Building on research and established practice, there is a consensus that a holistic institutional approach is necessary to promote the values of academic integrity and address student academic misconduct (Bertram Gallant, 2008; Bretag et al., 2018; Macdonald and Carroll, 2006; Morris, 2018; Morris and Carroll, 2016). This synthesis unpacks this recommendation for higher education institutions and considers evidence-informed strategies and interventions. It is emphasised that the driving theme of an approach is educational and should involve working in partnership with students (Bretag, 2020) where targeted initiatives or campaigns are run. The key elements of a holistic approach involve the following.

1. Academic integrity policy: developing, implementing and evaluating policy, including the use of technology to assist in identifying potential cases.

2. Students’ understanding and literacies: ensuring students acquire an understanding of academic integrity principles and assessment standards, as well as academic skills.

3. Assessment practices: employing diverse forms of assessment for learning, including determining how assessment tasks can be designed to mitigate academic misconduct.

4. Professional development: providing opportunities for staff to deepen their understanding of the complexity of academic integrity concerns, to enable the sharing of good practice in working with students and identifying possible cases of academic misconduct.

These four areas are considered in turn in the following sections.

1. **ACADEMIC INTEGRITY POLICY**

   Policy review, development and implementation are pivotal in an institutional approach, as academic integrity policy serves a number of key purposes:

   • to promote and instill values and principles of academic integrity;

   • to provide guidance for staff and students on the different forms of academic misconduct;

   • to help ensure that there is consistency, equity and fairness in procedure and decision-making for managing cases of academic misconduct, including the application of sanctions or penalties;

   • to describe how specific technology, such as a text-matching tool is used to assist in the identification of potential cases of academic misconduct and/or how they can be used by students formatively as part of developing academic skills.

   Research has identified how policy can be designed to be exemplary, characterised by being accessible (e.g. easy to find and read); encapsulating a strong institutional commitment to academic integrity values and practices; detailing responsibilities of stakeholders; and providing a comprehensive coverage of process and penalties, including the methods for reporting and recording (Bretag and Mahmud, 2016). It is also clear that consideration is needed to ‘bring policy to life’ and develop a shared understanding of policy amongst staff and students, which may involve appointing academic integrity champions or specialists at the school or departmental level (Bretag and Mahmud, 2016; HEA, 2011; Morris and Carroll, 2016):

   ‘Understanding and take up of policy and procedures will be enhanced by holding interactive events, such as forums and workshops, so that staff can discuss issues and review complex ... cases and/or the criteria used in determining penalties’

   (Morris and Carroll, 2016, p. 460)
Concerns, however, can emerge as staff realise that processes may be onerous in terms of time and documenting evidence, and there can be a lack of formal reporting or inconsistency in applying policy (Birks et al., 2020). It is vital that policy development is evaluated, with centralised resource allocated to support effective implementation. It is possible that students’ knowledge about policies and expected penalties may work as a prevention strategy with regard to deterrence; Brimble (2016), for example, draws on research to consider how students’ beliefs that there is a lack of reporting or sanctions may contribute to students choosing to engage in unacceptable practice.

It is likely that the terminology employed in policy matters. How are student behaviours described? There should be a positive emphasis on the significance of academic integrity and good academic practice, and care in how different forms of academic misconduct are described and articulated. For example, ‘academic integrity breach’ might be used instead of ‘cheating’ (see Bretag and Mahmud, 2016). Recent work investigating students’ informal and formal outsourcing of assignments has recommended that institutions reconsider their use of the term contract cheating, and instead use ‘assessment or assignment outsourcing’ to delineate the possible types of behaviours (Awdry, 2021).

It is recognised that an institution’s adoption of text-matching software to assess the authenticity of student work can also act as a prevention strategy for academic misconduct or a deterrent from engaging in plagiarism, but research findings in this regard are inconclusive (del Mar Pàmies et al., 2020). Policy can be developed to include detail on how technology is employed in an institution to help ensure academic integrity standards. However, it is clear that the use of technology, such as text-matching software, cannot provide a straightforward remedy to the issue of student academic misconduct (Sutherland-Smith, 2008); rather, careful consideration should be given to the purpose and effective use of technology by staff and students, as part of a holistic institutional approach.

Although text-matching software is widely recognised as a tool in the identification of possible incidences of plagiarism or collusion, Weber-Wulff (2016) has been cautious: ‘They can only deliver evidence that must be evaluated ... in order to determine if a text is a plagiarism or not’ (p. 636). This researcher has also questioned the value of students using text-matching software as a means to develop their academic writing skills (Weber-Wulff, 2016). This is in contrast to perspectives that have recognised the educational benefits of students using such tools to improve their understanding of citation and referencing in academic writing (e.g. Sutherland-Smith, 2008).

In response to the pandemic, higher education institutions have had to make rapid shifts in assessment practice, with a move from invigilated exams to online timed exams or alternative assessment formats, such as take-home exams (Buckley et al., 2021; Padden and O’Neill, 2021; Reedy et al., 2021). This has led institutions to consider the use of proctoring software in exams to address concerns that students may engage in academic misconduct, such as collusion or accessing resources that are not allowed during an online exam (Padden and O’Neill, 2021; Reedy et al., 2021). However, it has been highlighted that online proctoring is problematic with regard to issues of equity and privacy (Padden and O’Neill, 2021; Reedy et al., 2021) where instead, pedagogically considerations should be raised:

‘Rather than attempting the ... intrusive task of online proctoring ... a better approach may be to design exams where cooperation is allowed, aligning exams more closely [to] workplace contexts where students ultimately will be required to demonstrate their knowledge’ (Reedy et al., 2021, p. 20)

2. STUDENTS’ UNDERSTANDING AND LITERACIES

There have been advances in higher education institutions to ensure that students with a diverse range of backgrounds and experiences are effectively supported to develop academic, assessment and digital literacies, thereby gaining skills for good academic practice (Morris, 2016). This is viewed as vital, given that under-developed practices and skills, particularly in academic writing can mean that a student may inadvertently plagiarise in their assignment (Adam, 2016; del Mar Pàmies et al., 2020; Morris, 2016; Sutherland-Smith, 2008) because, for example, they have not effectively kept track of the sources they have read or been confused as to what should be cited in their work.

Formative and developmental opportunities can take many forms, such as online modules, workshops or study guides and may be offered as part of induction activities. They may also be adapted to be timely and relevant to different stages in a programme of study. There is a recognition that interventions are often designed to be generic, so that they are suitable for students studying in a range of subjects, but ideally, the strategy should be to make academic skills development integral to subject curriculum (Morris, 2016).

There has also been an impetus for academic integrity education in which students across an institution are required or encouraged to take an online module on academic integrity, developing good academic practice or avoiding plagiarism (Bretag and Mahmud, 2016; Morris, 2016; Sefcik et al., 2020). Amongst staff, however, it has been found that ‘stand-alone modules are considered less effective than academic integrity education entrenched in the curriculum’ (Birks et al., 2020, p. 9). Sefcik and associates (2020) have recommended a collaborative approach in the development of academic integrity programs, which involves a range of staff roles and students. Collaborative working to assess and determine a coherent programme of resources and support across an institution could also help to establish how integrated academic integrity education (including academic skills development) at programme or subject level can be complementary to a generic academic integrity module that students complete (Morris, 2016).

Trends in the use of academic integrity modules have been identified by research involving staff at 44 institutions in Australia and New Zealand, focusing on roles with a remit or responsibility for academic integrity within an institution (e.g. pro vice-chancellors, directors, managers) (Sefcik et al., 2020). These researchers found that institutions tended to employ a stand-alone module (59%), with 16% having the program embedded as part of the curriculum. With regard to coverage, it was found that, in the main, modules commonly focused on plagiarism, referencing, policies and the responsibilities of students, but only 60-70% of modules covered the topics of academic integrity values, risks to integrity and outsourcing assignments (Sefcik et al., 2020).
Interestingly, many of the academic integrity modules had a required assessment (63% of institutions, including 65% requiring “pass/fail”, 35% “scored assessment”), but three-quarters of institutions reported that no feedback was given relating to the students’ assessment. Although students tended to be supportive about completing modules (56%), completion rates were not necessarily known or documented by institutions (17% “accurately known”). Eleven institutions made use of sanctions to encourage completion, but only 18% of these reported sanctions as being ‘very effective’ in reducing student academic misconduct (37% (4) reporting ‘moderately effective’) (Sefcik et al., 2020).

Based on literature (Bretag, 2020; Bretag and Mahmud, 2016; Morris, 2016; Sefcik et al., 2020), the following strategies to enhance academic integrity education are recommended:

- develop a coherent provision that comprises a cross-institutional academic integrity module, with complementary tutorials, workshops and guidance that are designed to be relevant at faculty, school or programme level, and are aligned to academic literacies development integrated in subject curriculum;
- ensure that there is an emphasis on ethics and the values of academic integrity, and the practices that derive from this positioning, as well as coverage reflecting contemporary concerns, such as informal and formal sharing of work and outsourcing of assignments;
- establish centralised resource to rationalise and coordinate student engagement in academic integrity education, including recording data on module completion, which can inform evaluation activity to assess the impact of interventions on the incidence of academic misconduct.

### 3. ASSESSMENT PRACTICES

There has been a considerable focus on improving assessment practices in higher education (e.g. Clegg and Bryan 2019; HEA, 2012; Jessop and Tomas 2017; Sambell, McDowell and Montgomery 2013), including practical strategies on how to design assessment in ways that can help to minimise the possibilities of academic misconduct, particularly plagiarism and collusion (e.g. Bretag et al., 2019; Hrasky and Kronenberg, 2011; Morris, 2016). Advice has pointed to the importance of devising assessments aligned to assessment for learning principles, including judicious use of diverse assessment, authentic tasks and individualised assignments (see Watt Works Quick Guide 21). It is also important that students’ assessment and feedback literacy is supported through activities making use of assignment briefs, marking criteria and peer-review, for example (see Watt Works Quick Guide 8).

In general, however, there has been limited work on assessing the impact of such strategies with regard to the incidence of academic misconduct (Bretag et al., 2019; Morris, 2018). Further, it is clear that diverse forms of assessment can be outsourced, including project reports, presentations and critical reflections, in short timescales if required (Lines, 2016; Newton and Lang, 2016). This has led researchers to explore, through staff and student surveys, the possibility of contract cheating in relation to different assessment strategies (Bretag et al., 2019). However, findings suggest that:

> ‘there are no assessment tasks that can, in themselves, eradicate the perceived likelihood of contract cheating among students’

(p. 688)

However, there are assessment formats, that from a student perspective are ‘least likely’ to be outsourced: tasks completed in class, personalised and unique tasks, written tasks followed by a viva, and reflections on placements (Bretag et al., 2019). Based on these findings, three of these types of assessment are summarised in Table 1.

Although traditional invigilated exams can be seen as an answer to preventing student academic misconduct, they are not. Evidence points to how under exam conditions, students make use of tools that are not permitted, such as smart watches or hiding notes (Birks et al., 2020; Harris et al., 2020).

<table>
<thead>
<tr>
<th>Form of assessment</th>
<th>Key considerations</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral presentations or an assignment followed by a viva</td>
<td>Assessment of verbal skills seen as authentic and work-related</td>
<td>Not necessarily scalable for large cohorts; can involve opportunities for practise and formative feedback</td>
</tr>
<tr>
<td>Individualised assignment, drawing on unique experience</td>
<td>Can be particularly engaging and meaningful for students</td>
<td>Can highlight the value of such assignments to students; may minimise opportunities for collusion</td>
</tr>
<tr>
<td>Assignment involving reflection on placement or practical work</td>
<td>Can be valuable in developing evaluative judgement and understanding links between theory and practice</td>
<td>Assessing reflections may not be straightforward; self-assessment and/or peer review activities can support development</td>
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**Table 1. Forms of assessment that may mitigate the likelihood of outsourcing**

Based on forms of assessment ‘least likely to be outsourced’ (Bretag et al., 2019)
The impact of the pandemic in 2020 has meant that higher education institutions have made changes in the modes of programme delivery, including how exams and other assessments are designed and delivered (Buckley et al., 2021; Curtis et al., 2021; Pitt, 2021; Reedy et al., 2021). With the move to predominately remote and online delivery, there have been concerns that these changes will have implications for academic integrity issues and the nature of academic misconduct, such as an increase in cases of collusion in online exams (Curtis et al., 2021; Harris et al., 2020). However, based on a large-scale survey at a USA university and in comparison with a previous study of students’ academic misconduct at institutions in the USA and Canada, it was found:

‘that at a large online university, students are no more likely to engage in most forms of cheating than … students attending residential institutions’

(Harris et al., 2020, p. 431)

In a study exploring the experiences at three Australian universities of the transition to using online exams in response to the pandemic, it was found that there was a mismatch between staff and student perceptions (Reedy et al., 2021). It was identified that students thought it was more difficult to cheat in online exams compared to conventional invigilated exams, whereas staff were concerned, thinking ‘it was easier to cheat in online exams’ (p. 11). Reedy et al. (2021) suggest that guidance for students is needed to communicate expected standards of behaviour during online exams, with consideration given to the terms and instructions used (e.g. ‘open book’ may not relay to students what resources they are allowed to use).

4. PROFESSIONAL DEVELOPMENT

Professional development opportunities can be valuable for staff in consolidating their understanding of academic integrity issues, rethinking assessment strategies or discussing practice in identifying possible instances of academic misconduct as aligned to institutional policy (Birks et al., 2020; Eaton et al., 2019; Morris, 2020; Slade et al., 2019). These opportunities may take the form of seminars, workshops or online forums to promote a shared understanding of academic integrity policy and practice and entail supporting guidance.

Curtis and his colleagues (2021) describe the design and evaluation of an expert-led academic integrity workshop and associated toolkit that was delivered 19 times across Australia (to a total of 452 participants). The topics of this national workshop included exemplary policy and practice, institutional strategies and planning action relevant to participants’ institutions. The benefits of this workshop were clear from the positive feedback received from participants, as well as enhanced awareness of the issues covered in the workshop as indicated through pre- and post-event surveys (Curtis et al., 2021).

In the case of assignment outsourcing, workshops can be valuable to think through assessment practices in the light of this issue and propose how assessments might be redesigned in ways that can help to ensure students complete authentic work (Slade et al., 2019). This workshop approach involved academic developers and curriculum designers working together to consider a variety of example assessment tasks and identify design strategies that enabled ‘the verification of student authorship in assessment tasks’ (p. 22). Key strategies included employing additional stages in a task and requiring that students provide evidence of their work or contribution as part of this (e.g. with a video asset or through a viva), and changing the format of an assignment so that a student’s responses are linked to activities undertaken in class (Slade et al., 2019).

An emerging theme in recent literature is the importance of educators discussing with students the principles of academic integrity and what is expected of them in individual study and collaborative practices, and in authoring their assignments (Awdry, 2021; Eaton et al., 2019; Rogerson, 2017):

‘it is imperative to focus on having more effective conversations in universities to proactively encourage ethics and honesty, rather than focusing on deterrent actions or conversations on ... formal methods of outsourcing’

(Awdry, 2021, p. 230)

Conclusions

An institutional approach to promote academic integrity and manage student academic misconduct must be educational in focus and be underpinned by what is known about academic integrity issues within an institution and more widely through international research. A recommended approach for institutions involves four different kinds of interventions: reviewing and evaluating policy; academic integrity education; assessment design; and professional development for staff to deepen understanding of academic misconduct and to explore good practice for discussions with students about contemporary academic integrity concerns.

KEY POINTS

A holistic institutional approach for improving academic integrity involves the following four elements:

• Developing, implementing and evaluating effective academic integrity policy.
• Helping students to develop their academic skills and their understanding of assessment expectations and standards.
• Redesigning assessments for learning in ways that might minimise the motivation and opportunity for student academic misconduct.
• Providing opportunities for academic staff to consolidate their understanding of academic integrity issues, and share challenges and review practice.

This synthesis has looked at existing evidence on strategies and interventions to address student academic misconduct. Companion syntheses on the extent of student academic misconduct and explanatory factors contributing to this issue can be found at https://lta.hw.ac.uk/resources/assessment-and-feedback/
REFERENCES AND OTHER USEFUL READING


The International Centre for Academic Integrity (ICAI) “defines academic integrity as a commitment to six fundamental values: honesty, trust, fairness, respect, responsibility, and courage … More than merely abstract principles, the fundamental values serve to inform and improve ethical decision-making capacities and behavior” (ICAI, 2014, p. 4).

1 Policy is likely to be comprised of a coherent set of documentation, including guidance for staff and students. The term ‘academic integrity policy’ is used here to refer to what may be known in institutions as ‘student academic misconduct policy’ or relevant parts of assessment regulations.

2 The International Centre for Academic Integrity (ICAI) “defines academic integrity as a commitment to six fundamental values: honesty, trust, fairness, respect, responsibility, and courage … More than merely abstract principles, the fundamental values serve to inform and improve ethical decision-making capacities and behavior” (ICAI, 2014, p. 4).