in teamwork and sharing experiences and knowledge		✓	
Pressure from those providing the contract cheating services	✓		
Pressure from peers and family to do well	✓		
Easy to use ChatGPT but not check the responses it provides			✓

**Table 4.2: Reasons from Student Survey on why Students Engage in Contract Cheating, Collusion and/or Falsification.**

When asked specifically what the university and programme team could do to help, the main responses were in line with those above, particularly emphasising the need to attend sessions, provide a good quality of teaching including additional support for those students who are struggling to understand the subject, additional tutorial sessions, smaller classes (no more than 20 per class) as this would allow tutors to track more closely how each student is doing and what their level of understanding is, good guidance on the assessment and what is expected including mock exams,

example assessments and more formative assessment work, good guidance on what is acceptable practice and what is AM. It was also felt that staff should emphasise the importance of being an independent learner, that they should ensure they were available to help with assessment and module queries in a timely manner and should be seen as friendly and approachable by the students to encourage students to seek help when they are struggling. Another respondent indicated that there needs to be clear guidance about the use of Generative AI and other technologies. One comment indicated that staff need to be honest too, giving the example of a member of staff just reading from the slides *“like a robot”*. They believed that this showed that the staff member did not understand the subject and students viewed this as a form of ‘cheating’ by the member of staff. Another student indicated that they thought workshop and class attendance should contribute towards the final marks for a module. There was also a view that when students had to resit an assignment, they needed extra support on how to improve their previous submission. We also asked students how honest they were in completing the survey, with 65% (n=17/26) responding they were completely honest, a further 23% (6/26) indicating they were fairly honest with only 8% (n=2/26) stating they were not very honest and one student providing no response.

## 4.2 Student Focus Group

The data was transcribed from the student focus group and subjected to exploratory analysis using the same three areas as the student survey analysis.

### 4.2.1 Student Opinion of AM:

The students demonstrated that they were all familiar with AM but were less familiar with individual types of AM such as collusion or contract cheating. They also confirmed that AM affects not only the individual students but also the wider university. One student commented: *“I strongly believe it affects both the institution and the individual”* as *“that individual might not be able to prove or showcase what they have learnt”* and this can affect both the student and the university’s reputation with others.

In general, the group indicated they felt the process of doing the work themselves was an important part of their learning journey with one student stating that *“I decided that I must go through this assessment on my own so that I can learn”*. However, another student was open about admitting to contracting their coursework out to an essay mill provider. However, they then went on to state *“I discovered that the response the person gave did not meet my expectation” ... “even when I sent out further details of what to do”*. As a result, the student then completed the work themselves, indicating also that this had left them very little time to do the work properly so had resulted in several sleepless nights! It had been a good learning experience ultimately, with the student concluding that they viewed their own final submission as much superior to that provided by the essay mill service and that they would never consider contracting their work out again. All the students indicated that within a few weeks of starting their Masters programme, they and their peers were being inundated with messages from essay mill providers and similar organisations offering help with their studies and particularly their assignments. These were generally being received on their social

media platforms such as LinkedIn and Facebook, and they could all see how this activity might guide a student to “*fall into temptation*”.

When asked about other reasons that students might cheat, the group stated the following: work commitments, ill health, a lack of time due to other commitments, poor time management, family responsibilities, a lack of understanding of the assessment and/or a lack of understanding of the subject itself.

#### 4.2.2 *Student Perspective on University Approach*

The views expressed on the university approach to student cheating and AM were similar to those provided by the survey respondents. However, there was a strong opinion that the responsibility for dealing with AM rested with not only the university but also the wider government and national education bodies. The student group felt that these national bodies should be addressing this issue and providing solutions.

The group also recognised that the university’s approach to granting extensions to assessment deadlines was helpful and that there was good support in place for students but not all students made use of this support.

#### 4.2.3 *Student Opinion on Preventing AM*

The group had mixed views about assessment design, and this generated quite a bit of discussion and debate. Some participants felt strongly that the adoption of exams would help prevent AM. Others were not so convinced and highlighted how coursework can be beneficial as they are “*learning in the process*” and it can also increase student engagement. It was felt by some that the timed constraint of an exam does not suit everyone. One person also noted the potential for ‘ghosting’ in an exam by getting someone else to take the exam for you. The group felt that the use of practical laboratory work, demonstrations, walkthroughs and vivas could also be helpful forms of assessment for combatting cases of AM. The group also recognised that some students may not be comfortable with assessments where they are required to present their work orally and may need additional support and practice for this.

### 4.3 *Staff Survey*

The findings from the staff survey are presented against each key area of focus identified in the survey.

#### 4.3.1 *The Academic’s Opinion on AM*

When asked ‘*Do you think that academic misconduct is a serious issue in universities today?*’, all of the respondents agreed with 15/16 (93.8%) answering ‘Strongly Agree’ and 1/16 (6.2%) answering ‘Agree’. A significant majority (15/16) think that AM affects academic standards with only one respondent disagreeing. When asked to explain how AM may or may not affect academic standards, participants identified the following:

- Students are not learning when they cheat.

- AM devalues qualifications and “*Students achieving high marks from cheating can adversely affect those who don’t cheat by displacing them in academic ranking;*”
- It can affect the reputation of universities who make awards to students who have cheated. Employers can realise that a student they employ who has cheated at university does not really have the expected expertise. Employers may therefore think less highly of the university the student qualified from;
- Students are being given credit which is not reflective of their abilities;
- More time is spent on finding and processing AM rather than focusing on education;
- It is increasingly ‘normal’ for students to cheat.

As one participant commented: “Students have developed very sophisticated methods to conceal misconduct and often go undetected.”

There was also some concern that when AM is detected, the punitive measures are often very mild and are not really a deterrent for students. Participants also indicated that some institutions have expectations around ‘pass rates’ and ‘module averages’ that staff are expected to conform too. The amount of AM cases can negatively affect these.

Finally, there was an interesting observation around assessment design: “... because we modify assessments to avoid misconduct, and so we cannot always assess in the way that would give us the strongest evidence that students have achieved the kinds of skills, knowledge and behaviour that we want”.

Column 3 of Table 4.1 outlines staff responses to a list of reasons provided in the survey on why students commit AM. Respondents were also asked if there were other reasons and listed the following:

- pressure of work commitments;
- lack of understanding about what AM is;
- copying is acceptable in some cultures;
- lack of foundational knowledge/not qualified to be on the course;
- failure to engage in their studies;
- students feeling they cannot afford to fail.

All participants confirmed they had witnessed recent cases of cheating at their institution. 15/16 (94%) had experienced one or more specific cases of contract cheating and an identical number had also experienced one or more specific cases of collusion. However, only 50% (8/16) had seen any cases of falsification. Table 4.3 outlines the responses from participants when asked about the reasons students engaged in these different forms of cheating. Those reasons marked with an asterisk, \* were provided as a choice to survey participants. Other reasons were those suggested by participants in an open response format.

Overall Cheating	Contract Cheating	Collusion	Falsification
<i>Because they feel they will not get caught*</i>	Harder to detect with plagiarism detection software/less likely to be caught/considered low risk	Students think they can get away with it	Students think they won't be caught.
<i>It's an easy option*</i>			Want an easy way to pass
<i>Lack of time*</i>	Need a solution quickly/lack of time.	Poor time management	Desperation when run out of time
<i>Lack of confidence* about the assignment</i>		Lack of confidence	
<i>Lack of understanding about the assignment*</i>	Lack of skills/knowledge to complete the assessment.		Lack of knowledge
<i>The subject has not been taught well*</i>			
Pressure of work commitments			
Lack of understanding around what AM is/copying is acceptable in some cultures			
Lack of foundational knowledge/not qualified to be on the course			
Failure to engage in their studies	Little desire to study/lack of engagement.		
Students feeling they cannot afford to fail.			
	Students just want the qualification not the learning.		
	Dishonesty		
		Working together too closely with others	
		Hard to refuse a peer's request for help.	
		Struggling with work so ask friends for help.	
			Laziness

**Table 4.3: Opinions Provided by Staff Participants on Why Students Cheat**

#### 4.3.2 Academic Perspective on University Approach

The majority of participants (15/16, 94%) felt that the university clearly defined which actions are considered to be academic misconduct, with one respondent disagreeing with this. The views were more mixed on whether the university deals appropriately with cases of academic misconduct, with only 31% (5/16) replying 'Yes', a further 50% (8/16) responding 'Sometimes' and 19% (3/16) saying 'No'. Table 4.4 indicates how participants feel about how the university deals with cases of academic misconduct.

About right	8/16 (50%)
Somewhat lenient	4/16 (25%)
Very lenient	3/16 (19%)
Very severe	1/16 (6.2%)

**Table 4.4: How do you feel about the university's approach to dealing with Academic Misconduct**

Half the respondents (8/16) felt that their university's guidance and information on academic misconduct was 'somewhat helpful' with a further 5/16 (31%) feeling it was 'very helpful'. Only 3/16 (19%) felt it was 'not helpful'.

#### 4.3.3 Promoting Academic Integrity and Preventing AM

Participants indicated that each of the following actions is helpful in preventing students from cheating:

- Highlight potential examples of AM during formative activities.
- Hold tutor-led drop-in support sessions to clarify assessment.
- Design module assessments to make cheating hard.
- Explain that other students have been caught.
- Outline the consequences of AM to the students.
- Provide guidance and support about expectations.
- Enable extensions/deferrals on assessed work.

In terms of what their university and computing department could do in future to help prevent cheating, the following were suggested:

- Introduce harsher penalties.
- Enable adequate staffing levels to support the use of vivas and invigilated assessments.
- Adhere to appropriate entry requirements to programmes.
- Provide clear information and guidance to students and staff on academic integrity and AM.
- Enable ongoing monitoring of student work.
- Support the design of assessments to evidence understanding.
- Encourage more Individualised assessments.

Participants also indicated the following in terms of what they felt they could to help prevent cheating among their students:

- Assess the process and evidence work-in-progress.
- Design the assessments to make it harder to cheat.
- Provide better education and communication about what cheating is.
- Conduct vivas on a random sample of students.
- Introduce sanctions that send a clear message.

Four respondents provided examples of good practice. These were:

1. Train staff on effective methods to detect contract cheating. Conduct vivas for all students suspected of contract cheating and make vivas compulsory for all dissertations.
2. For major projects, students begin by submitting a proposal. They may have already found a report on the web that they intend to plagiarise or have contracted a ghostwriter at the proposal stage and need to be challenged about anything suspicious before it is too late.
3. My assignment briefs often ended up on contract cheating websites. The sites advertise their services by 'displaying' completed assignments. I have started fingerprinting these, so each copy of the assignment could be linked to an individual.
4. Personalised datasets for use in assignment work.

#### *4.3.4 Additional Feedback*

Participants also offered the following additional feedback:

1. Generative AI is making it problematic to assess essays. Ghostwriters will become proficient at using it in their work for students, plus students will be able to use it directly.
2. There is no incentive for teaching staff to detect cheating, or to report it when it is detected. Indeed, there are deterrents to detecting cases as they lead to more work for the teaching staff and the results can lower the overall average and pass rates, which can reflect badly on the member of staff and the wider module team.
3. One participant outlined how they had identified about 70% of the class copying directly from each other. However, most of the AM decisions were overturned by the university who said the team had not understood the cultural differences of their cohort of students. This has been quite disheartening.
4. One participant discussed how the university has moved to an approach of failing the student with feedback that this is poor academic practice rather than finding a case of AM. This is less onerous on staff, and reduces the university statistics on AM but students may not learn from this and may continue to engage in AM.
5. The university appears more interested in increasing student numbers and income from this rather than promoting and supporting academic integrity and standards.
6. Dissertations have been a particular problem for us as, although your academic instinct can tell you that the text is not written by the student and is composed of a number of elements stitched together, it is very time-consuming and difficult to provide robust evidence to support this.

#### *4.4 Staff Interviews*

Exploratory thematic analysis of the staff interviews yielded 14 codes, which were then grouped into three broad themes: (1) Student Opportunity to Cheat (encompasses the codes: Reasons Students Cheat; Student Attitude and Motivation; and Generative AI) (2) Encouraging Good Academic Practice (encompasses the codes:

Academic Integrity and AM Student Guidance; Assessment Design; Education Support and Guidance; Staff Development and Training, Staff Attitude and Guidance) and (3) Detecting Cheating (covers the codes: Detecting Cheating, Institution and Department Processes). Each of these themes is discussed in turn.

#### 4.4.1 Student Opportunity to Cheat

The analysis of the staff interviews demonstrate that student cheating is a complex issue and the reasons and motivation to cheat can vary per individual. One participant remarked *“I think students are knowingly cheating, and many cases, have the intent to cheat from very early on”* concluding *“it's not something that can really be educated about”*. Another participant observed that this type of student has little *“moral compass”* and *“they don't care”*. It was also observed that for these students, providing training around good academic practice seems to have little or no effect. Another participant observed that some students believe they are going to fail anyway so they may as well try to pass by cheating. Often these students end up being ‘repeat offenders.’ Generally, this was felt to apply to a small number of students in any one cohort.

Participants observed that students might run out of time or not understand the assessment or the wider topic and this could lead to *“desperation”* and/or being overwhelmed, both of which can lead students to cheat. Some also commented that students may not understand what is required. For example, several participants commented on cultural differences, with one remarking *“some of them are taught to actually copy from a book and if they don't copy it word for word, then that's not good,”*. Another participant speculated how for some students in their home country and/or during their previous educational experience, it may be the case that there is *“more corruption generally and paying your way through a system is more normalised”*.

Also, requirements can often change from one module to another and that can be confusing to students: *“because in one module, we might be expecting students to write the fine details of some compiler for a computer language from scratch, whereas in other modules, they'll just take that off the shelf and use it as a tool”*. As academic staff, we understand those differences, but we may not clearly explain them to students.

In terms of motivation, it was recognised that some students are motivated to learn and are *“very enthusiastic”* about their studies. However, there are many other drivers such as gaining the end qualification, providing a pathway into the UK and enabling a future career. For those motivated by their future career, the link between their studies and future employment needs to be really clear. This may also include helping them prepare for technical job interviews where they might have to write or analyse code on the spot, with one participant remarking *“students respond well to that message”*.

Participants also commented that the majority of students are well behaved and that the amount of misconduct is relatively small in their experience. One participant outlined that when students cheat, they often do so *“because they think they're going to gain some benefit from it. And they know they're cheating.”* AM was also recognised as a growing problem particularly since the advent of generative AI tools such as ChatGPT. Participants commented that with ChatGPT and similar tools, it



becomes easier for both the students and contract cheating services to provide better quality assignments quickly and easily. Social media also enables contract cheating services to target students more readily. Several participants recognised that no matter how often universities change the detection software, they would not be able to keep up with the capabilities of generative AI tools in practice. Therefore, encouraging honesty and changing students' perception of AM to prevent it from occurring in the first place was seen as the most desirable approach to combat student cheating. This includes making students aware of the seriousness of AM. One participant outlined how they feel students currently view it as a minor offence "*akin to shoplifting*", whereas the institution, staff and future employees regard it much more seriously. One participant illustrated how a class discussion on the effect of cheating on other students can also be helpful in combatting AM.

#### 4.4.2 Encouraging Good Academic Practice

With respect to student guidance and training, several participants commented that they had institutional-wide guidance and training for students, often as part of their induction: "*...there is a mandatory institution-wide Moodle course with a quiz ... that every student has to take.*" This was mandatory at some institutions. However, several participants felt that it mainly focused on '*writing essays, reports and such like*' and although this helped raise consciousness, computing students may benefit from a more tailored approach, which also covered more practical and technical types of assessment.

There was a mix of practices between different computing departments. At one institution, advice about AM was provided within each module, aimed at encouraging students to do their own work and not cheat. Another department addressed it in induction with a follow-on session using their departmental student tutor groups with video support. One participant commented on the value of discussing this face to face with students, rather than expecting them to study a course or material in their own time. One department has incorporated it into a professional skills first year module, with supplementary online resources. These are not always effective though, with one participant commenting that no matter what you try and do, there are certain students that will cheat no matter what. However, on a positive note, one participant commented "*I've noticed a difference in the demeanour of people appearing in [AM] panels, which indicates that something's getting through ... the added training is beginning to help*". One department brings in former graduates to talk about their own university experience. Another interviewee emphasised to their students, the need to be able to show both technical and 'softer' skills at interview, and that they need to gain these through their studies by actually undertaking the work themselves. Anecdotally, both of these approaches seem to have been helpful.

All participants had strong views on assessment design, recognising that their ideal assessment approach might be different if they did not have to consider academic integrity, but also recognising that compromise was needed, and the risks of student cheating had to be weighed against what seems right in terms of educational practice. "*Because we could lock students in a room for exams for everything ... but ... we don't want to do that because we don't feel that's giving scientific insight into*

*what students can do. But equally, we don't want to be naive and let people just get through when it isn't their own work."*

One participant commenting on the latest developments in AI, stated that this might move assessment *"towards invigilated exams for core skills and project work for everything else. And that's always been what we should be doing. So maybe this will force that."* Others also mentioned the benefits of examinations, both closed and open book, and the need for specialised software to ensure exam conditions if these were provided in an online format. Participants also recognised that some institutions are implementing assessment guidance and policies which move away from exams, and this was a concern for them. However, there was also a view by some participants that we should not just revert to exams – academics also need to ensure that assessments are evaluating the appropriate skills and expertise that we want to engender in our students.

Three other approaches were mentioned that could be helpful in promoting honest assessment practice: (1) the use of staged assessments where students hand in work/evidence at different stages during the assessment period; (2) assessments that are individualised to each student e.g. individual project work; and (3) demonstrations/walkthroughs/vivas. One respondent mentioned that they were looking at more holistic assessments, initially on their degree apprenticeships, but that elsewhere in their institution, programme level portfolio-based assessments were being trialled. The benefits are that these can be individualised to the student, it can be a more substantive piece of work and that, as it reduces the overall number of assessments per year, staff can have more time to assess and providing meaningful feedback. It was also recognised that this approach could be difficult for weaker students, and it could be quite a high-risk strategy. At another institution, a traditional programming assignment was used but this was accompanied by a short closed-book exam testing the student's ability to do some simple programming tasks in the same programming language. This was marked on a pass/fail basis and if the student did not pass this test, then their main assignment was not marked. Many institutions have long lead times for changes to modules e.g. one year in advance, and this can make it very difficult for staff to adapt their delivery and assessment approach to deal with changing practices around AM. It was also recognised that students can use social media to discuss their work and that it's very difficult even if we wanted to, to have any oversight of those discussions, although they may pertain to potential dishonest practice by students.

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*"Last year I trialled putting a lot more focus on process rather than end product, because it's a lot harder to fake a process. So, for coding assignments, I'd like them to use Version Control software, particularly on a server that's under our department's control., so we can see the time and date and every step along the way, and we can see the stages of the development. So, it was quite effective at catching students cheating, but whether it deterred students from cheating, I don't know. It's certainly provided evidence because you can check the timestamps on the files."*

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Several participants mentioned the challenges arising from latest developments in generative AI. This has ignited what has always been an ongoing debate in computing education: what is the right level of abstraction for teaching

programming skills? We have already moved away from teaching assembly language, so does this give us the opportunity to move the abstraction level even higher? There was a view that this level of abstraction varies from module to module, which can be confusing to students; so, each module needs to be very clear about its expectations here and in relation to the acceptable use of generative AI. This also raised an issue around curriculum design and an ongoing issue in computing education about being able to provide an authentic programming experience. Often the programs that students are asked to develop are quite simple, and it is difficult to replicate the complexity of the programs they may subsequently be working on when employed in the sector.

In terms of supporting staff in recognising/managing AM cases, most respondents indicated that their institution and/or department has provided training and support on recognising and dealing with AM, but this often tends to be on an ad-hoc, informal and/or voluntary basis. Two respondents commented that it was an important consideration as the computing discipline has tended to see higher levels of student cheating. Some institutions were experiencing rapid turnovers in academic staff and highlighted the need to provide support and guidance on a regular basis to support newer members of staff. It was also highlighted that some staff do not engage with the process, and that the training should be mandatory rather than voluntary. It was also stated that whilst university-wide training is OK, it would also be helpful to have training and guidance that is adapted to cater for each individual discipline. One institution provided training about the process to follow once cheating was suspected but did not have any support around how to detect cheating in the first place.

#### 4.4.3 Detecting Cheating

Every participant highlighted that there was little incentive for staff to detect cheating, and that there was variation in staff attitudes and actions relating to academic integrity and AM across their department. One participant stated *“It’s better for the university that less cheating is happening. We can’t measure cheating; we can only measure the cases of cheating that have been caught ... I suspect all of the incentives are around not catching cheating”*. Another commented *“... a student who’s been caught cheating in four modules, then it’s probable that they cheated in their other modules and just weren’t caught. But no-one ever pursues that line of thought”*. There was also a view by several respondents that the staff who detect cheating get a *“bad name”* within their department/institution and that these AM cases can arise because *“maybe your teaching is not good – that’s why students cheat”* rather than because they are being more vigilant than others. Some staff were keen to detect cheating whereas others were less committed. Where staff were not as vigilant over detecting AM, this could result in a student receiving a good grade and positive set of feedback on a piece of work that in another module, would be seen as a potential case of AM, and this mixed messaging to students is not desirable. However, participants also indicated that it was important to have consistency – *“it’s a question of fairness”*. It was also noted that AM was often not picked up until the final stages of the programme where the student was

undertaking a significant individual project, yet it would be much more helpful if it had been picked up earlier in the student's studies.

Respondents also highlighted the difficulty of detecting cheating, particularly with the latest developments in AI and the proliferation of essay mill services. They talked of it being an "ad-hoc" process. One person remarked that you often had a "gut feeling" this was a case of AM but proving it could be more challenging. Most participants indicated that their institution used a plagiarism detection tool, such as Turnitin, for coursework assignments but also recognised this was "*only a partial solution*" and is only useful for written work. One participant also raised the issue of allowing students to submit a draft assignment to Turnitin, just regarding this as an opportunity for them to further paraphrase their writing rather than encouraging them to use good academic practice from the outset. Face-to-face presentations/walkthroughs/vivas were seen as a good way to detect if the assessment was the student's work or not but the difficulty of using these with large student cohorts was also recognised. One institution used an in-person viva with the student to explore their knowledge and understanding when AM was suspected, before going down the formal process.

All those interviewed indicated that they followed an institutional process when AM was suspected. The processes were clear and often comprised a lesser penalty for a first offence, typically capping the module mark or reducing it in some way, leading up to more severe penalties for a second offence, often a resit or repeat of the module and in more serious cases, suspension of their studies or dismissal from the institution. Also, some institutions did not put the first instance of AM on the student record, but viewed it as a warning, while others did note it on the student record and all institutions did for subsequent offences.

Participants also talked about the fact that an AM investigation should be a supportive process and be viewed as a learning opportunity for the student: "*once you've detected it, you want it to be a constructive process, you want the student to come out of it, less likely to cheat in future*".

In terms of institutional processes when cheating is suspected, most staff are aware of the process and what they need to do. However, comments such as "*the degree of enthusiasm for catching people varies from colleague to colleague*" and "*so I have colleagues that just don't bother*" indicate that there is inconsistency among staff in engaging with the process. The main reasons for this seem to stem from the process itself which can be quite heavyweight and "*tedious*" often requiring various forms to be completed and attendance at a number of meetings. "*Some of the cases in my institution have gone for months, which is not really benefiting the student or the staff*". Also, there is a problem with providing evidence: "*I have submitted recordings of my vivas, and still there are some staff that think that's not good enough evidence to prove. So, it's very difficult. And that puts off many of my colleagues from even referring*". This results in some colleagues just taking matters into their own hands, for example by reducing the mark, but it was recognised that this was not desirable as it could lead to inconsistent practice.

There were several suggestions on how the AM investigation process could be improved.

- Move it within the department/faculty so that those involved in the process have the subject knowledge to understand the AM case. Currently it was felt that *“sometimes they [those hearing the AM case] don't have the subject knowledge and the students get away with it”*.
- Move to a system of referral where the onus is on the investigating officer rather than the tutor to gather the evidence. It was recognised that this could be problematic if the investigating officer is not familiar with the disciplines and specifics of the assessment process, and also it moves the staffing resource from the tutor to the investigating team but doesn't necessarily reduce the resource needed.
- Provide a lighter penalty if the student admits it upfront rather than going through the full process. This is in place already in some institutions although not all institutions support this process as they feel it can pressure the student into accepting guilt whether they are guilty or not.
- When a student is found guilty of AM on a couple of modules, it is quite probable that they cheated on other modules too, but this had not been picked up by those module tutors. It was felt by some that there should be some staff accountability put in place to explore why it had not been picked up – for example, was it due to the design of the assessment process or a reluctance by the staff team to find such cases?
- With regards to generative AI, several institutions had put in emergency regulations to deal with this but it was felt this needed to be done with care as *“there are plenty of us who want to use those tools in a constructive way in education”*, So sometimes the regulations were saying that the use of a generative AI tool was not authorised but it was felt that we should be able to let students use such tools *“in a productive way”*.

One respondent also remarked that their institution was promoting anonymous marking and that made it even harder to detect cases of AM. Another highlighted the need to focus on good student behaviour rather than the more negative aspects. Participants also highlighted that they would like to see more sharing of good practice across the sector as everyone was struggling with this issue. They also saw that CPHC could have a role here in coordinating/leading on advice and guidance, particularly some of the more discipline specific aspects of academic integrity and AM such as coding and programming.

#### 4.5 Discussion of Findings

The analysis of the results from the staff and student surveys, the student focus group and staff interviews were triangulated with each other and with the existing literature to underpin this discussion. Whilst the majority of staff had witnessed recent cases of AM, the majority of students had not. Most students also indicated they had also not witnessed specific cases of contract cheating, collusion and falsification This result may be due to the fact that more honest students self-

selected to complete the survey as potentially the more 'dishonest' students may have felt less comfortable in completing it. Also, students may have limited knowledge of other students compared to staff who teach on multiple programmes and modules. But these reasons are speculative, and the study did not collect any evidence that could support them. Although staff recognise the different types of AM such as collusion and contract cheating, together with the students, they often tended to focus on AM as a whole rather than particular considerations for each type of AM. This is reflected in the following discussion.

Despite the differences in their experiences of AM, it is clear that both students and staff recognise that AM is a serious issue in computing departments in UK universities and that it can adversely affect academic standards. Study participants recognise that this reflects badly on both the student and their university, and also affects their peers, when they see students 'getting away' with it.

#### **4.5.1 Responses to the Research Questions**

The research questions have been used to frame the main discussion for this study.

##### ***RQ1: Which are the factors that lead students to cheat and engage in AM?***

This study, in line with earlier studies (Makarova, 2019; Eaton et al., 2019; Parnter, 2020) highlights the number and complexity of factors that can lead computing students to cheat and engage in AM. Staff and students identify similar reasons though with different emphasis. Whilst both highlight a lack of time management by the student to complete assessed work, the students particularly emphasised a lack of understanding and lack of confidence around the subject, assessed work and what constitutes AM together with a lack of guidance/support from staff and/or poor teaching. Staff particularly emphasised that students often viewed it as an easy option and/or that they would not get caught. Staff also highlighted that students have various reasons for being on their programme of study, and some are looking to achieve the qualification but may not necessarily want to learn in the process. The importance of individual student motivation aligns with findings from previous studies (Murdoch and Anderman, 2006; Markarova, 2019).

Both staff and students highlighted that essay mills and similar services were on the increase and were using social media to target students from the outset of their studies. They also noted that the recent growth in generative AI and associated tools was causing some confusion for both staff and students over what was acceptable academic practice or not. Data from the staff interviews also highlighted that generative AI tools particularly in relation to programming, have the potential to change the computing curriculum, enabling more complex and higher levels of abstraction to be introduced.

Staff also highlighted that they felt the majority of students were honest and "well behaved" and this resonates with the findings from the student survey where over 90% of the students indicated they had been honest or fairly honest in completing the survey. It should be noted that this is self-reported data.

##### ***RQ2: How are UK computing departments and their institutions addressing student cheating?***

The majority of students and staff felt that their university had clear and helpful guidance on what constituted AM. However, over a third of students from this study felt that the penalties on AM were too severe, with less than 20% agreeing they were about right. This may also link to some comments concerning the high fees they pay and a feeling that this gives them some sort of 'entitlement'. In contrast, 50% of the staff surveyed thought that the penalties for AM were about right with a significant proportion feeling the penalties at their institution were too lenient. So, there are noticeable differences between the student and staff perspective on the severity of AM penalty systems although it should also be noted that the student responses are based at one institution and may not be indicative of the student responses across multiple institutions.

In terms of providing student guidance and support on academic integrity and how to avoid AM, most institutions provided a short course or induction sessions to students at the institutional level. Several staff felt that this could be quite generic and not always tailored sufficiently to the type of assessments found in the computing discipline. At departmental level, the level and type of guidance and support to students varied, from specific training to more ad-hoc arrangements provided by individual module and/or programme teams. Students also felt that extension requests could be helpful in preventing AM particularly for students who were running out of time to complete their assessment work.

The approaches to training and guidance for staff on academic integrity and AM was also quite mixed across those surveyed. Some institutions provided guidance at both university and departmental levels. However, it was often optional and at departmental level was reliant on particular colleagues to 'champion' this rather than it being more formally embedded within mainstream academic activities.

***RQ3: What are the key challenges for academics and their computing departments in tackling student cheating and cases of AM?***

A significant challenge is the inconsistent approach taken by academic staff in computing departments to detect and report instances of AM. This inconsistency arises because there is no incentive for a member of academic staff to identify student cases of AM. In some institutions, there may even be disincentives for reporting such incidents. This is because there is a concern that identifying instances of AM can potentially reduce student pass rates, negatively impact student retention and average module grades, all of which institutions often keen to avoid. In addition, when a member of staff detects a potential case of AM, they need to provide the evidence and this together with the AM process can be quite time consuming and adds a further administrative burden to their current workload. With the use of generative AI and essay mills, it is also harder to provide the required level of evidence to 'prove' a case of AM. As a result, some staff are not formally raising cases of student AM at their institution. Instead, they are dealing with them at a local level, often reducing marks and viewing them as cases of poor academic practice. This issue has not been particularly highlighted in the previous research literature but emerged particularly from the staff data analyses for this study. The use of generative AI tools and the proliferation of essay mill providers and similar services in recent years is also seen as a challenge. These provide much easier and cheaper opportunities for students to be dishonest. The resulting assignments

are also of good quality. This aligns with research by Manoharan and Speidel (2020) and Manoharan's subsequent study (2023).

Further challenges were highlighted by academic staff particularly in being able to change modules and their assessment approach in a timely manner. Institutions often have long lead times, up to a year or more, for making a change to a module and getting it approved and ready for delivery. This means it can be difficult for staff to respond to emerging trends such as ChatGPT in a timely manner.

There was also a view that some students, and it was generally felt this was a minority, have a "*low moral compass*" and will try to cheat no matter what the institution, staff and other students do. This is really challenging and can only be dealt with by designing assessments that are difficult to cheat on and/or being able to detect when cheating occurs.

Students in particular raised the challenge of understanding the assessment requirements including what was acceptable academic practice. This is particularly an issue now with the emergence of generative AI tools and their widespread use across society.

Finally, there are indications that automatic AM detection tools such as Turnitin are struggling to keep up with the developments in generative AI and contract cheating. Additionally, there are now tools that students can use to 'fool' Turnitin, so these tools are no longer reliable indicators of potential AM cases.

Anonymous marking was also raised by staff as although it helps with consistency of marking, it may make it more difficult to detect potential cases of AM, particularly where staff know the student's capabilities and can look for a mismatch between this and their submitted work.

#### ***RQ4: What effective practices can be shared to improve academic integrity across computing departments?***

Both staff and students were keen to stress the need to encourage honesty and good academic practice among both staff and students. Students particularly highlighted the need to emphasise the benefits of being honest and being engaged with their learning and that students need to take responsibility here. This aligns with the findings from Maio and Dixon (p6, 2022) about the need to "*promote and maintain a culture of academic integrity*".

To encourage student engagement, students suggested that attendance should be monitored closely and that attendance levels could contribute to the final grade. Staff discussed the need to link student learning to their future careers, highlighting the need to be competent so they could perform well at interviews and during the recruitment process. They also outlined that bringing in former graduates could provide a good incentive for students to engage in their learning.

Students were particularly keen to emphasise the need to provide clear and effective guidance and support around each assessment. They discussed staff being clear about what is expected and that sample assessments were helpful. Staff highlighted that drop-in sessions to support assessment practice were also beneficial and helped clarify expectations with students.

On training and guidance around good academic practice and prevention of AM, staff indicated that although university wide approaches were useful, it was also



beneficial to provide more tailored support at department and module level. The example was provided of programming type assignments where generative AI and other digital tools could be used inadvertently by students in a way that would not be regarded as acceptable practice by the academic team. So, staff needed to be very clear about what was acceptable practice and what was not. Training and guidance should be provided to both staff and students.

Students were particularly keen to emphasise the need for academic staff to teach well and be friendly and approachable and respond to assessment queries in a timely way. This would help students get the support they need and ensure they felt comfortable raising any queries they have. This in turn, should help reduce levels of anxiety, stress and/or desperation in regard to their assessment work.

There was recognition among staff and students that the design of assessments can help prevent cases of AM. However, there were mixed views on what this approach should be in practice, with some staff and students advocating for more exams, and other staff and students recognising some of the pedagogic issues, particularly with closed exams. Staff were generally more positive about the need to use good assessment design that could help prevent cheating but also meets the learning outcomes and provides an effective learning opportunity. Importantly, assessments should not just be designed to prevent AM. Individual vivas/demos/walkthroughs, staged assessment and individualised assessments were all provided as examples of effective assessment design.

One institution was also exploring the use of programme rather than module level assessments. This was aimed at reducing the overall number of assessments on staff and students each year. It also enables a holistic programme level approach where students are assessed on programme learning outcomes rather than individual module learning outcomes. This can then lead to adoption of a more individualised approach for each student, for example, individual vivas, to evaluate their levels of knowledge and understanding across modules, and through this further reduce the potential for cheating.

Students felt that a sympathetic approach to extensions and deferrals could also be helpful and prevent students from engaging in AM due to a 'lack of time'. It was also felt that the AM investigation process itself should be supportive and a learning process for the student rather than being just punitive.

Students were also keen to highlight that this was a sector-wide issue and that more help and guidance could be done at national level by government and other bodies to tackle this, including preventing essay mill and other service providers, and in providing guidance and support to students, staff and their institutions.

#### *4.5.2 Other Points of Discussion*

The inclusion of two students as researchers on the team was found to be beneficial. They helped determine the most appropriate way to engage with the student body and were also able to advise on how to phrase questions in a more accessible and student-friendly format. The student researchers also delivered the student focus group ensuring that this was a 'safe' student space for the participants where they could talk 'freely' about their own experiences, knowing no academic staff were present.

## 5 Key Recommendations and Conclusions

The results, analysis and discussion from this study confirm that academic integrity and its counterpart AM remains a complex and relevant issue today that requires a coordinated and holistic approach to tackle it. Each department and their staff need to work closely with the student body, university and the wider sector to promote honesty and high levels of academic integrity. This aligns with other recent studies (Sindre and Haugset, 2022; Mahmud and Ali, 2023). As highlighted through the recent emergence of generative AI tools and the persistent targeting of students by essay mill providers, it is essential that computing departments and their staff recognise the need and have the conditions in place to evolve and adapt to ongoing changes in the sector and wider society, working in partnership with their students. Future changes should also consider the nuances of each discipline, drawing on subject experts to inform the approach.

It is also clear that the emphasis should continue to shift towards encouraging and rewarding honest behaviour from students and staff. Although this should help limit the cases of cheating, there still needs to be processes and support in place to detect cheating and deal with it in a supportive and fair manner.

### 5.1 Key Recommendations

This report concludes with the following key recommendations for promoting good academic practice and integrity and mitigating against AM. Each is accompanied by one or more examples drawn from the participant data to demonstrate what could be done in practice.

**Promote Student Engagement and Honesty.** Encourage honesty and foster high levels of academic integrity among students by engaging them in their programme of study to create both ‘a sense of belonging’ and the motivation to learn. When students want to learn, they are more likely to demonstrate good academic practice.

**Practical Example:** Bring in former graduates to talk about their experiences, particularly the need to demonstrate their skills and understanding to their employers, so that students can see that university is not just about the qualification but also the learning they have acquired.

**Provide Effective Assessment Design and Delivery.** Design assessments that reduce the opportunity, or make it very difficult, for students to cheat, whilst still ensuring they provide an effective learning experience. Ensure that when assessments are given out to students, staff explain what is expected and provide clear guidance on what is acceptable practice, particularly relating to generative AI and other digital tools.

**Practical Example:** Use a viva or walkthrough to show that the students understand their assessed work and can demonstrate they have developed it themselves.

**Practical Example 2:** Emphasise the process rather than the end product, requiring students to submit evidence to demonstrate this, such as timestamped entries on a work log.

**Practical Example 3:** Provide exemplar assessments to students to help them understand what is required.

**Deliver High Quality Teaching and Support:** Ensure that academic staff are providing good quality teaching. Also ensure that staff are friendly and approachable and respond to student queries in a responsive and timely manner. This helps students understand the topics and the assessment itself.

**Practical Example 1:** Provide a drop-in session for students to provide further assessment support and guidance.

**Practical Example 2:** Provide continuous professional development opportunities for staff on effective pedagogical practice to ensure they can deliver a high-quality learning experience for their students.

**Ensure Professional Staff Attitude and Development:** Set expectations that staff should be honest and act with the highest level of academic integrity. This also includes ensuring that all staff are vigilant, consistent and in line with university guidance in terms of detecting and following up cases of AM, and that effective training and development is in place to support staff including dealing with discipline specific AM.

**Practical Example 1:** Share anonymised examples of student assessment and AM with staff to help them provide a more consistent approach to AM detection.

**Practical Example 2:** Provide ongoing training and support to staff at departmental level around academic integrity and approaches to reduce cheating.

**Design Student Friendly Guidance and Support on Academic Integrity:** Plan and develop academic integrity resources, training, support and guidance that is student friendly, to ensure that all students are aware of what constitutes good academic practice and what might be construed as AM. This also should address discipline-specific needs.

**Practical Example 1:** Co-design academic integrity resources and training with students to ensure they are accessible and student friendly – see also Lancaster (2023).

**Practical Example 2:** Provide module or individual assessment-based guidance for students on acceptable academic practice including permitted use of generative AI tools.

**Develop Effective University Processes and Systems:** Universities should review their approach to both the prevention and detection of AM to be clear and supportive for both students and staff, with the emphasis on prevention rather

than detection. Processes and systems should also be responsive to current and emerging situations such as the growth of generative AI and the aggressive targeting of students by essay mill providers. Processes and systems also need to be sensitive to the nuances of different subject disciplines, and the AM process itself should be seen as supportive and a learning opportunity for students rather than punitive.

**Practical Example 1:** Ensure that subject areas are consulted when developing good academic practice and AM guidance.

**Share Good practice across the Sector:** National bodies such as CPHC should take a leading role to share good practice across the sector. They should also be responsive to the challenges arising from emerging trends and changes such as generative AI. This would help computing staff and their departments and institutions to also be responsive and address such challenges in a timely manner.

## 5.2 Limitations

This study has a number of limitations. The researchers are aware of the relatively low survey response rate for both the student and staff survey. Also, the student survey and focus group was based on one department at one institution whereas the staff survey and interviews were across institutions. All the data is self-reported data. The level of AM reported here by students is much lower than in earlier studies and may reflect the type of student that decided to engage with the survey.

## 5.3 Future Work

It would be useful to repeat the student survey and focus groups across multiple institutions to see if similar results arise. It would also be useful to see whether it is possible to quantify the level and types of AM occurring at different institutions potentially via CPHC or another national body, whilst recognising the difficulties of sharing this data in practice. There is also the opportunity to share the good practice that has been highlighted by participants in this study and to evaluate its effectiveness in different situations and across institutions.

## 5.4 Conclusions

This study investigated the student perceptions at one university and the staff perceptions across multiple HE institutions on academic integrity and AM. Both staff and students indicated good awareness of the effect of AM on themselves and their institution. They also generally felt the guidance on good academic practice was clear and helpful although students felt the penalties were generally too severe whereas staff leaned towards viewing them as more lenient. Students wanted to see more guidance on what constitutes acceptable and unacceptable academic practice, and also emphasised the need for good levels of teaching and support for both the subject content and good academic practice and AM. Staff emphasis differed and

focused more on individual student motivations and opportunities to cheat. With the emergence of generative AI and commercial provision of contract cheating services, the emphasis needs to continue to move towards preventing students from cheating rather than on detecting when it has occurred. It is also important to encourage ethical behaviour among both students and staff. Staff, students and their departments and institutions need to work together to address this ongoing challenge and provide a high-quality ethical learning experience.

*“it’s a question of fairness”.*

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## *Appendix A: Student Survey Questions*

The student survey was conducted by Oguna and Oruche with the questions designed by Oguna, Oruche and Strachan.

Survey Questions, provided online via Google Forms:

### **THEME: Your Opinion on Academic Misconduct**

1. Do you think that academic misconduct is a serious issue in universities today?  
ANSWER: 5 item Likert scale from Strongly Agree to Strongly Disagree
2. Do you think that academic misconduct affects academic standards?  
ANSWER: Yes/No
3. Please give a brief explanation of your view on how academic misconduct may or may not affect academic standards.  
OPEN ANSWER
4. What do you think are the main reasons that students commit academic misconduct?  
ANSWER: Tick all that applies from (1) Lack of confidence about the assignment (2) Lack of time (3) Lack of understanding about the assignment (4) Because they feel they will not get caught (5) It's an easy option (6) The subject has not been taught well (7) Any other reason – open text option.

### **THEME: Approach at your University**

5. Does the university clearly define what actions are considered to be academic misconduct by students? (Please select your level of agreement)  
ANSWER: 5 item Likert scale from Strongly Agree to Strongly Disagree
6. Do you feel the university deals appropriately with cases of academic misconduct?  
ANSWER: Yes/Sometimes/No/No Opinion/Don't know
7. What do you think about the penalties the university can impose for cases of academic misconduct?  
ANSWER: 5 item Likert scale from Very Lenient to Very Severe plus option of No Opinion/Don't Know
8. How helpful do you think the current university's guidance/information is on academic misconduct.  
ANSWER: Select from Very helpful, Somewhat helpful, Not helpful, Have not used it, Unaware of it.

### **THEME: Contract Cheating, Collusion and Falsification**

9. Do you know of anyone that has cheated during their studies at the university? ANSWER: Select from Yes I saw this recently, Yes I have but it was a long time ago, No I have never seen this.
10. Have you or anyone you know ever paid for services to complete an assignment or part of an assignment for you (known as **contract cheating**)?  
ANSWER: Yes/No
11. If you have experience of contract cheating, please outline below the main reasons why you think students do this.

OPEN ANSWER

12. Have you or anyone you know ever worked with other students to complete an assessment that should have been completed individually (known as **collusion**)?

ANSWER: Yes/No

13. If you have experience of collusion, please outline below the main reasons why you think students do this.

OPEN ANSWER

14. Have you or anyone you know ever falsified information (including data/results) for an assignment (known as **falsification**)?

ANSWER: Yes/No

15. If you have experience of falsification, please outline below the main reasons why you think students do this.

OPEN ANSWER

**THEME: Your own Experience and Perspectives on Preventing Academic Misconduct/Cheating**

16. What do you think currently helps prevent students from cheating?

OPEN ANSWER

17. What do you think the university and programme team could do to help prevent students cheating in the future?

OPEN ANSWER

18. What do you think you could do, if anything, to help prevent students cheating now or in the future?

OPEN ANSWER

**THEME: Concluding Questions**

19. Is there any other feedback you would like to provide?

OPEN ANSWER

20. Overall, how honest would you say you were in answering this survey?

ANSWER: Select from Not at all honest, Not very honest, Fairly honest, Completely honest.

Students were also asked if they were willing to take part in a follow up interview and asked to provide their email address, if that was the case.

## *Appendix B: Student Focus Group Plan*

The focus group was conducted in a face-to-face setting by Oguna and Oruche with the focus group guide and initial questions designed by Oguna and Oruche.

These are the outlined areas of focus and initial questions for the focus group, enabling follow up questions to be asked during the focus group itself to provide further insights/clarification where this was felt necessary. Care was taken to ensure each participant was invited to contribute to each question but also that they could refrain if they did not want to contribute anything.

### **(1) The Student's Opinion on AM (including collusion/falsification/contract cheating) and why it occurs.**

Participants were asked about their experience of AM (including collusion/falsification/contract cheating) and why it occurs.

### **(2) The Student's Perspective on the University Approach to AM**

Participants were asked about their perspective on the current university approaches to AM but also what else could be done to improve this.

### **(3) The Student's Opinion on Promoting Academic Integrity and Preventing AM**

Participants were asked about what could be done to promote academic integrity and prevent AM among students, including a discussion on assessment design.

## *Appendix C: Staff Survey Questions*

The staff survey was conducted by Strachan with the questions designed by Oguna, Oruche and Strachan.

Survey Questions, provided online via Google Forms:

### **THEME: Your Opinion on Academic Misconduct**

1. Do you think that academic misconduct is a serious issue in universities today?  
ANSWER: 5 item Likert scale from Strongly Agree to Strongly Disagree
2. Do you think that academic misconduct affects academic standards?  
ANSWER: Yes/No
3. Please give a brief explanation of your view on how academic misconduct may or may not affect academic standards.  
OPEN ANSWER
4. With regard to your own institution and department, what do you think are the main reasons that students commit academic misconduct?  
ANSWER: Tick all that applies from (1) Lack of confidence about the assignment (2) Lack of time (3) Lack of understanding about the assignment (4) Because they feel they will not get caught (5) It's an easy option (6) The subject has not been taught well (7) Any other reason – open text option.

### **THEME: Approach at your University**

5. Does the university clearly define what actions are considered to be academic misconduct by students? (Please select your level of agreement)  
ANSWER: 5 item Likert scale from Strongly Agree to Strongly Disagree
6. Do you feel the university deals appropriately with cases of academic misconduct?  
ANSWER: Yes/Sometimes/No/No Opinion/Don't know
7. What do you think about the penalties the university can impose for cases of academic misconduct?  
ANSWER: 5 item Likert scale form Very Lenient to Very Severe plus option of No Opinion/Don't Know
8. How helpful do you think the current university's guidance/information is on academic misconduct.  
ANSWER: Select from Very helpful, Somewhat helpful, Not helpful, Have not used it, Unaware of it.

### **THEME: Contract Cheating, Collusion and Falsification**

9. Do you know of anyone that has cheated during their studies at the university? ANSWER: Select from Yes I saw this recently, Yes I have but it was a long time ago, No I have never seen this.
10. Have you experienced the situation when a student has paid for services to complete a university assignment or part of an assignment (known as **contract cheating**)?  
ANSWER: Yes/No

11. If you have experience of contract cheating, please outline below the main reasons why you think students do this.

OPEN ANSWER

12. Have you experienced the situation when students have worked with other students to complete an assessment that should have been completed individually (known as **collusion**)?

ANSWER: Yes/No

13. If you have experience of collusion, please outline below the main reasons why you think students do this.

OPEN ANSWER

14. Have you experienced a student falsifying information (including data/results) for an assignment (known as **falsification**)?

ANSWER: Yes/No

15. If you have experience of falsification, please outline below the main reasons why you think students do this.

OPEN ANSWER

**THEME: Your own University Experience and Perspectives on Preventing Academic Misconduct/Cheating**

16. What do you think currently helps prevent students from cheating?

OPEN ANSWER

17. What do you think your university and programme team could do to help prevent students cheating in the future?

OPEN ANSWER

18. What do you think you could do, if anything, to help prevent students cheating now or in the future?

OPEN ANSWER

19. GOOD PRACTICE: we are also interested in finding out about examples of good practice. Do you have any you could share with us and the wider CPHC community?

Yes/No with OPEN ANSWER for those answering Yes.

**THEME: Concluding Questions**

20. Is there any other feedback you would like to provide?

OPEN ANSWER

Participants were also asked if they were willing to take part in a follow up interview and asked to provide their email address, if that was the case.

## *Appendix D: Staff Semi-Structured Interview Guide*

These interviews were conducted by Strachan, with the interview guide and initial questions designed by Strachan and Anderson.

Here are the outlined areas of focus and initial questions for the semi-structured interviews, enabling follow up questions to be asked during the interview process itself to provide further insights/clarification where this was felt necessary.

Interview Questions (conducted online via Microsoft Teams):

### **THEME: ASSESSMENT DESIGN**

1. There are several ways to address academic misconduct and encourage good academic practice. One way is through assessment design. Do you have departmental and/or university guidance around assessment design particularly in regard to promoting good academic practice and/or helping to address/avoid academic misconduct?
2. Do you have any examples of assessment design that you think are particularly effective (and would you be willing to share these with the CPHC community?)

### **THEME: EDUCATION OF STUDENTS**

1. What does your institution/department have in place for educating students about good academic practice/avoiding academic misconduct? And do you think it is effective?
2. Do you think there is anything else your institution/CPHC could be doing with regard to student education about good academic practice?
3. Is there any good practice you would be willing to share with the CPHC community?

### **THEME: MOTIVATION AND ENGAGEMENT OF STUDENTS**

1. Much of the research indicates that there are a variety of reasons that can motivate students to cheat/conduct academic misconduct such as lack of understanding, lack of time, it's cheap and most people get away with it. Is there anything your institution/department is doing to reduce these motivations?
2. Is there any good practice you would be willing to share with the CPHC community?
3. Research is starting to indicate that students that are less engaged in their studies are also more likely to commit academic misconduct. Is there anything particularly effective that you are doing as a department/institution to engage students in their programmes/studies?
4. Is there any good practice you would be willing to share with the CPHC community?

### **THEME: INSTITUTIONAL PRACTICE AND POLICY**

1. University policies and practice seems to vary across the sector. What do you think is the ideal process here that should be in place? (to both instil good academic practice but then also identify and deal with Academic misconduct when it happens).
2. Are there any barriers to putting these processes in place?

### **THEME: STAFF DEVELOPMENT AND APPROACH**

1. In your own department, do you think there is consistency in reporting and handling academic misconduct across all of your staff?

2. What do you do in terms of staff development, awareness, training and sharing of good practice around academic misconduct?
3. Is there any good practice you would be willing to share with the wider CPHC community?