Contract cheating and assessment design: exploring the connection

Final report 2019

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https://cheatingandassessment.edu.au/
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# List of acronyms used

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADKAR</td>
<td>Awareness, Desire, Knowledge, Ability, Reinforcement</td>
</tr>
<tr>
<td>CCAD</td>
<td>Contract Cheating and Assessment Design project</td>
</tr>
<tr>
<td>EAL</td>
<td>English as an Additional Language</td>
</tr>
<tr>
<td>FoE</td>
<td>Field of Education</td>
</tr>
<tr>
<td>Go8</td>
<td>Group of Eight (Australian universities)</td>
</tr>
<tr>
<td>HE</td>
<td>Higher Education</td>
</tr>
<tr>
<td>LOTE</td>
<td>Language Other than English</td>
</tr>
<tr>
<td>NUHEP</td>
<td>non-university higher education provider</td>
</tr>
<tr>
<td>OLT</td>
<td>Office for Learning and Teaching</td>
</tr>
<tr>
<td>RSS</td>
<td>Rich Site Summary</td>
</tr>
<tr>
<td>SET</td>
<td>Student Evaluation of Teaching</td>
</tr>
<tr>
<td>SOLO</td>
<td>Structure of Observed Learning outcome</td>
</tr>
<tr>
<td>TEQSA</td>
<td>Tertiary Education Quality and Standards Agency</td>
</tr>
<tr>
<td>UniSA</td>
<td>University of South Australia</td>
</tr>
<tr>
<td>UNSW</td>
<td>University of New South Wales</td>
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<td>UWA</td>
<td>The University of Western Australia</td>
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Executive summary
A series of media scandals in 2015 generated significant public concern about ‘contract cheating’ in Australian higher education. Contract cheating was first described by Clarke and Lancaster in 2006, who identified that students in information technology programs in the United Kingdom were using an industry freelancing platform, RentACoder, to employ professionals to complete their assignments. As awareness of the issue has grown, contract cheating has been identified in all discipline areas. The term is now understood to describe a range of ‘outsourcing’ behaviours in which students arrange for a third party (paid or unpaid) to complete their assessed work. This is how contract cheating was defined in this project.

To support higher education providers respond to the challenge of contract cheating, the Australian Government Office for Learning and Teaching commissioned a Strategic Priority Project to explore the potential relationship between authentic assessment and academic integrity. Assessment design had been widely promoted as a solution to contract cheating by educational commentators and researchers, yet no evidence for its efficacy existed. The project also recognised that minimal data existed about the scale of the problem in Australia.

This project therefore aimed to explore how approaches to authentic assessment might be used as part of an institutional strategy for minimising contract cheating. The project’s five research questions are listed below, along with the key findings. The project gathered what is believed to be the largest and most comprehensive dataset on contract cheating in the world to date. Parallel staff and student surveys were conducted at eight universities and four non-university higher education providers (NUHEP), with responses received from over 15,000 students and 1200 staff. A large dataset of assignment purchase orders posted by students to multiple online cheat sites showed the types of assessment commonly contracted out to third parties. Additionally, data from two universities’ longitudinal academic integrity databases showed the assessment items in which purchased assignments had been detected.

The project generated the following outputs:
1. A contract cheating and assessment design framework: Based on the project findings, this framework identifies assessment design as only one part of what must be a holistic, sector-wide approach to fostering academic integrity.
2. Resources: Supporting each part of the framework, these resources build understanding and guide good practice at the sector, institution, educator and student levels.
3. An interactive and user-friendly website, which houses the framework and resources, and disseminates published research findings.
4. National (and international) workshops to disseminate findings, and pilot and refine the framework and resources. In all, 49 sessions were conducted during the life of the project.
5. Publications: To date, three papers in highly ranked international journals have been published from the data, a further two have been accepted for publication and three more are in progress.
6. A panel discussion at Plagiarism Across Europe and Beyond Conference (Czech Republic, June 2017) entitled ‘Authentic assessment and contract cheating’.
The project drew on Prosci’s ADKAR process to identify how it would facilitate sustained impact of the project. Public and sector awareness of contract cheating and the need for changed practices was achieved through a project symposium and infographics, which together ‘launched’ the research findings. Stakeholders from every Australian university were invited, and key findings were featured in numerous media outlets, including The Australian. Findings from the staff survey identified barriers and disincentives to addressing contract cheating, to enable institutions to strengthen the desire of staff to implement the project’s outcomes. The evidence-based framework provided knowledge about how to change. The nationwide workshop tour (conducted in parallel with workshops in the UK and Europe) refined the resources based on stakeholder feedback about what would be relevant and realistically achievable in a variety of contexts. This, and the identification in the data of organisational barriers to change, helped to ensure that stakeholders would have the ability to implement the recommendations. Reinforcement to sustain new practices has continued throughout the 2.5 years of the project and is ongoing, leveraging the institutional roles and networks of the project team and reference group.

In addition, evidence of broad systemic adoption of the project’s outcomes is evident in TEQSA’s development of a Guidance Note entitled Addressing contract cheating to safeguard academic integrity, which drew heavily on the project findings. TEQSA has also been funded by the federal government to draft legislation that would render the provision of cheating services illegal in Australia, an early aim and recommendation of this project. Team members’ expertise in contract cheating and assessment design is also being sought out nationally and internationally for a range of purposes.

**Research questions**

1: *How prevalent is contract cheating in Australian higher education?*

Around 6 per cent of students surveyed at universities and 7 per cent of students at NUHEPs had engaged at least once in a contract cheating behaviour. Importantly, a majority reported that it was in the context of exams and not take-home assignments such as essays or reports. This challenges a widely held belief that invigilated exams are the most secure form of assessment, and an antidote to contract cheating.

2: *What are student and staff experiences with and attitudes towards contract cheating?*

Despite the widespread availability of file-sharing sites, essay mills and commercial contract cheating services, students primarily engage in contract cheating with people they know—friends, family, and peers. Sharing academic work was reported by many as a common and useful part of their learning experience, but the evidence suggested that this can lead to cheating. These trends were different at NUHEPs, where there was a significantly higher use of professional services. This is perhaps because students’ social networks are less well established in that context.

A total of 68 per cent of university staff and 64 per cent of NUHEP staff have suspected a student of contract cheating on at least one occasion, signalled primarily by inconsistency between the submitted work and their knowledge of a student’s academic or linguistic abilities. Perhaps as a result of their personal experience, staff are quite concerned about the problem. In contrast, although most cheating and non-cheating students agree that contract
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cheating is ‘wrong’, they are generally not concerned that students engage in contract cheating in higher education. Students tend to perceive that students are only cheating themselves and will eventually be unable to progress in their studies or work.

3: What are the individual, contextual and institutional factors that are correlated with contract cheating?
In addition to the systemic factors highlighted above, contract cheating was primarily influenced by three student factors: speaking a language other than English at home (LOTE), perceptions that there were lots of opportunities to cheat, and dissatisfaction with the teaching and learning environment. Staff reported that a range of factors impact on efforts to combat contract cheating at their institutions. These include lenient penalties; inadequate teaching workload, academic integrity breach management; limited staff–student contact time and large class sizes that make it difficult to get to know students; and a performance review, reward and evaluation environment that discourages the reporting of breaches.

4: What kinds of assessments are associated with contract cheating?
Cheating (providing or receiving assistance) was most common in invigilated exams, particularly those made up of multiple-choice questions. In addition, students reported that assignments with a short turnaround time (e.g. one week to complete) and heavily weighted assignments would be most likely to prompt contract cheating. Those assignments considered to be the least likely to be outsourced were ‘reflection on practicum’, ‘in-class task’, assessment that is ‘personalised and unique’, and assessments that included a viva. In the qualitative data, students reported that group work and online quizzes were also very prone to cheating and other academic integrity issues.

5: Can authentic assessment solve the problem of contract cheating?
No. Using criteria identified in the literature, assignment purchase orders from online cheat sites, as well as substantiated cases of contract cheating from two university databases, were analysed for their authenticity. Assessment tasks with no, some, or all five of the authenticity factors investigated were outsourced and/or submitted by students. However, the research suggested that while authentic assessment cannot prevent contract cheating, highly authentic assignments may allow educators to more readily detect and/or report it when it does occur.

The main finding of the project, which formed the basis for the framework, was that contract cheating is a symptom of systemic issues in Australian higher education, and not an isolated problem in and of itself. This finding was supported by both the quantitative and qualitative data from the staff and student surveys. The data connected the problem of contract cheating to the positioning of higher education by government, to the policies and practices of universities, to the attitudes and behaviours of educators, and to characteristics and motivations of students. The project therefore advocates a systems approach to addressing contract cheating—the project logo of the nautilus exemplifies the way in which the components of the higher education system are nested within one another, as well as the relative size of the effect of each component. While educators, for example, have an important role to play in preventing contract cheating, their institutions must first do the work of establishing organisational conditions to enable change in the teaching and learning environment.
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Chapter 1: Introduction

Rationale

In 2015, a series of higher education cheating scandals were reported by the Australian media (ABC Radio National 2015; Chung 2015; Visentin 2015a, 2015b). These reports suggested that there was a potentially large and unaddressed problem of Australian university students outsourcing their assessment to third parties—a behaviour known as ‘contract cheating’. The purported escalation in students’ use of online essay mills, file-sharing sites, and online contracting platforms sparked public and sector concerns, and led to direct involvement from Australian national regulator, the Tertiary Education Quality and Standards Agency (TEQSA), which asked the universities implicated to provide reports on their investigations and responses.

Concerns about contract cheating can be situated within a broader context of global higher education disruption, one in which the social, political and economic role of universities is undergoing unprecedented change. The massification and internationalisation of higher education has led to larger and increasingly diverse student cohorts, often without corresponding growth in institutional funding. As a result, universities have progressively come to operate as commercial enterprises, with all operations—from student recruitment, retention, and graduate outcomes, to research funding, outputs and university rankings—driven by competitive strategies. Job opportunities for graduates are increasingly uncertain, threatened by disruptive technologies and fluctuating job markets, which contribute to a rise in ‘credentialism’ (Brown 2001) and more transactional and disengaged approaches to learning. A booming ‘sharing economy’,2 which facilitates the exchange of goods and services via online platforms, allows individuals to outsource almost any task, large or small, creating a shift from ‘you are what you own’ to ‘you are what you can access’ (Richardson 2015). This context represents a ‘perfect storm’ in which contract cheating can perhaps be seen as an unsurprising symptom of an ecosystem under extreme stress.

Contract cheating

Clarke and Lancaster (2006, p. 1) first coined the term ‘contract cheating’ and defined it as ‘the submission of work by students for academic credit which the students have paid contractors to write for them’. Although early identification of the issue tended to relate to assignments in computer coding, it has recently been recognised as an emerging problem in all disciplines across the higher education sector. The term ‘contract cheating’ has now evolved to encompass a cluster of practices relating to the outsourcing of students’ assessment to third parties, whether or not these entities are commercial providers (Walker & Townley 2012; see also Lancaster & Clarke 2016).

In addition to the outsourcing of assessment, we suggest that there are a range of behaviours that signal a ‘transactional’ approach to learning more generally, where education is viewed as a product to be bought, sold or traded rather than an intrinsically motivated, effortful and potentially transformative individual process. To make clear the distinction between

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1 The sections ‘Rationale’ and ‘Contract cheating’ are drawn from Bretag et al. (2018a, pp. 1–2).

2 As noted in Bretag et al. (2018a), this is also referred to as the collaborative, gig, on-demand and crowd-sourcing economy (Richardson 2015).
transactional approaches to learning and contract cheating, in this research project contract cheating was defined as:

... where a student gets someone—a third party—to complete an assignment or an exam for them. This third party might be a friend, family member, fellow student or staff member who assists the student as a favour. It might be a prewritten assignment which has been obtained from an assignment ‘mill’. The third party may also be a paid service, advertised locally or online.

Walker and Townley (2012) pointed out that cheating involving third parties is cause for significant concern, because it is potentially difficult to detect and constitutes a form of fraud. To further complicate the issue, educators have recently raised concerns about students’ propensities to outsource other aspects of learning, such as note-taking (Rogerson & Basanta 2016) and paraphrasing of text (Rogerson & McCarthy 2017). File-sharing and peer-to-peer networking sites such as ThinkSwap (www.thinksnap.com), Course Hero (www.coursehero.com) and Baidu Library (wenku.baidu.com) can be used to trade notes and other course-related materials, while paraphrasing tools such as GoParaphrase (www.goparaphrase.com) or Paraphrasing Online (www.paraphrasingonline.com) can be used to automatically supply alternative phrasing for any inputted text. These behaviours are potentially problematic because they encourage students to view notes and textual summaries as products, rather than artefacts of engagement in a learning process. Moreover, although many online sites are advertised as note-sharing platforms, in reality they are used by students to share completed assignments. There is a genuine risk that buying, selling or trading notes are the beginning of a ’slippery slope’ towards the outsourcing of graded assessment.

Research on student cheating

A significant body of research exists on why students cheat. This research has largely been generated by surveys of students (a method with recognised limitations), and common findings are that students cheat for a range of individual, contextual and situational reasons. In a recent review of the literature, Brimble (2016) identifies seven motivators for cheating. These include demographic factors (e.g., age, gender and language background, with those who speak a language other than English [LOTE] particularly vulnerable), a growing cultural acceptance of cheating, a lack of knowledge and skills among students and staff, issues with curriculum design and delivery, and situational factors such as peer culture, likelihood of detection and consequences. In addition, Brimble (2016) identifies the effect of modern life on both students and staff, which for both involves managing competing priorities, increased performance pressure, and less time and inclination to prioritise teaching and learning. Surveys of staff have also identified a range of factors that may influence student cheating.

In Walker and White’s Australian study (2014), respondents cited class sizes and the ‘impersonal nature’ of contemporary teaching models as reasons why student cheating might...
go undetected. They reported that better-trained and more-experienced lecturers often remain distant from students, while those close to them are often casual staff who are more likely to have less experience and training, be less connected to institutional culture, and not paid enough to devote time to following academic integrity procedures. This environment of anonymity is potentially compounded by the practice of anonymous marking, ostensibly established in many educational environments to reduce bias and ensure fairness. Staff also reported a tendency for appeals against breach investigations to be overturned, which undermines staff members’ faith in their institutional processes (Walker & White 2014).

Findings from Sattler, Wiegel and van Veen’s German study (2017) also suggested that large class sizes were problematic, along with staff awareness of detection methods and management processes. MacGregor and Stuebs (2012) found that students were more likely to engage in cheating if they perceived that their educator did not care about them, concluding that students’ ethical decision-making may be influenced by the extent to which they have a personal relationship with their educator. Similarly, Beasley (2014) found that students were more likely to cheat if they perceived that staff had a lack of care for individual students, their learning and their success. Simkin and McLeod (2010, p. 450) also found that cheating was deterred by student and staff connections, particularly ‘the presence of a moral anchor in a faculty member whose opinion mattered’ to the student.

**Proposed approaches to managing academic integrity**

Multi-pronged and holistic approaches have been widely recommended to address academic integrity, whereby responsibilities are explicit and shared by students and staff across an institution (Bretag 2013; Morris & Carroll 2016). Responsibilities include establishing principles, policies and processes (Bretag et al. 2011; Walker & White 2014), mapping program curricula to develop a sequential schedule of assessment that scaffolds skills (Walker & White 2014), designing assessment and course curricula to minimise opportunities and reasons to take shortcuts (Morris 2016; Newton & Lang 2016; Walker & Townley 2012;), teaching academic integrity and academic practice (Cheung et al. 2016; Henderson & Whitelaw 2013; Morris 2016; Sutherland-Smith 2010), and managing breaches (e.g., enforcing rules, detecting and referring suspected cases) (Walker & White 2014). However, many of the recommendations for improving teaching practice to minimise cheating are based on experience and educational ‘common sense’ rather than empirical evidence that clearly demonstrates efficacy.

In any approach to academic integrity, the fundamental role of teaching staff is evident. While holistic approaches may be overseen and supported by a range of university staff, most rely on teaching staff for their implementation. Although teaching staff consider contract cheating to be a very serious ethical and moral matter (Sattler, Wiegel, & van Veen 2017), a range of factors influence the extent to which they actually implement their institution’s strategies for preventing and managing breaches of integrity. Staff may perceive that responsibility ultimately lies elsewhere (e.g., with the student) (Walker & White 2014), or they may be generally uninformed about academic integrity matters, lacking awareness or knowledge about what role they can play (Ransome & Newton 2017). A large German study of over 1400 staff at four institutions found that staff practices were primarily based on three factors: the time and workload involved, compared to the likelihood of reward; the perceived efficacy of suggested methods; and behavioural expectations of other staff and students in their context.
In this context, contract cheating presents new challenges because it is not clear how ‘detectable’ it is to teaching and marking staff. Research by Dawson and Sutherland-Smith (2017) found that markers identified 62 per cent of contract cheating cases when they were advised to specifically look for it; however, Lines (2016) found that when markers were unaware of the possible presence of contract cheating, none was detected. Even when cases are detected, teaching staff are concerned that it may be difficult to ‘prove’ (Walker & Townley 2012). The complexity of the problem, combined with a variety of perceived barriers or disincentives to tackle it, mean that many staff may simply ignore it altogether (Coren 2011; McCabe 2005).

**Authentic assessment**

As part of a holistic response to improving academic integrity, assessment design has been widely promoted as critical for minimising contract cheating in higher education (see for example, International Center for Academic Integrity (ICAI) 2016; Newton & Lang 2016). A greater emphasis on invigilated (proctored) assessments, such as traditional examinations, has been proposed by some as a logical response (Lancaster 2014; Lines 2016). However, there are educational settings that rely heavily on examinations as the main assessment method, and yet cheating still remains problematic, even rife, as students make use of technological devices and impersonation (Lancaster 2017).

Bloxham and Boyd (2007) recommend nine assessment strategies to minimise plagiarism, and there has been an assumption that these may also be useful to address contract cheating. These include changing assessment tasks regularly, spreading assessment across a sequence of nested tasks (including drafts), drawing on recent events, and including students’ personal experiences and reflection. Echoing this, many academic integrity researchers have argued that the best forms of assessment are original, sequential and personalised (Bertram Gallant 2008; Bretag et al. 2014; Carroll & Appleton 2001). Despite widespread agreement that this is good practice, recent research on contract cheating shows that tasks such as these can still be easily purchased online (Newton and Lang 2016; Rozenberg and van Haeringen 2017; Wallace & Newton 2014).

More recently, authentic assessment has been heralded as a potential solution to contract cheating (ICAI 2016). Authentic assessment commonly describes a task that engages students in real world scenarios or problems. It developed as an alternative to traditional standardised testing (e.g., examinations), with early advocates (Newmann & Archbald 1992; Wiggins 1990) aiming to improve assessment of higher-order skills such as application, problem-solving and critical thinking through tasks that are realistic, contextualised, integrated, and relevant to the kinds of complex challenges that students would face after graduation. However, while authenticity has long been recognised as a feature of good assessment design (Gulikers et al. 2004; Herrington & Herrington 2006, 2007; Newmann & Archbald 1992; Wiggins 1990, 2011), its role in nurturing academic integrity had not been adequately explored, prior to the work conducted as part of this OLT research project.
Chapter 2: Methodology

In the context of widespread concerns about the proliferation of online file-sharing sites and commercial assignment writing services, the Contract Cheating and Assessment Design project sought to investigate the prevalence and nature of contract cheating and other outsourcing behaviours, and understand the individual, contextual and institutional factors that may influence these behaviours. Data were collected in three phases as outlined below.

Student and teaching staff surveys (Data Source 1)

Two parallel surveys, one for students and one for educators, were conducted at eight universities and four NUHEPs across Australia. The rapid growth of NUHEPs in Australia has been the subject of some public concern, particularly in relation to the challenges of maintaining academic standards (Community Colleges Australia 2017). In the context of global concerns about contract cheating in the higher education sector, it was important to understand the extent of contract cheating at NUHEPs and to compare NUHEP data to existing data about contract cheating at Australian universities (Bretag et al. 2018a, 2018b; Bretag et al. 2019, forthcoming; Harper et al. 2018).

The full survey instruments are available on the project website. The surveys were constructed online using Qualtrics. Together, the parallel surveys were designed to explore staff and student experiences with and attitudes towards a range of outsourcing behaviours, and the individual, contextual and institutional factors that may contribute to these behaviours. Initial ethics approval was obtained from the lead institution and the survey was piloted at one institution, before final ethics approval was secured for the updated survey. After gaining consent from senior managers at each participating institution, a link to the online survey was distributed and promoted through staff email systems. A convenience sampling method was used, as it was not possible to coordinate a random sampling method at all institutions within the time constraints of the project. The survey was conducted between October and December 2016. Data were analysed in SPSS using descriptive statistics, cross-tabulations and factor analysis to explore relationships between items.

Given the paucity of empirical research on contract cheating, and the various ways that it has been defined in the literature, there were no established survey instruments available on which to base our items. The survey was therefore developed based on the currently available literature on contract cheating and teaching and learning, and the expertise of the research team and reference group. As shown in Figure 1, we conceptualised an ‘Outsourcing Spectrum’ of seven distinct behaviours, ranging from sharing notes through to exam impersonation, and these provided the basis of the survey questions. The first two behaviours reflect transactional approaches to learning, but do not (or may not) constitute cheating and were therefore labelled ‘sharing behaviours’, while behaviours three to seven are unequivocal ‘cheating’ behaviours. The survey did not indicate to respondents whether any of these behaviours were considered to be cheating, but for the purpose of analysis ‘buying, selling or trading notes’ and ‘providing others with a completed assignment (for any reason)’ were classified as ‘sharing’ behaviours, while the remaining five behaviours were classified as ‘contract cheating’. Survey questions posed to staff in the parallel staff survey were phrased to

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6 The Methodology section in this report is drawn from the project’s key publications (Bretag et al. 2018a; Bretag et al. 2018b; Harper et al. 2018) and (Bretag et al. 2019, forthcoming)

7 The full surveys can be found at https://cheatingandassessment.edu.au/resources-index
allow responses from staff in a range of teaching roles, including casual tutors, lecturers and subject coordinators. The questions used either nominal or ordinal scales (five-point Likert scales), with the exception of a single open-response item. Qualitative data from the surveys is in the process of being analysed and will be published separately in due course.

<table>
<thead>
<tr>
<th>Buying, selling or trading notes</th>
<th>Providing a completed assignment (for any reason)</th>
<th>Obtaining a completed assignment (to submit as one’s own)</th>
<th>Providing exam assistance</th>
<th>Receiving exam assistance</th>
<th>Taking an exam for another</th>
<th>Arranging for another to take one’s exam</th>
</tr>
</thead>
</table>

**Figure 1. Outsourcing spectrum (from Bretag et al. 2018a & 2018b)**

**Assignment orders (Data Source 2)**

This dataset consisted of a random selection of ‘assignment orders’ placed by students on academic custom writing sites. As noted elsewhere, some academic custom writing sites publish rich site summary (RSS) feeds that contain information relating to orders that have been placed by students (Ellis, Zucker & Randall, 2018). RSS feeds are public and designed to be aggregated and stored. Data in RSS feeds published from 85 academic custom writing sites were collected from 1 October to 30 November 2016, using Vienna software. In that time period 111,958 items were collected.

It can be stated with some confidence that someone, most likely a student, had ordered work to be done for them by someone else with the reasonable expectation that the order would be completed. Furthermore, while it can be assumed that each order had been placed by a student, it was not possible to know who they were, at which institution they were studying, why they had placed the order or how much it had cost. Nor was it possible to know if the order had been filled or if they were subsequently submitted to an educational institution as the student’s own work. The international nature of the academic custom writing industry means that those who made the orders could have been high school, undergraduate or postgraduate students studying at institutions anywhere in the world. A random sample of 250 items was selected for close analysis. Prior to coding, 29 orders were identified as unable to be coded. Therefore, Data Source 2 contained 221 items that were analysed using an authenticity coding framework (see Table 1), based on the work of Iverson, Lewis and Talbot (2008) and Bosco and Ferns (2014).

**Contract Cheating Breach Reports (Data Source 3)**

This dataset contained 235 assessments in which contract cheating was identified at one Australian university between semester 2, 2013 and semester 2, 2016 (inclusive). Of these assessments, 37 were identified as unable to be coded for authenticity. The remaining dataset

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8 The section ‘Assignment Orders (Data Source 2)’ and ‘Coding process (Data Sources 2 and 3)’ are drawn from Ellis et al. (2019, forthcoming).
9 Predominantly undergraduate student load enrolled in FoEs 1–10.
therefore contained 198 assessments. These included 30 assessments that had been outsourced to paid commercial providers (‘paid contact cheating’) and 168 assessments that had written by family, friends or other students (‘unpaid contract cheating’). The information for each assessment included the assessment type (e.g., written assignment, oral presentation, technical or professional piece, reflective journal, observations or records of professional practice, etc.) and description of the task (e.g., the specific task question, the learning objectives, the word length [if applicable], the percentage weighting and due date).

**Coding process (data sources 2 and 3)**
The assessments collected for data sources 2 and 3 were analysed for authenticity. The level of authenticity for each assignment was determined using the same authenticity coding framework for both datasets, based on five features commonly found in authentic assessment tasks as set out in the literature.

**Table 1. Authenticity coding framework**

<table>
<thead>
<tr>
<th>Authenticity Factor</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>Frequency in the real world</td>
<td>Task is common or fundamental to discipline, profession or workplace practice</td>
</tr>
<tr>
<td>Fidelity to the real world</td>
<td>Task reflects the conditions in which it would be done in the discipline, profession or workplace</td>
</tr>
<tr>
<td>Complexity of the real world</td>
<td>Task is not menial; involves messy, complex problems that call for inquiry-based approaches and contingent solutions</td>
</tr>
<tr>
<td>Impact on the real world</td>
<td>Task is visible beyond the course; shared, performed, delivered to or used in authentic setting</td>
</tr>
<tr>
<td>Impact on future practice</td>
<td>Task involves self-assessment; feed forward as part of a sequential set of tasks</td>
</tr>
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To determine the complexity factor, the SOLO taxonomy (Biggs 1982) was used. For an assessment task to be considered ‘complex’, alignment with a 4 or 5 on the SOLO taxonomy was required. To ensure comparability and reliability of coding, two research team members independently coded assessment tasks in both datasets, engaged in a face-to-face calibration process with all coders, and a sample from both datasets was then exchanged between team members for independent coding. Within the breach reports dataset, a number of assessment tasks feature every semester. The description of the assessment task within both datasets was evaluated against the coding framework and the absence or presence of each feature was noted. This produced an ‘authenticity score’ for each assessment task.

Before being coded according to the authenticity framework, it was necessary to know the discipline in which each assignment was undertaken. For example, the ‘real world’ context of a task for a nursing student would be expected to be different to that of a student studying finance. Sometimes the discipline was made clear (e.g., the ‘title’ field of the RSS feed contained information such as ‘anthropology’ or ‘psychology’). In others, the text field was analysed to identify the discipline. All assignment orders were also coded with Field of Education (FoE) codes. In the breach reports dataset, each assessment task was linked to a subject/unit code from which the six-digit FoE and the career level (e.g., undergraduate or postgraduate) could be derived.
Chapter 3: Findings and discussion

University students

Despite alarmist media reports to the contrary, the survey data demonstrated that a relatively small proportion of students are engaging in contract cheating. These students are referred to in the analysis and findings as the ‘cheating group’. Of the 14,086 respondents, 814 students (5.78 per cent) reported engaging in one or more of the five cheating behaviours, and of those, a very small proportion reported doing so repeatedly (see Bretag et al. 2018b). This finding supports earlier research by Scanlon and Neumann (2002) in which 6.3 per cent of students reported having ‘sometimes’ purchased a paper from an essay mill, and 2.8 per cent doing so very frequently. Curtis and Clare (2017) reported comparable findings; the percentage of students who reported engaging in contract cheating ranged from 3.5 to 7.9 per cent, and of that group 62.5 per cent did so more than once. Although these numbers are relatively small, it is still a cause for concern that some students are repeatedly engaging in cheating as a strategy for completing their studies.

Despite the widespread availability of file-sharing websites and commercial services that support cheating, students still primarily engage in outsourcing behaviours with people they know—other students, friends, and family. Students reported using professional services relatively rarely, and more commonly in cases of exam impersonation than for other cheating behaviours. Money was also exchanged infrequently, most commonly in relation to ‘taking an exam for someone else’. Perhaps this explains why cheating rates were not higher among fully online, external students; although their relative anonymity and remoteness spark concerns that they could more easily get away with cheating, their disconnection from typical, campus-based networks of peers limits their access to the most commonly used sources of outsourced material.

Although contract cheating rates remain relatively low, sharing academic work is a common part of the learning experience for many Australian students, with more than one in four students self-reporting this behaviour (see Bretag et al. 2018b). Moreover, students more frequently provide others with completed assignments than they do with notes. It remains unclear whether students are altruistically providing their completed assignments to others to assist with their learning, to serve as a ‘model’ for comparison, or recklessly providing their work to other students, knowing full well that the assignment will be submitted by that student as their own work. While this question certainly warrants further investigation, the fact that such a large proportion of students are engaging in this behaviour, as well as buying, selling and trading notes is indicative of a ‘sharing economy’ in which everyday tasks are routinely shared or outsourced (Cook 2017).

Furthermore, the data also indicated a possible relationship between these ‘sharing’ behaviours and more egregious forms of cheating. The cheating group were twice as likely as the non-cheating group to engage in both sharing behaviours, more likely to use a file-sharing website or professional service to do so, and more likely to exchange money in the process. This evidence indicates the possible adoption of more instrumental, transactional approaches to learning among the cheating group. It is unclear whether one behaviour precedes the other.

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10 The section ‘University students’ is drawn from Bretag et al. (2018a)
For example, perhaps students begin with sharing notes, prompting disengagement from components of the learning process, which in turn starts them on a ‘slippery slope’ towards disengagement from other aspects of learning, including the completion of assessment. Or it may be that students in the cheating group are more generally disengaged, and therefore more likely to outsource all aspects of their learning, including note-taking.

Importantly, our study identified individual, contextual and institutional variables that influence outsourcing behaviours. Despite a significant amount of academic integrity research, variables relating to cheating behaviour have typically been examined in isolation, thereby risking the conflation of measured variables with other underlying factors. Much of the research has previously concluded that males are more likely than females to cheat (Bertram Gallant, Binkin and Donohue 2015; Kremmer et al. 2007; Marsden et al. 2005; McCabe 2016). Studies have also pointed to higher cheating rates among student cohorts, including international students (Bertram Gallant et al. 2015; Bretag et al. 2014), business students (McCabe & Trevino 1993), and engineering students (Marsden et al. 2005; McCabe & Trevino 1993). The preliminary analysis of the descriptive statistics indicated an over-representation in the cheating group of students from certain groups: specifically, males, international students, engineering students, and students from more ‘elite’ Group of Eight universities (see Bretag et al. 2018b). In the multivariate analysis, however, many of these seemingly significant variables fell away due to their conflation with the key contributing variables (full details are available in Bretag et al. 2018b).

Contract cheating behaviour was influenced by three factors: LOTE status, dissatisfaction with the teaching and learning environment, and perceptions that there were lots of opportunities to cheat. For two of the cheating behaviours (receiving exam assistance and arranging for another to take an exam), the LOTE variable had a particularly strong effect. This confirms numerous studies which have highlighted that breaches such as plagiarism are a particular concern for LOTE students (Pecorari 2003; Vieyra, Strickland & Timmerman 2013). The perception among the cheating group that there are ‘lots of opportunities to cheat’ could be interpreted in a range of ways. One hypothesis is that students who are engaging in cheating are looking for opportunities to cheat, and so see opportunities where more engaged learners do not. Or it may be that some students are exposed to opportunities (such as sharing work with peers) that other students are not. It appears, then, that while the engineering discipline contains around one quarter of all the students in the cheating group, it is not engineering per se that influences cheating behaviour. It is rather that students who are LOTE, and/or particularly dissatisfied with the teaching and learning environment, and perceive there to be ‘lots of opportunities to cheat’ are concentrated within the discipline of engineering.

Most studies have previously concluded that international students are particularly vulnerable to engaging in breaches of academic integrity. Numerous authors have offered explanations for this, including English language proficiency (Devlin & Gray 2007), academic pressures (Egan 2008) and the unique difficulties of studying in a foreign country (Ehrich et al. 2016). In addition, there is a commonly held view that international students bring differing cultural views about cheating to university (Denisova-Schmidt et al. 2016; Hayes & Introna 2005; Introna et al. 2003). Our findings, while not disputing the critical role of students’ previous educational and learning experiences, contradict the simplistic view that international students cheat more due to culturally based values and attitudes towards cheating. This research suggests that the categories of LOTE and international should not be conflated.
Although LOTE and international status both increase the probability of having others take an exam, this is the only overlap of influence: LOTE increases the probability of receiving exam assistance, while international status increases the probability of taking an exam for others. Nor did the cultural and linguistic diversity of the sample lead to a diversity of attitudes towards outsourcing behaviours, a finding also reported by Maxwell, Curtis and Vardanega (2008). The only difference here was that both international and LOTE students were more likely to report that buying, selling or trading notes is ‘wrong’, which perhaps indicates that among these groups there is greater confusion and a tendency to err on the side of caution with regard to the boundaries between acceptable and unacceptable academic practice. It appears to be the case, then, that both domestic and LOTE students are more likely to engage in certain cheating behaviours despite thinking that they are wrong, not because they believe these practices are acceptable.

The sharing behaviours were influenced by a variety of variables, but for both, younger students were more likely to be involved. This perhaps indicates that engagement in a sharing economy is to some extent related to generational factors. The sharing behaviours were also more prevalent in certain discipline areas, indicating the presence of certain discipline-based cultures of sharing, collaboration and possibly collusion. Although collusion was not included in this research, due in part to the complexities of defining it (for example, see McGowan 2016), it is an important area of further research to explore the ways in which learning might be ‘outsourced’ through inappropriate collaboration.

Although Group of Eight students were more likely to engage in buying, selling and trading notes, they were no more or less likely to engage in other outsourcing behaviours. This finding is at odds with a prevailing assumption that contract cheating is more likely to occur in higher education providers of ‘lower quality’. In response to an exam cheating scandal, a senior manager at one of Australia’s most prestigious universities described the incident as a “freakish” singular event and suggested that elite universities are ‘far less exposed to the integrity pressures faced by other education providers’ (McKenzie & Baker 2016). Our research indicated that this is not the case.

**University staff**

Despite concerns that contract cheating is difficult to detect, the findings from the staff survey showed that almost 70 per cent of teaching staff have suspected outsourced assignments at least once. The most common signals that prompted their suspicions were their knowledge of students’ academic and linguistic abilities. Although concerns have been expressed that text-matching software has limited value for identifying outsourced assignments (Lancaster & Clarke 2016), staff reported that it was still a useful tool for prompting suspicions. This is possibly because the similarity report indicates matches to essay mills or other students’ work that includes material from those sites. In addition, unscrupulous commercial cheat sites have been known to respond to buyer fraud (e.g., when a student uses a stolen credit card to purchase a ‘bespoke essay’) by posting the sold essay online so that it will become part of the Turnitin database (Rigby et al. 2015, p. 24).

Nearly half the staff who have suspected seeing outsourced assessment reported that they

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11 The section ‘University staff’ is drawn from Harper et al. (2018). Please refer to this paper for full details of the findings and analysis.
typically manage these cases themselves, rather than refer them on to an academic integrity decision-maker (see Harper et al. 2018). A small but concerning percentage choose to ignore these cases entirely. While staff reported a range of reasons for managing contract cheating themselves, the most common response was that ‘it is impossible to prove’. This perception can be challenged by the finding that when contract cheating cases are referred to an appropriate decision-maker, one-third of staff reported these cases were substantiated 90–100 per cent of the time. A further third of staff, however, reported that they were not informed of the outcomes of referred cases. These data suggest that some educators hold misconceptions about contract cheating, and that university processes are failing to consistently engage and inform staff to ensure that all suspected cases are referred and dealt with appropriately.

Although research in the United Kingdom suggests that the minimum penalty for serious academic integrity breaches such as contract cheating should be suspension (Wallace & Newton 2014; see also Tennant & Rowell 2010), we found that in the Australian context suspension was only rarely applied. The most common penalty for outsourced assignments involved a warning/counselling, closely followed by zero for the assignment, with suspension applied only 4.3 per cent of the time. It could be argued that zero for the assignment is not a penalty at all, given that the student did not complete the task, and did not engage in the learning in any demonstrable way. A student who does not submit the assignment will receive a zero for the task, but has not breached academic integrity in any way. It seems unfair that this honest student should receive the same outcome as a student who attempts to defraud the institution.

A zero for the task therefore accurately reflects the lack of effort on the part of the student, but does not address the deceptive and intentional nature of the breach. Worse, for students who anticipate that they will fail an assignment if they complete the work themselves, contract cheating may be viewed as an expedient approach to completing assessments; the risk of a zero for the assignment might be one worth taking. In light of research which demonstrated that students are less likely to purchase an assignment as the probability of detection and the penalties increase (Rigby et al. 2015, p. 24), it is critical that penalties for contract cheating are of an appropriate severity if they are to serve as disincentives for students to engage in this behaviour.

An additional problem appears to be that even when contract cheating was substantiated and penalties applied, staff reported that records of these breaches were not typically recorded in an official database. If staff perceptions are accurate, this is a particular concern in light of the Australian Higher Education Standards Framework (Threshold Standards) 2015. Section 7.3.3(c) requires all universities to maintain secure and confidential information systems and records to ‘document and record responses to … breaches of academic or research integrity…’. Given that students who engage in contract cheating tend to do so repeatedly (Curtis & Clare 2017), consistent record keeping is particularly important if contract cheating is to be promptly identified and addressed.

The data demonstrated that teaching staff consider contract cheating to be a serious matter. They hold strong views regarding the ‘wrongness’ of outsourcing behaviours, which are comparable to those of non-cheating students. The only notable exception was for buying, selling and trading notes, which 69.8 per cent of staff agreed was wrong (compared with 54.1 per cent for other cheating practices). This suggests that the ‘wrongness’ of contract cheating is less clear-cut than other forms of academic misconduct.
per cent of non-cheating students). Given that course, assignment and exam notes are increasingly accessible via online file-sharing and peer-to-peer networking sites, it is perhaps unsurprising that in the context of a survey on contract cheating staff might be ambivalent about this behaviour.

One view is that swapping notes and completed assignments is ‘merely translating into the online environment what students have always done’ (Siebert 2015). There is growing concern, however, that the organised, online trade of academic work encourages students to adopt transactional approaches to learning and view assignment tasks as commodities to be acquired, rather than artefacts that demonstrate the attainment of learning outcomes. These concerns have prompted at least one university to caution against the sharing of work in their academic integrity policy.12

In addition to their views on note-sharing, over three quarters of staff were moderately to extremely concerned that students are engaging in contract cheating in higher education. Their heightened concern was not accompanied by inflated perceptions of the prevalence of contract cheating; staff most commonly estimated that 1–10 per cent of students engage in outsourcing behaviours, which closely approximates the data from this and other research (see for example, Curtis & Clare 2017; Králíková 2017; McCabe 2005). It therefore appears that staff have a reasonably accurate view of the extent of contract cheating, and their levels of concern are congruent with their attitudes that these behaviours are egregious. The views of staff are in stark contrast to the views of students. A majority of students—at least 70% of both cheating and non-cheating students—agreed that the cheating behaviours investigated were ‘wrong’. Unlike staff, however, most were only slightly or not at all concerned about the issue. In addition, while both groups of students over-estimated the prevalence of contract cheating, the cheating group vastly over-estimated the prevalence of cheating behaviours, with nearly nine per cent estimating that virtually everyone was engaged in it. Such an inflated view of cheating prevalence (‘everyone is doing it’) may have served to normalise cheating behaviours, which in turn may have influenced students’ (low) levels of concern (see also McCabe & Trevino 1993, 1997; Rettinger & Kramer 2009). It is somewhat perplexing that while the non-cheating students perceive cheating to be both wrong and common, they do not appear to be worried about it.

We maintain that non-cheating students have the potential to be a significant resource to combat contract cheating. Universities need to educate this group of students about the negative impact of contract cheating on the value of their own qualifications, and on the risk it represents to the public. Students need to be encouraged to care in the same way that staff care, and then the sector could have a powerful resource to influence (through peer culture) a change in behaviour across all student cohorts.

In addition to exploring attitudes towards and experiences of contract cheating, the project research sought to investigate the influence of organisational factors on the capacity of staff to address and minimise contract cheating. While the most positive responses were about departmental and institutional academic integrity policies and practices, just over half of staff agreed that these factors contributed to minimising contract cheating. The remaining factors

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had agreement from less than half of respondents. The most negative responses related to two distinct aspects of the teaching environment. The first were practical conditions of teaching, specifically workload for teaching, staff–student contact time, and class sizes, which may constrain teachers in their ability to minimise cheating. The second was the performance review and reward environment, including recognition and reward, performance management, and student evaluations of teaching (SET), which may serve as a disincentive to actively address and report breaches such as contract cheating.

Worth noting is that numerous researchers have been apprehensive about the way that SET is used as an auditing and performance management instrument (see for example, Shevlin et al. 2000; Slade & McConville 2006). Many studies have also examined students’ motivations in completing the SET and concluded that a complex array of factors influence the way that students evaluate teachers, some of which have little or nothing to do with teachers’ ability or expertise. One factor identified by Pounder (2007) was labelled ‘Students punishing their teachers via SET scores’. This occurs when students use the SET to punish ‘conscientious educators’ who may have asked challenging questions, maintained high grading standards, or set excessive homework (see also Crumbley et al. 2001). It follows that teaching staff, particularly those on short-term or casual contracts, who are reliant on positive SET scores as the major performance criteria for future work, may be apprehensive that disgruntled students who have been referred to an academic integrity decision-maker will use the SET as a vehicle for retaliation.

Staff were also asked to report on the extent to which they implement a range of teaching and learning practices linked in the literature to the minimisation of contract cheating. In the parallel student survey, students were asked to rate their lecturers and tutors on the same practices. There were two important items on which staff and students’ views converged. Staff, cheating and non-cheating students shared a high level of agreement that academic integrity policy is being explained. At the same time, all three groups shared a low level of agreement that contract cheating is being explained.

It is evident that much progress has been made in recent years in relation to academic integrity education more broadly, but that the specific and more serious breach of contract cheating is not discussed as openly and consistently. This may be because staff assume that contract cheating is so evidently ‘wrong’ that it is unnecessary to provide any explanation or education about the issue. Students’ lack of concern about contract cheating, however, suggests that conversations between teaching staff and students are needed if the implications of contract cheating are to be understood and the issue meaningfully addressed.

Of particular interest are the three teaching and learning items on which staff rated themselves most confidently. Over 95 per cent of staff agreed that they ensure students understand assessment requirements, provide students with opportunities to approach them when needed, and provide sufficient feedback to ensure students learn from the work they do. On these three items, however, students who engaged in cheating reported a markedly more negative experience (at least 11 percentage points lower) than their non-cheating peers (see Bretag et al. 2018b). Clearly there is a disjuncture between the way that teachers perceive aspects of their own practice, and the way that cheating students experience it.

It is important to emphasise the significance of the teaching and learning environment in this
research. In the parallel student survey, the 10 teaching and learning items contained two factors which, together with students’ language background, played a fundamental role in influencing cheating behaviour. Greater dissatisfaction with the teaching and learning environment (a nine-item factor) and a perception that there were lots of opportunities to cheat, were coupled with a greater propensity to cheat (Bretag et al. 2018b). The nine items related to aspects of curriculum design, academic integrity education, education and training in scholarly practices, maintenance of clear and consistent standards, and attending to students’ individual understanding and development through assessment and feedback. This finding supports other research that points to the critical role played by teaching staff and their practices in addressing cheating.

**NUHEP (students and staff)**

Despite ongoing concerns about the rise of marketing savvy commercial academic writing services (Ellis, Zucker & Randall 2018; Newton 2018), this research has shown that the prevalence of contract cheating at Australian NUHEPs and universities is relatively low, and comparable at 7 per cent and 6 per cent respectively. Other research on the prevalence of contract cheating has reported similar findings (see Foltýnek & Králíková 2018).

An interesting finding was that students at NUHEPs perceive sharing behaviours to be ‘more wrong’ than their university peers and engage in sharing behaviours significantly less than students at universities. As we suggested in our first paper from this research (Bretag et al. 2018b), the recent emergence of the sharing economy is shaping the day-to-day experiences of young people and this is reflected in university students’ propensity to see sharing (buying, selling and trading notes, and providing assignments to others) as an acceptable way to complete assignments. The difference between the two cohorts may be because university students generally have about three years to complete their first qualification, in contrast to NUHEP students who tend to study at their institution for a much shorter time (particularly in the case of ‘pathway’ colleges where they may only be there for one year or less). In addition, there is a higher proportion of domestic students at university, and those domestic students often come straight from high school, bringing with them their existing friendship groups. It might therefore be surmised that university students have more social capital and stronger networks with whom to collaborate, share (and sometimes collude) than NUHEP students. Domestic university students may also have access to wider social and family networks, whereas newly arrived international students at NUHEPs are not only new to the educational institution, but to the higher education system and to the broader culture. Put simply, international NUHEP students are without local, social resources to assist them with their studies, regardless of whether that support is legitimate or unauthorised.

While NUHEP students consider sharing to be ‘more wrong’ and engage in it at lower rates than university students, we found that those NUHEP students who do buy, sell or trade notes were 3.73 times more likely than other NUHEP students to engage in cheating behaviours, in comparison with those at university who buy, sell or trade notes who were two times more likely to cheat (Bretag et al. 2018a). Rogerson and Basanta (2016) have suggested that ‘The proliferation of essay mills … has unintentionally created a less visible industry in the bartering, trading or sharing of content related to learning and assessment’ (p. 274), an observation which informed the project’s approach to this research. We had hypothesised

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13 The section entitled ‘NUHEP (Students and Staff)’ is taken from Bretag et al. 2019, forthcoming.
that sharing behaviours, particularly the use of online file-sharing sites (buying, selling and trading notes), were a ‘slippery slope’ towards cheating, and the findings from both the NUHEP and university student data confirmed this hypothesis. Based on the project team members’ own experience of exploring online file-sharing sites (such as ThinkSwap and Course Hero) it is evident from the numerous pop-up messages advertising academic writing services that file-sharing sites are often little more than gateways to contract cheating (see also Ellis, Zucker & Randall 2018).

Another important finding was that while NUHEP and university students report contract cheating at comparable rates, NUHEP students reported paying for assignments at 12 times the rate of university students. Again, this suggests that NUHEP students, particularly those who are socially and culturally isolated, may have fewer options for support and feel that professional services are the most accessible assistance available. This finding suggests that NUHEP students may be particularly vulnerable to the persuasive and targeted marketing tactics of commercial academic writing services (see Rowland et al. 2018).

Given the much higher rate of engagement with professional services by NUHEP students, it is encouraging that NUHEP staff reported being more concerned about contract cheating than university staff. Based on the responses from both NUHEP students and staff it is also apparent that NUHEP staff spend more time as part of the teaching and learning process to train NUHEP students on key academic skills such as referencing and also take the time to discuss contract cheating with their students.

The general dissatisfaction of cheating students with the teaching and learning environment at universities (Bretag et al. 2018a) and the lack of conversations about contract cheating between students and staff at universities (Harper et al. 2018) are both issues of concern that require considerable improvement. The higher levels of satisfaction with the teaching and learning environment expressed by NUHEP students may have been enabled by the smaller classes and extra contact time typical of NUHEPs. Disappointingly, this extra pastoral care and supportive learning environment does not appear to have prevented NUHEP students from using professional academic writing services.

NUHEPs and universities’ staff use of assessment was comparable, with very little difference expressed by either students or staff. For both types of institution, ‘short turnaround time’, ‘heavily weighted tasks’ and assessments that involved ‘research, analysis and thinking skills’ were those that students considered most likely to be outsourced. For both types of institution, the four least likely assignments to be outsourced were ‘reflection on practicum’, ‘in-class task’, assessment that is ‘personalised and unique’ and assessments that included a viva. While there was no assessment type at either type of institution that students indicated could not be outsourced, the comparability of the responses provides a solid foundation on which to make assessment design decisions that have the potential to minimise contract cheating in higher education (see Bretag et al. 2018b).

Responses to suspected contract cheating (for example, whether a staff member forwarded their suspicion to a decision-maker) and penalties for substantiated cases at both NUHEPs and universities were also comparable, with lenient outcomes comprising warnings and zero for the assignment at both types of institution. Both groups of staff expressed similar rates of agreement that contract cheating is ‘impossible to prove’, and NUHEP staff in particular were
concerned that if they referred a case to a decision-maker, it would affect their employment, perhaps reflecting the higher proportion of staff on short-term, sessional contracts at NUHEPs. There is an urgent need for staff at both NUHEPs and universities to engage with the 22 Examples of Good Practice provided by TEQSA (2017). Good Practice Example 7 clearly indicates the importance of referring suspected contract cheating to a trained decision-making body, and Good Practice Example 8 suggests that institutions should apply a ‘serious penalty such suspension or expulsion’. Teaching staff across the sector are also advised to utilise the resources developed by this project, particularly the resource entitled ‘Impossible to prove? Substantiating contract cheating’.

NUHEPs outperformed universities in relation to how well penalties for contract cheating were communicated to staff, with only 13.5 per cent of NUHEP staff compared to 33.2 per cent of university staff stating ‘I don’t know’ (the outcome for the referred breach). As TEQSA (2017) has noted, when institutions do not inform staff of the outcomes of contract cheating investigations, ‘This has the potential to impact on teachers’ confidence levels about the process, as well as make it less likely that cases will be referred in the future’ (Good Practice Example 9, p. 18).

Assessment task and authenticity

The relationship between contract cheating and assessment design is complex and is affected by a variety of individual, contextual and organisational factors. For all 13 assessment tasks investigated in this study, students’ perceptions of the likelihood of contract cheating for the cheating and non-cheating groups followed the same order, with both groups agreeing on the tasks that were the most and least likely to prompt contract cheating (See Bretag et al. 2018b).

It is important to note that there were no assessment tasks for which students reported a zero per cent likelihood of contract cheating. The four assessment tasks that were perceived by students to be the least likely to prompt contract cheating were in-class tasks, personalised and unique tasks, vivas and reflections on practical placements. Assessments with short turnaround times and those that are heavily weighted were perceived to be the most likely.

This finding supports the work of Wallace and Newton (2014) who found that contract cheating services commonly provide students with bespoke assignments within very short timeframes (often less than 24 hours) and refutes advice in the literature that ‘just-in-time release of assessment specifications’ (O’Malley & Roberts 2012) is an effective counter-strategy to contract cheating. The data from the student survey (see Bretag et al. 2018a and 2018b) suggests that short turnaround times are no disincentive to outsource work and may in fact encourage cheating. Encouragingly, short turnaround times were the least used assessment feature reported by educators, but 24 per cent still reported using this strategy moderately or regularly.

Not surprisingly, for every assessment task, students in the cheating group reported a greater likelihood of contract cheating than students in the non-cheating group. It appears that students who have actually engaged in contract cheating and students who report increased perceptions of likelihood, both see and look for opportunities to cheat regardless of the

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14 The section entitled ‘Assessment task and authenticity’ is taken from Bretag et al. (2018a & 2018b) and Ellis et al. (2019, forthcoming).
For universities aiming to address contract cheating through assessment design, it would be more effective to address opportunities to cheat for all assessment types, rather than assuming that simply changing the task itself will combat the problem. This is particularly the case for high-stakes, invigilated assessments (examinations), which many advocate as the most effective strategy to prevent contract cheating and other forms of academic misconduct. There is a growing body of evidence, however, that examinations provide universities and accrediting bodies with a false sense of security. Importantly, our findings indicate that heavily weighted assessment tasks increase students’ perceptions that contract cheating is likely (see Bretag et al. 2018b).

A commonly proposed alternative to heavily weighted examinations is the use of a series of small graded tasks (sometimes called continuous or weekly assessment). This approach aims to engage students early and often in the learning objectives, with many low-stakes opportunities to learn through failing that do not also risk total failure in the course (see for example, McKinnon & Lowry 2012). While this assessment strategy may be pedagogically sound, our multivariate analysis indicated that students perceive it to be the third most likely task to be outsourced. Perceptions of the likelihood of contract cheating for this type of task increased for LOTE students, those who perceived lots of opportunities to cheat and substantially increased for students in engineering (see Bretag et al. 2018a).

It may be that the widespread use of online learning management systems in universities is enabling an increased use of small graded tasks in the form of online quizzes or exercises. When completed without supervision, students may collaborate to complete these together, rather than individually, or outsource them altogether with little risk of detection. As these tasks are not worth much of the final grade, students may justify outsourcing them in order to concentrate on what they perceive to be more important assignments. Alternatively, the low weighting of such tasks perhaps signals to students that they are unimportant and students may not appreciate their intrinsic value for their learning.

While the overall effect sizes for disciplines of study were relatively small, the study did show that students in some disciplines perceived contract cheating in particular assessment tasks to be more likely than students in other disciplines. As reported in Bretag et al. (2018b), students in commerce had higher perceptions of the likelihood of contract cheating for six of the 13 tasks, with the largest effect for assignments requiring research, analysis and thinking skills. This finding supports numerous studies (McCabe 2005; McCabe & Trevino 1993) that have reported high levels of plagiarism and other academic integrity breaches in business more broadly, and commerce specifically.

Our findings also support other international research that has highlighted cheating in engineering to be a particular problem (Marsden, Carroll & Neill 2005; McCabe 2016; McCabe & Trevino 1993), with engineering students in this study perceiving a significantly higher likelihood of contract cheating for five assessment tasks, with the largest effect for a series of small graded tasks. Despite evidence that may point educators towards renewed assessment practices, multivariate analysis of the staff survey data indicated that educator use of assessment is affected by organisational factors, such as the degree of institutional support available for minimising cheating (see Bretag et al. 2018b and Harper et al. 2018).
Our analysis found that dissatisfaction with teaching and learning had a significant influence on actual cheating behaviour (see Bretag et al. 2018a, 2018b). We found that as dissatisfaction increased, so too did the perceived likelihood of contract cheating on six of the 13 assessment tasks (see Bretag et al. 2018b). It is apparent that the more a student is satisfied with teaching and learning, the less they perceive that contract cheating is likely. This finding resonates with results from the first Australasian Survey of Student Engagement (AUSSE) in 2007 which reported that student engagement was reduced when students felt less satisfied with their learning environment and the quality of support received from academic staff. Reporting on the 2007 AUSSE findings, Coates (2008) outlined the ‘educational levers’ that institutions can enact to improve students’ learning experience, and thus their satisfaction. Coates recommended engaging students in higher-order, real world thinking, improving student relationships with educators and monitoring satisfaction across student cohorts (Bretag et al. 2018b).

Our analysis has also provided irrefutable evidence of the impact of LOTE status on the perceived likelihood of cheating, with a significant and large effect on all 13 assessment tasks (Bretag et al. 2018b). In particular, LOTE students hypothesised that assignments that require research, analysis and thinking skills, heavily weighted assessments and those with short turnaround times are most likely to be outsourced. These assessment tasks all share common features: they are challenging and high pressure, which clearly places a greater burden on LOTE students who may already be struggling with completing written assessments in a language other than their main language. In company with numerous other researchers over the last two decades (see for example, Arkoudis & Kelly 2016; Bretag 2007; Bretag et al. 2014; Devlin & Gray 2007), we maintain that the higher education sector must finally acknowledge this ‘elephant in the room’ and appropriately address the needs of this vulnerable student cohort through curriculum and pedagogy changes and early intervention.

Three assessment tasks were included to investigate the relationship between authentic assessment and contract cheating: tasks that develop relevant professional skills, tasks where there is no right answer and a reflection on a practicum. While students perceived that a reflection on a practicum was the least likely to be outsourced of all 13 tasks, assessments that develop relevant professional skills and tasks where there is no right answer were perceived to be moderately likely to be outsourced. For tasks that develop relevant professional skills, perceptions of the likelihood also increased for LOTE students and those who perceive there are lots of opportunities to cheat, as well as for commerce and health sciences students (Bretag et al. 2018b).

It appears that authenticity alone is not sufficient for reducing the perception that an assessment task may be outsourced. Using a five-factor authenticity coding framework derived from the work of Iverson, Lewis and Talbot (2008) and Bosco and Ferns (2014), our analysis of data sources 2 and 3 demonstrated that assessment tasks with no, some, or all of the five authenticity factors are outsourced by students (see Ellis et al. 2019, forthcoming). This finding suggests that educators were able to accurately detect and report highly authentic assessments that had been outsourced to custom academic writing services. The less-authentic assessment tasks (those with only one or two authenticity factors) occurred at much lower rates in the cheating breach data than in the assignment orders. This suggests that it is more challenging to detect and report instances of outsourcing for
these types of assessments at that institution. Also worthy of note was the fact that those assessments with the authenticity factor ‘feed forward’ (the assessment has an impact on future practice, includes self-assessment and/or is a sequential task) occurred much less frequently in the assignment orders than in the cheating breach data, suggesting that this aspect of authenticity is particularly useful to staff in detecting and reporting outsourcing (Ellis et al. 2019, forthcoming).

The findings from Ellis et al. (2019, forthcoming) challenge the advice that has been offered in several documents, including the Quality Assurance Agency (2017) Advisory Statement that recommends authentic assessment as a strategy to counter contract cheating. The risk with such advice is that it might lead to complacency. If an educator, in good faith, designs authentic assessment tasks with the explicit intention of ‘designing out’ contract cheating, they may falsely believe that they have made it impossible for students to procure a third party to do their work for them, and in that case the educator may be less vigilant in their efforts to deter cheating. Conversely, our analysis has shown that while authentic assessment design cannot prevent contract cheating, the more authentic the assessment task, the more likely educators are to detect and/or report it.

Analysis of the two datasets also showed that that there are two broad FoE codes that were disproportionately represented. More than 70 per cent of both assignment orders and cheating breaches were coded in the combined Management and Commerce (08) and Society and Culture (09) broad codes. It should be noted, however, that these are both very large FoE codes encompassing numerous disciplines. It is worth considering that university students who outsource professionally focused ‘authentic’ assessment tasks, may find themselves unfit for professional practice and then be vulnerable to engaging in unethical behaviours in the workplace. Professions rely on the certification authority of individual universities to assure that graduates can operate honestly within those codes of conduct and standards. The propensity of some students to outsource their work, regardless of the type of assessment task, potentially damages the trust between the professions and universities, and between employers and graduates (see Ellis et al. 2019, forthcoming).

The findings from this project have the potential to change the landscape of academic integrity education and professional development, where educators have been routinely advised to create ‘authentic’, ‘meaningful’ and ‘engaging’ assessments to ensure that students do not want to cheat (see for example, Van der Vleuten et al. 2012). While we agree with other educational researchers that authentic assessment, with its emphasis on engaging students in real world, complex tasks linked to professional practice is good for learning (Herrington & Herrington 2006, 2007; Gulikers et al. 2004; Newmann & Archbald 1992; Wiggins 1990, 2011), the project’s extensive and multi-layered research based on robust data from numerous sources has debunked the myth that, in itself, authentic assessment will solve the problem of contract cheating. As we have stated in our various publications (see for example, Bretag et a. 2018a), one of the challenges of authentic assessment is that it centres on realistic, professionally focused and complex tasks (Gulikers, Bastiaens, & Kirschner 2004; Herrington & Herrington 2006) with which many academically and linguistically diverse students may not be familiar. Providing the appropriate time-intensive and scaffolded support to these students may not be feasible in the current under-resourced higher education environment, leaving some students adrift and tempted to seek unauthorised assistance.
Chapter 4: Conclusion

In the context of global concerns about the proliferation of online file-sharing sites and commercial assignment writing services, this project sought to investigate the prevalence and nature of contract cheating and other outsourcing behaviours, understand the individual, contextual and institutional factors that may influence these behaviours, and explore the potential role played by assessment design in addressing this issue.

The project’s research involved collection and analysis of three data sources—student and teaching staff data from a nationwide survey of universities and NUHEPs, academic integrity breach reports at one Australian university, and assignment orders placed on multiple contract cheating websites.

Survey findings have outlined the various demographic and contextual factors that influence contract cheating, with the key finding that contract cheating behaviours were primarily influenced by students’ LOTE status, perceptions that there are lots of opportunities to cheat and dissatisfaction with the teaching and learning environment. Sharing behaviours were influenced by a range of variables, but particularly age (students 25 and younger), and discipline of study. In addition to the responsibility of universities to seriously consider approaches to curriculum, assessment design and the associated challenges faced by teaching staff, it is also important that universities respond to the ways in which the sharing economy is shaping students’ approaches to life and learning. Curriculum and pedagogy could better reflect the realities of working in a highly connected and networked world, in which sharing and collaboration are an increasing part of professional practice. Educators need to support students in learning to navigate this world, both as learners who must demonstrate their own individual capabilities through assessment, and as emerging professionals who need to learn to work ethically (Bretag et al. 2018a).

Findings regarding the role of assessment, meanwhile, indicated that there are no assessment tasks that can, in themselves, eradicate the perceived likelihood of contract cheating among students. Authentic, personalised, professionally focused and nested tasks were all reported by at least some students as likely to be outsourced (Bretag et al. 2018b). The relationship between contract cheating and assessment design is therefore not a simple product of cause and effect, and the nature of the task itself may be less relevant for preventing cheating than other factors, such as a student’s LOTE status or perceived opportunities to cheat. The study has provided clear empirical evidence to demonstrate that authentic assessment tasks do not assure academic integrity, and that students are not prevented from placing orders on commercial academic writing services or outsourcing their work to friends, family or other students (Ellis et al. 2019, forthcoming). In exploring the relationship between authentic assessment and contract cheating, it has become apparent that authenticity brings inherent challenges that need to be considered as part of the learning, teaching and assessment design process.

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15 The section entitled ‘Conclusion’ is drawn from Bretag et al (2018a & 2018b) and Ellis et al (2019, forthcoming).
Chapter 5: Dissemination and impact

The Contract Cheating and Assessment Design Project has delivered the following outcomes, as proposed in the original submission to the Office for Learning and Teaching:

**Contract Cheating and Assessment Design Framework**

A *nautilus* was selected as the project and framework logo as it represents growth, transformation, and a way of communicating multi-faceted complexity, but also interconnectedness. The framework builds on existing research on good assessment practice that fosters academic integrity in the Australian higher education context, and contributes to emerging work on authentic assessment design. It is located on the Contract Cheating and Assessment Design website, and serves as a portal to custom designed resources for each of the stakeholders identified in the four segments – the higher education sector, institutions, educators and students (See Appendix C: Contract Cheating and Assessment Design Framework).

**An interactive and user-friendly website**

The project website serves as a repository for the Contract Cheating and Assessment Design Framework and its associated resources, publications and outputs. It is available at www.cheatingandassessment.edu.au. The website was launched in August 2016 and to date has been accessed by over 10,000 unique visitors from 98 countries, with a total of 29,555 views, of which 21,584 views were from within Australia. Table 2 provides a summary of those accessing the website.

<table>
<thead>
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<th>Year</th>
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<td>13997</td>
<td>4118</td>
</tr>
<tr>
<td>2019</td>
<td>1035</td>
<td>408</td>
</tr>
<tr>
<td>Total</td>
<td>29555</td>
<td>10112</td>
</tr>
</tbody>
</table>

**Nationwide staff workshops**

Between April and May 2018, the project team held a series of interactive staff workshops at the University of South Australia, The University of Western Australia, Victoria University, UNSW, and Griffith University. A total of two hundred staff from universities located in each state attended. The purpose of the workshops was to disseminate the most recent findings from the project, and to develop and refine the project’s educational resources for the contract cheating and assessment design framework. The workshop conducted at Victoria
University on 18 April 2018 by CCAD project co-leader Associate Professor Tracey Bretag was video-recorded and is available for viewing on the project website at the following URL: www.cheatingandassessment.edu.au/publications-presentations/

Edited collection, *International Journal of Educational Integrity*

Project team co-leader, Associate Professor Tracey Bretag edited a thematic series entitled, *The rise of contract cheating in higher education: academic fraud beyond plagiarism*. The series is comprised of seven articles from Europe, Australia and the UK, with a focus on extending the research beyond issues of prevalence, to reporting on contract cheating business models, the legal and ethical implications for contract cheating providers, users and institutions, and the mechanics of detection and response. See the series here: www.biomedcentral.com/collections/cche

Resources for higher education stakeholders

The following resources for the four stakeholder groups outlined in Table 3 below were produced as part of the Contract Cheating and Assessment Design Framework. They are downloadable in PDF from the project website.

*Table 3. Contract cheating and assessment design framework resources*

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education sector</td>
<td>Contract cheating is a symptom, not the problem</td>
</tr>
<tr>
<td></td>
<td>Three factors contribute to contract cheating</td>
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<tr>
<td>Institution</td>
<td>Students share their work a lot</td>
</tr>
<tr>
<td></td>
<td>Suspected cheating goes unreported and penalties are lenient</td>
</tr>
<tr>
<td>Educator</td>
<td>Assessment to foster academic integrity</td>
</tr>
<tr>
<td></td>
<td>Assessment types to use with caution</td>
</tr>
<tr>
<td></td>
<td>Managing risk for different assessment types</td>
</tr>
<tr>
<td></td>
<td>Students are not concerned about contract cheating and we are not talking to them about it</td>
</tr>
<tr>
<td></td>
<td>Impossible to prove? Substantiating contract cheating</td>
</tr>
<tr>
<td>Student</td>
<td>Contract cheating is not a victimless crime</td>
</tr>
<tr>
<td></td>
<td>Collaborating with integrity</td>
</tr>
</tbody>
</table>
Contract cheating panel
Project Co-leader Tracey Bretag chaired a panel entitled, ‘Authentic assessment and contract cheating’ at the Plagiarism Across Europe and Beyond conference, in the Czech Republic, June 2017.

Findings based on the largest contract cheating survey data to date
The project conducted a survey of 15,047 higher education students, and 1243 higher education teaching staff, on the topic of contract cheating and assessment design. This is the largest such survey on the topic of contract cheating and assessment design to date, and has yielded valuable insights to assist the project and the sector in developing evidence-based responses to the problem of contract cheating.

Publications
The following publications have been produced by the project team to contribute to the literature on assessment design and contract cheating. The published papers are available to download or view via the project website.


Harper, R, Bretag, T & Rundle, K 2019, Detecting contract cheating in a range of assessment types (paper currently in process).

Two additional papers based on student and staff survey qualitative data, are currently being developed by Bretag and Harper.

Project infographics
Two infographics were developed to assist dissemination of the research findings. Both versions of the infographic are available to download in PDF from the project website and are appended to this report (see Appendix D: Project Infographics)
Presentations
Project team members have disseminated project findings widely across the Australian higher education sector and in Europe, through a range of keynote addresses, presentations and workshops. In total, 52 presentations have been conducted, reaching over 4200 participants. A full list of the presentations is included in Appendix E: Dissemination Table. Fourteen of these presentations have been video-recorded and are available for viewing on the project website at the following URL: www.cheatingandassessment.edu.au/publications-presentations

Media coverage
The project received extensive coverage in the media with over 21 news reports specifically referring to the research (see Appendix F: Media coverage). In addition, Project Co-Leader Dr Rowena Harper was interviewed on Today Tonight (Channel 7, Adelaide), on 11 October 2017, the video for which can be viewed at https://cheatingandassessment.edu.au/publications-presentations/

Impact
The major impacts of the project are outlined above in terms of the project’s research outputs, the dissemination of research findings, resources, and engagement with the higher education community and public in raising awareness and creating a sustained dialogue about contract cheating.

Please see Appendix F for an updated project impact table, which outlines the project’s impact over the 2.5 years of the project, and going forward, according to the relevant stakeholders involved and project outputs. As evidenced in Appendix F, the project achieved all the anticipated changes in team members’ own institutions, and in the Australian and international higher education sector, with 52 presentations to over 4000 participants. Given the extensive and ongoing uptake of the project’s findings and recommendations, we are confident of the long-term impact of the project.

Interdisciplinary linkages that have resulted
Findings from the project regarding the effect of discipline of study on contract cheating suggested possible gendered cheating behaviours in engineering. In collaboration with reference group member, Associate Professor Michael Burton (UWA), the project team leaders are currently developing an ARC Linkage grant application to propose further research on this topic. In addition, through the project’s presentation at the 2018 HERDSA conference, close links were established with PhD candidate Kiata Rundle at Murdoch University. Kiata has co-authored a paper with the project team and is continuing to work with the project leaders in the analysis of qualitative data from the project.

Factors critical to success
There were four key factors critical to the success of this project:

1. The commitment, collaboration, cooperation and expertise of the project team members, which allowed for a dynamic, multidisciplinary approach to be applied to the research design and analysis. As reputable learning and teaching scholars within their own fields, the team members were able to utilise their professional networks
to disseminate the project widely to key stakeholders.

2. The interest, assistance and participation of stakeholders at the institutions (including key members of the University Executive) who enabled the dissemination of the survey, and who helped to coordinate and promote the nationwide teaching staff workshops.

3. The timely government, sector, media and public interest in the phenomena of contract cheating, which provided fertile ground for the project to conduct its research, raise awareness and promote ongoing dialogue about contract cheating and assessment design.

4. As a result of the intense interest in the project findings, we presented at 52 host-funded forums, reaching over 4000 participants. We were thus able to save considerable funds that had originally been allocated to dissemination and travel and reassign those funds to a six-month extension for the project, including paying a project manager and data analyst. As a result of our strategic decisions, we achieved a balanced budget and a project that has achieved maximum impact.
References


Bretag, T 2007, ‘The Emperor’s new clothes: yes there is a link between English language competence and academic standards’, People and Place, vol. 15, no. 1, pp. 13–21.


Curtis, GJ & Clare, J 2017, ‘How prevalent is contract cheating and to what extent are students repeat offenders?’ Journal of Academic Ethics, vol. 15, no. 2, pp. 115–24, doi:https://doi.org/10.1007/s10805-017-9278-x


Rozenberg, P & van Haeringen, K 2017, ‘Authenticity and contract cheating: can effective assessment design reduce students procuring and handing in work of others?’ Paper presented at the 8th Asia Pacific Conference on Educational Integrity: Academic integrity as public good. 6–7 December, Sydney, Australia.


Vieyra, M, Strickland, D & Timmerman, B 2013, ‘Patterns in plagiarism and patchwriting in science and engineering graduate students’ research proposals’, *International Journal for Educational Integrity*, vol. 9, no. 1, pp. 35–49, doi: 10.21913/IJEI.v9i1.846


Wiggins, G 1990, ‘The case for authentic assessment’, *ERIC Digest* no. ED328611

Appendix A

Certification by Deputy Vice-Chancellor (or equivalent)

I certify that all parts of the final report for this OLT grant provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name: Professor Allan Evans
Date: 22 March 2019

Professor Allan Evans
Provost and Chief Academic Officer
University of South Australia
Appendix B: Contract Cheating and Assessment Design Framework
Framework for minimising contract cheating in higher education

Contract cheating is symptomatic of a higher education system under stress. Data from this project illustrates that contract cheating is connected to the positioning of higher education by government, to the policies and practices of institutions, to the attitudes and behaviours of educators, and to characteristics and motivations of students. A system-wide approach involving stakeholders at all levels is critical if contract cheating is to be addressed and the integrity of the Australian higher education system assured.

Sector causes of contract cheating

Federal policy and funding decisions are driving commercialisation, marketisation and competition in higher education. This is leading to greater internationalisation, massification and diversification of the student body. As government reorients the sector to focus its work on economic outcomes, students are repositioned as fee-paying ‘customers’ and encouraged to think about study as a way to get a job.

What can be done?

Government must establish a policy and funding environment that enables and rewards integrity in higher education. Investment is needed to support quality teaching and research to ensure that higher education continues to fulfil its social, intellectual and economic functions.

Institutional causes of contract cheating

The trends above are leading directly to compromised teaching and learning environments. The pressure to find ‘efficiencies’ creates large classes, less staff-student contact, and shrinking workload to devote to teaching; all of which affect educators’ capacity to use assessment tasks that are less likely to be outsourced by students. Moreover, poor processes and lenient penalties for contract cheating mean many suspected cases go unreported.

What can be done?

Review policies and procedures for identifying, reporting and managing suspected breaches. Ensure staff at all levels are trained, appropriately resourced, and recognised for responding to contract cheating. Provide educators with conditions that allow them to get to know students individually, and to design teaching, learning and assessment processes that have integrity. Encourage the use of assessments that students report are less likely to be outsourced, and use invigilated exams, group work, and online quizzes cautiously.

Student causes of contract cheating

The three factors linked to contract cheating are: speaking a language other than English at home (LOTE), dissatisfaction with the teaching and learning environment and the perception that ‘there are lots of opportunities to cheat’. The sharing economy is impacting on students’ outsourcing behaviours, with many students taking a ‘transactional’ approach to their learning.

What can be done?

Admissions processes need to ensure that all students are capable of success. This includes setting appropriate language entry requirements, and allocating resources for language and learning development. Students also need teaching, learning and assessment environments that minimise opportunities to cheat, and foster relationships with staff.

Educator causes of contract cheating

Many educators are now focussed on expediency, and on how to ‘make do’ with ever-shrinking teaching resources. As a result they; may be too reliant on certain assessments, don’t discuss contract cheating with students, and may not report suspected breaches. A lack of institutional support means they may also lack awareness of how to substantiate cheating.

What can be done?

Educators need adequate workload and resourcing for the time-intensive task of teaching. They also need a professional development and reward environment that builds and recognises their knowledge and skills in fostering academic integrity in curriculum design, student education, and assessment processes. Part of this should be education in how to detect and substantiate breaches of academic integrity, including cases of contract cheating.
Appendix C: Project Infographics
7 outsourcing behaviours investigated
15,047 students and 1,243 staff surveyed at 8 Australian universities and 4 NUHEPs*

**Who is doing it?**

**Sharing behaviours**
- Students 25 yrs and under
- Internal mode students
- Law students
- Full-time students

**Cheating behaviours**
- Students who speak a LOTE* at home
  - 40% of participants, but 40% of those cheating
- International students
  - 33% of participants, but 33% of those cheating
- Engineering students
  - 25% of participants, but 25% of those cheating

**How prevalent is it?**

1 in 7 have bought, sold or traded notes
1 in 4 have provided others with completed assignments

**Where does cheating help come from?**

Students mainly get help from those they know
Other/former students
Friends
Partners
Family

**Why is it happening?**

Do cultural norms matter when it comes to cheating attitudes?
Domestic/International and English/LOTEx students all shared comparable attitudes about the ‘wrongness’ of cheating behaviours

Lack of a 'Personalised Teaching and Learning Relationship'
The cheating group reported significantly lower levels of agreement for three key teaching and learning items:
- Ensuring understanding of assignment requirements
- Receiving sufficient feedback
- Approachability of teaching staff

*LOTEx = Language Other Than English
*NUHEPx = Non-University Higher Education Providers
What do staff say?

68% have suspected instances of contract cheating

Most common signal for suspected cheating is the educator’s knowledge of the student

How concerned are you that students are engaging in contract cheating in higher education?

- Not at all
- Slightly
- Moderately
- Very
- Extremely

- Students
- Staff

Are Non-University Higher Education Providers (NUHEP) different to universities?

- Higher rates of exam cheating and money being exchanged
- NUHEP students were equally likely to obtain a completed assignment, but 6 times more likely to pay money for it
- Lower rates of providing completed assignments
- Staff more satisfied with institutional policy and practice for minimising contract cheating

54% of NUHEP college staff were very or extremely concerned about contract cheating compared to 46% of university staff

What can be done?

Use assessment types that students report they are less likely to outsource

- Reflections on practicum
- Oral presentations (vivas)
- Individualised
- Completed in class

Foster ‘Personalised Teaching and Learning Relationships’ with students

- Clarify assessment requirements through task instructions, scaffolding, interactive discussion and rubrics
- Be accessible for learning help and support
- Provide constructive, meaningful and timely feedback for each student
- Recognise the particular needs of International and LOTE* students

Support a process of detection, reporting, substantiation and feedback

This Strategic Priority Project (SP16-5283) is supported by the Australian Government Department of Education and Training

University of South Australia
University of Sydney
UNSW Australia
Griffith University
Swansea University

*LOTE: Language Other Than English
Additional Findings from a Survey of Students and Staff at Australian Universities

7 outsourcing behaviours investigated

- Bought, sold or traded notes
- Provided completed assignment (for any reason)
- Obtained completed assignment (to submit)
- Provided exam assistance
- Received exam assistance
- Taken exam for other
- Other taken exam

Participants
- 8 Australian Universities
- 1,147 Teaching Staff
- 14,086 Students

Contract cheating is influenced by 3 factors
- Student dissatisfaction with learning & teaching
- Perceptions that there are lots of opportunities to cheat
- Speaking a language other than English

Students ‘share’ their work a lot...
- 15% bought, traded or sold notes
- 27% provided a completed assignment

...and this may lead to cheating
- Cheating students are 2x more likely to also share work

Students are not concerned about contract cheating...

...and we are not talking to them about it

Only 1 in 5 students reported that staff had talked to them about contract cheating
Can authentic assessment design prevent contract cheating?

Assessments with no/some/all authenticity factors are routinely procured and submitted by students

5 authenticity factors
1. Frequency: the task is common or fundamental to discipline/profession
2. Fidelity: the task reflects how things are done in discipline/profession
3. Complexity: the task reflects the ‘messiness’ of real world problems
4. Impact: the task has an impact that is shared with/delivered in the real world
5. Feedback: the task directly, meaningfully informs future practice

Students tell us that some assessments are less likely to be outsourced… but they are rarely used by staff

Assessment Types Utilised by Staff and Likelihood of Student Cheating

Suspected contract cheating often goes unreported for 3 reasons
- Perceptions it is ‘impossible to prove’
- It is too time consuming
- Staff do not feel encouraged to report

Contract cheating often results in lenient penalties
- Staff report that penalties most commonly include:
  - 30% Warning/counselling
  - 27% Zero for the assignment
  - 21% Reduced mark for the assignment
- More severe penalties were rarely reported:
  - 3% Suspension
  - 2% Expulsion

This Strategic Priority Project (SP16-5283) is supported by the Australian Government Department of Education and Training
### Appendix D: Dissemination Table

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Duration</th>
<th>Event</th>
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<th>Title</th>
<th>Team member/s</th>
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<tr>
<td>1</td>
<td>13 April 2017</td>
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<td>Project Symposium</td>
<td>UniSA, Adelaide</td>
<td>Preliminary Findings to higher education sector</td>
<td>All</td>
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<td>2</td>
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<td>Awareness raising and policy workshops on Contract Cheating</td>
<td>University of Huddersfield</td>
<td>Awareness raising workshop and Policy workshop for Senior Leadership</td>
<td>Cath Ellis</td>
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<td>Awareness raising and policy workshops</td>
<td>Leeds Beckett University</td>
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<td>Anglia Ruskin University</td>
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<td>5</td>
<td>9-23 May 2017</td>
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<td>Consultation to European Network for Academic Integrity Committee (representing 12 countries)</td>
<td>Mendel University, Brno, Czechia</td>
<td>Preliminary Findings</td>
<td>Tracey Bretag</td>
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<td>6</td>
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<td>Safeguarding Academic Integrity</td>
<td>Higher Education Council, Prague</td>
<td>Preliminary Findings</td>
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<td>17 May 2017</td>
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<td>Universities Australia, DVC:A Meeting</td>
<td>ANU, Canberra</td>
<td>Preliminary Findings to HE sector</td>
<td>Rowena Harper</td>
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<td>Evidence-based approaches to contract cheating</td>
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<td>Plagiarism Across Europe and Beyond</td>
<td>Mendel University, Brno, Czechia</td>
<td>Procurement data</td>
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<td>Plagiarism Across Europe and Beyond</td>
<td>Mendel University, Brno, Czechia</td>
<td>Contract cheating</td>
<td>Tracey Bretag: Chair; Phil Newton: Panel Member</td>
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<td>11</td>
<td>15 June 2017</td>
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<td>Contract Cheating</td>
<td>Cath Ellis</td>
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<td>15 June 2017</td>
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<td>UNSW Legal Team meeting (staff)</td>
<td>UNSW, Sydney</td>
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<td>UNW, Sydney</td>
<td>HERDSA Sydney, NSW</td>
<td>Showcase presentation: Project Preliminary findings</td>
<td>Tracey Bretag</td>
<td>60</td>
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<tr>
<td>21 August 2017</td>
<td>2 hours</td>
<td>Business Education Research: Academic Integrity Forum</td>
<td>Deakin University, Victoria</td>
<td>Project Preliminary findings</td>
<td>Tracey Bretag</td>
<td>50</td>
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<td>21 August 2017</td>
<td>2 hours</td>
<td>HERDSA Victorian Branch meeting</td>
<td>Swinburne University</td>
<td>Project Preliminary findings</td>
<td>Tracey Bretag</td>
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<tr>
<td>22 August 2017</td>
<td>30 mins</td>
<td>Assessment Integrity and Examinations Forum</td>
<td>Victoria University</td>
<td>Project Preliminary findings</td>
<td>Tracey Bretag</td>
<td>100</td>
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<tr>
<td>22 August 2017</td>
<td>1 hour</td>
<td>ACPET</td>
<td>Brisbane</td>
<td>Pathway Colleges data</td>
<td>Karen van Haeringen</td>
<td>350</td>
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<tr>
<td>19 October 2017</td>
<td>1 hour</td>
<td>Turnitin User Summit</td>
<td>Newcastle, UK</td>
<td>Contract cheating in Higher Education: Findings from a Survey of Australian Students and Staff</td>
<td>Cath Ellis</td>
<td>80</td>
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<tr>
<td>27 October 2017</td>
<td>3 hours</td>
<td>TEQSA Forum to launch Good Practice Note: Addressing contract cheating to safeguard academic integrity</td>
<td>Sydney</td>
<td>Good practice note plus OLT project findings</td>
<td>Tracey Bretag, Cath Ellis</td>
<td>150</td>
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<tr>
<td>1-3 Nov 2017</td>
<td>45 mins</td>
<td>Assoc for Academic Language &amp; Learning Conference</td>
<td>Geelon, Vic</td>
<td>Contract cheating in Higher Education: Findings from a Survey of Australian Students and Staff</td>
<td>Rowena Harper</td>
<td>300</td>
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<tr>
<td>6-7 Nov 2017</td>
<td>40 mins</td>
<td>8APCEI</td>
<td>Uni of Sydney, NSW</td>
<td>Panel on Contract Cheating</td>
<td>Chair: Tracey Bretag</td>
<td>100</td>
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<tr>
<td>6-7 Nov 2017</td>
<td>20 mins</td>
<td>8APCEI</td>
<td>Uni of Sydney, NSW</td>
<td>Report on qualitative data student survey</td>
<td>Sonia Saddiqui, Rowena Harper</td>
<td>30</td>
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<td>Week</td>
<td>Date</td>
<td>Duration</td>
<td>Venue</td>
<td>Details</td>
<td>Speaker(s)</td>
<td>Cost</td>
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<td>25</td>
<td>6-7 Nov 2017</td>
<td>20 mins</td>
<td>8APCEI, Uni of Sydney, NSW</td>
<td>Report on breach data research</td>
<td>Tracey Bretag</td>
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<tr>
<td>26</td>
<td>10 Nov 2017</td>
<td>60 mins</td>
<td>ECU, Perth</td>
<td>Contract cheating in Higher Education: Findings from a Survey of Australian Students and Staff</td>
<td>Karen van Haeringen and Pearl Rozenberg</td>
<td>40</td>
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<tr>
<td>27</td>
<td>29-30 Nov 2017</td>
<td>40 mins</td>
<td>Grand Hyatt, Melbourne</td>
<td>Project Preliminary Findings</td>
<td>Karen van Haeringen</td>
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<td>28</td>
<td>29 Nov – 1 Dec 2017</td>
<td>50 mins</td>
<td>Otago University, New Zealand</td>
<td>Academic integrity generally, with reference to the contract cheating project</td>
<td>Tracey Bretag</td>
<td>200</td>
<td></td>
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<tr>
<td>29</td>
<td>5 Dec 2017</td>
<td>1 hour</td>
<td>Charles Sturt University</td>
<td>Contract cheating in Higher Education: Findings from a Survey of Australian Students and Staff</td>
<td>Cath Ellis</td>
<td>180</td>
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<tr>
<td>30</td>
<td>8 Feb 2018</td>
<td>50 mins</td>
<td>Kings College, London</td>
<td>Contract cheating in Higher Education: Findings from a Survey of Australian Students and Staff</td>
<td>Rowena Harper</td>
<td>6</td>
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<tr>
<td>31</td>
<td>16 Feb 2018</td>
<td>20 mins</td>
<td>Online</td>
<td>Contract cheating in Higher Education: Key project Findings</td>
<td>Rowena Harper</td>
<td>30</td>
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<td>32</td>
<td>5 April 2018</td>
<td>3 hours</td>
<td>Interactive workshop for university staff, UniSA</td>
<td>Workshop with staff from SA universities, to disseminate findings and develop resources for the sector</td>
<td>Tracey Bretag, Rowena Harper</td>
<td>25</td>
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<tr>
<td>33</td>
<td>13 April 2018</td>
<td>3 hours</td>
<td>Interactive workshop for university staff, University of Western Australia</td>
<td>Workshop with staff from WA universities, to disseminate findings and develop resources for the sector</td>
<td>Rowena Harper</td>
<td>25</td>
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<td>34</td>
<td>18 April 2018</td>
<td>3 hours</td>
<td>Interactive workshop for university staff, Victoria University</td>
<td>Workshop with staff from VIC universities, to disseminate findings and develop resources for the sector</td>
<td>Tracey Bretag</td>
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<td>35</td>
<td>19-20 April 2018</td>
<td>25 mins</td>
<td>Building capacities: DASSH Associate Deans’ Learning and University of Sydney</td>
<td>Latest analysis of project findings</td>
<td>Sonia Saddiqui</td>
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<td>Event</td>
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<td>Presenter(s)</td>
<td>Fee</td>
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<td>36</td>
<td>9 May 2018</td>
<td>3 hours</td>
<td>Interactive workshop for university staff</td>
<td>UNSW</td>
<td>Workshop with staff from NSW universities, to disseminate findings and develop resources for the sector</td>
<td>Cath Ellis</td>
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<td>37</td>
<td>16 May 2018</td>
<td>3 hours</td>
<td>Interactive workshop for university staff</td>
<td>Griffith University</td>
<td>Workshop with staff from QLD universities, to disseminate findings and develop resources for the sector</td>
<td>Karen van Haeringen</td>
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<td>38</td>
<td>7-8 May 2018</td>
<td>3 hours</td>
<td>European Network for Academic Integrity Development Workshop</td>
<td>Ephesus, Turkey</td>
<td>Project findings and resources</td>
<td>Tracey Bretag</td>
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<td>39</td>
<td>9-11 May 2018</td>
<td>50 mins</td>
<td>Plagiarism Across Europe and Beyond Conference</td>
<td>Ephesus, Turkey</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
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<tr>
<td>40</td>
<td>22 May 2018</td>
<td>1 hour</td>
<td>LSRI Research Seminar Series</td>
<td>University of Nottingham, UK</td>
<td>Dissemination of project findings</td>
<td>Phil Newton</td>
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<td>41</td>
<td>6 June 2018</td>
<td>3 hours</td>
<td>Project-specific workshop</td>
<td>Middlesex University, UK</td>
<td>Using tools and findings to enhance academic integrity</td>
<td>Phil Newton</td>
<td>25</td>
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<td>42</td>
<td>6 June 2018</td>
<td>20 mins</td>
<td>University of Adelaide</td>
<td>Adelaide</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
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<tr>
<td>43</td>
<td>7 June 2018</td>
<td>1 hour</td>
<td>HEQN Assessment, Integrity, Review</td>
<td>Melbourne</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag and Rowena Harper</td>
<td>200</td>
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<td>44</td>
<td>20 June 2018</td>
<td>1 hour</td>
<td>Turnitin online</td>
<td>Online</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
<td>200</td>
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<td>46</td>
<td>3 August 2018</td>
<td>50 minutes</td>
<td>Education Special Interest Group Forum, Australian Society of Mico-Biologists Conference</td>
<td>Brisbane</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
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<td>47</td>
<td>9 August 2018</td>
<td>30 minutes</td>
<td>Studiosity Symposium</td>
<td>Sydney</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
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<tr>
<td>48</td>
<td>13 August 2018</td>
<td>2 hours</td>
<td>Flinders University First Year Community of Practice</td>
<td>Adelaide</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
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<td>49</td>
<td>16 August 2018</td>
<td>1 hour</td>
<td>CQ University</td>
<td>Rockhampton CQ University – F2F and online</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
<td>100</td>
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<td>50</td>
<td>20 Sept</td>
<td>30</td>
<td>Chairs of Academic Board –</td>
<td>Melbourne</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
<td>60</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Duration</td>
<td>Event Description</td>
<td>Location</td>
<td>Presenter</td>
<td>Time</td>
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<tr>
<td>22 October 2018</td>
<td>30 minutes</td>
<td>Chairs of Academic Board – Australian universities</td>
<td>Adelaide</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
<td>30</td>
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<tr>
<td>24 October 2018</td>
<td>30 mins</td>
<td>University Governance and Regulations Forum</td>
<td>Brisbane</td>
<td>Latest analysis of project findings</td>
<td>Tracey Bretag</td>
<td>60</td>
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</tbody>
</table>

Total number of countries involved: 5

Total number of participants: 4,228
Appendix E: Media coverage


3AW Melbourne and 5AA Adelaide, Interview with Tracey Bretag – contract cheating research, 9 May.

ABC Radio Adelaide (2018). Interview with Tracey Bretag - plagiarism in universities and other cheating methods that educators are having to manage, 13 June.


Campus Review (2018). Plagiarism, not cheating, 1 November.


Margan, M. (2016). 'Go to class people!': Academics slam university students who are avoiding class by buying lecture notes online for just a few dollars, The Daily Mail, 3 July.
http://www.dailymail.co.uk/news/article-3671924/University-students-avoid-class-purchasing-study-notes-little-2.html


Matchett, S. (2017). From attrition to integrity, Campus Morning Mail, 24 July,


Radio National Canberra (2018). Interview with Tracey Bretag - Cheating and outsourcing assessment tasks at universities. The interview was also broadcast on eight other stations, including Radio National (Sydney) and Radio National (Melbourne), 28 May.

Radio National (2018). Interview with Tracey Bretag - The rise of online cheating sites and ghost writing at universities, 23 May.


## Appendix F: Updated project impact table

<table>
<thead>
<tr>
<th>Anticipated changes:</th>
<th>During the project</th>
<th>Project completion</th>
<th>12 months post-completion</th>
<th>24 months post-completion</th>
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<tbody>
<tr>
<td><strong>1. Team members</strong></td>
<td>Team members leveraged their institutional leadership roles to pilot the evidence-based framework in their own contexts.</td>
<td>Team members continue to receive invitations to share project findings and outputs at institutional events, conferences and higher education forums.</td>
<td>Team members will be recognised as institutional leaders in assessment design to address contract cheating, implementing the evidence-based framework widely.</td>
<td>Team members’ expertise in assessment design to address contract cheating will continue to be sought out nationally and internationally (e.g. keynotes and consultation).</td>
</tr>
<tr>
<td><strong>2. Immediate students</strong></td>
<td>Participating students in team members’ context benefitted from improved assessment design. Students provided feedback for ongoing refinement and adaptation of resources at the institutional level.</td>
<td>Students’ learning outcomes within the project team members’ immediate contexts have benefitted from improved assessment design.</td>
<td>Students’ learning outcomes across the project team members’ institutions will benefit from improved assessment design.</td>
<td>There will be increased awareness of the ethical issues of contract cheating and a corresponding reduction in students using third parties to complete assessments.</td>
</tr>
<tr>
<td><strong>3. Spreading the word</strong></td>
<td>Team members shared outcomes via the project website, social media, institutional forums and professional networks. 52 presentations made to 4,228</td>
<td>Project outcomes continue to be disseminated via presentations at academic forums. Ongoing interaction via the website and followers on social media.</td>
<td>Dissemination of outcomes and sharing of evidence-based resources via website and academic publications relevant to project team members’ networks.</td>
<td>Ongoing contribution to national and international forums addressing issues around assessment design, language and learning, higher education and academic integrity.</td>
</tr>
<tr>
<td>4. Narrow opportunist ic adoption</td>
<td>Evidence of understanding by stakeholders within team members’ immediate contexts (eg faculty) relating to issues of contract cheating and assessment design.</td>
<td>Team members have influenced a majority of staff in their context to effect change in assessment design.</td>
<td>All new and reviewed programs will refer to the project outcomes as part of the process of designing assessment tasks.</td>
<td>Stakeholders within team members’ contexts report increased dialogue about contract cheating and students’ reduced use of third parties to complete assessment.</td>
</tr>
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</tr>
<tr>
<td>5. Narrow systemic adoption</td>
<td>Pilot of project outcomes have been incorporated in a long-term strategic plan for systemic adoption within team members’ own contexts.</td>
<td>Assessment design advice is incorporated into the role of Academic Integrity leaders (eg. Academic Integrity Officers, Academic Deans) within team members’ institutions.</td>
<td>Improved assessment practices will be embedded across a whole program, faculty or school.</td>
<td>Faculty and/or institutional assessment policy has been influenced by project outcomes.</td>
</tr>
<tr>
<td>6. Broad opportunist ic adoption</td>
<td>Nationwide tour resulted in individuals at various universities changing assessment practices to assure academic integrity in their own contexts.</td>
<td>Project outcomes are being used by Universities across the sector to assess the quality of their assessment processes in relation to academic integrity.</td>
<td>Various universities use project outcomes relating to assessment design and academic integrity in staff induction, professional development, performance management and promotion criteria.</td>
<td>Project outcomes used by a variety of universities to challenge legality of cheat sites marketing their students’ work.</td>
</tr>
<tr>
<td>7. Broad systemic adoption (the aim of this project)</td>
<td>Project team leveraged reference group members and extended networks to influence institutional assessment policy across the sector.</td>
<td>Project team have continued to collaborate with professional networks and Universities Australia to incorporate project outcomes in national standards.</td>
<td>Project outcomes used as reference points for higher education sector quality audits in relation to academic assessment design to address contract cheating.</td>
<td>Project outcomes used by Australian higher education sector (specifically TEQSA and the Dept of Education and Training) to lobby for third party cheat sites to be made illegal. Draft legislation was released to the sector 7 April 2019.</td>
</tr>
</tbody>
</table>