

## Chapter 2

# Removing the ‘Opportunity’ for Academic Misconduct: A Criminology-Based Framework for Preventing Academic Integrity Problems



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**Abstract** This chapter will explore the relevance of adopting a problem-oriented approach to reducing the opportunity for academic integrity problems. The most effective, sustainable crime prevention strategies have several things in common. They are typically problem-specific, focus on the immediate ‘opportunity’ (environment) within which crime problems have happened in the past, and involve manipulating the existing opportunity structure to make it less suitable for offending. All of this can be done without apprehending offenders, and instead can focus on highly victimised targets and frequently visited crime places. Crime does not displace and there can often be broader prevention-focused benefits than were anticipated through the scope of the targeted intervention. Problem-oriented policing is the name for a theory-based criminological framework intended to develop, implement, and evaluate novel, prevention-focused strategies to address crime problems. The intent of this chapter is to introduce readers to a framework they can use to minimise integrity risks associated with the specific assessment opportunities they are creating. This framework is theory-based, focused on prevention, and does not depend on detection and apprehension.

**Keywords** Academic integrity · Academic misconduct · Prevention · Problem-oriented policing · Situational crime prevention · Crime scripts

This chapter outlines a methodology for preventing non-random, opportunity-based academic integrity problems that translates what works in a policing context: the problem-oriented policing (POP) framework. Initially, the consistent patterns of non-randomness of crime across time, space, and people will be explained, along with justification of the useful relevance of these patterns for responding to crime problems in targeted, prevention-focused ways. Next, an overview of POP is

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provided, with the key components of this methodology outlined. Following this, the relevance of the POP approach for preventing academic integrity issues will be discussed, including details for using this methodology in creative ways to remove opportunities for academic misconduct in tertiary education contexts. The chapter concludes by emphasizing that POP is a problem-solving framework (as opposed to a solution in its own right) that must be committed to in a systematic, iterative, and ongoing manner to remove opportunities for academic misconduct.

This chapter aims to translate an existing body of crime prevention research to an academic misconduct context and demonstrate the relevance of other recent work that discusses the imperfect nature of measurement (Clare & Rundle, 2022; Curtis & Clare, 2023) and prevention (Baird & Clare, 2017; Clare, 2022; Hodgkinson et al., 2016) with respect to academic integrity breaches. The POP approach has worked for over 40 years to reduce a wide range of crime problems and its success has not depended on detection, apprehension, and punishment of offenders (Tilley & Burrows, 2010). Meta-analysis has demonstrated that POP implementation results in a 34% decline in crime/disorder in treatment areas/groups relative to controls (Hinkle et al., 2020). This review of POP studies also found there was no evidence that targeted interventions simply create an equivalent problem somewhere else (termed within the crime prevention literature as ‘crime displacement’) and suggestion POP can have a positive impact on issues that extend beyond the focus of the targeted interventions (termed within the crime prevention literature as a ‘diffusion of benefits’, Hinkle et al., 2020). Those interested in the broader history and development underpinning POP, are strongly encouraged to review the seminal practitioner-focused, “Crime analysis for problem-solvers in 60 small steps” by Clarke and Eck (2005).

## **Crime Is Non-Random Across Time and Space, Which Is Useful for Prevention**

Criminological schools of thought are many and varied. One major source of division relates to the focus: criminality (the reasons for offending) versus crime (the where, when, and what of the offence). The focus of this chapter is largely on the latter – what can be done to understand the proximal opportunity structure that influences the non-random distribution of crime (and by extension, academic misconduct) across time, place, targets, and actors (both offenders and victims)? As Felson and Clarke (1998) explain, “no single cause of crime is sufficient to guarantee its occurrence; yet opportunity above all others is necessary and therefore has as much or more claim to being a ‘root cause’” (p.1).

Empirical findings consistently demonstrate the following patterns. The norm is compliance rather than offending, and even highly motivated offenders only choose to offend when they think the opportunity is right (Eck, 2015). A very large proportion of crime is committed by very few criminals (Martinez et al., 2017)

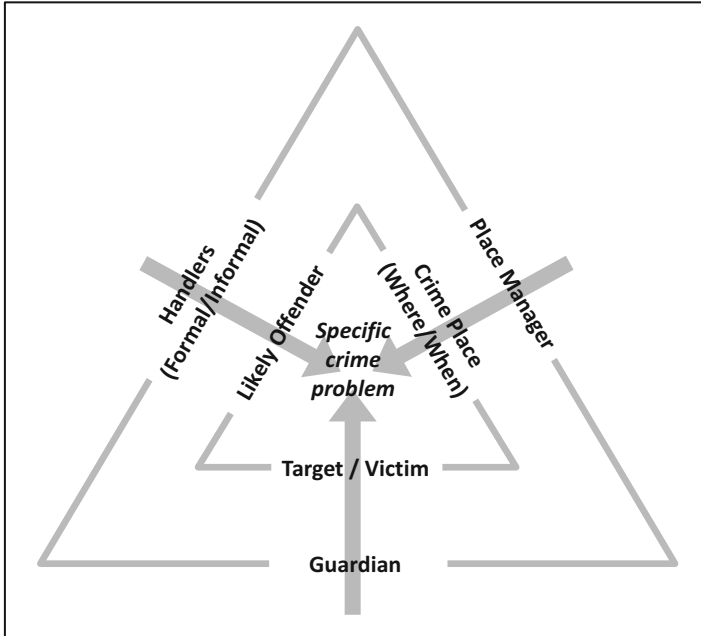
and committed against a small group of highly victimised people/places (SooHyun et al., 2017). With these patterns in mind, Felson and Clarke (1998) coined the phrase "opportunity makes the thief", leading them to propose the ten principles of crime opportunity.<sup>1</sup> The essential contribution of this opportunity-focused perspective relates to the active, context-specific choice that is made about offending. As Eck and Eck (2012) explain, if offending propensity is stable (and high), the decision to offend still cannot be made without an appropriate opportunity. Alternatively, if offending propensity is variable, the immediate context can simultaneously present offending opportunities and temptations for offending. Either way, the immediate situation influences the risk of crime.

This opportunity-based explanation for crime is underpinned by two compatible theories: the rational choice perspective (Clarke & Cornish, 1985) and routine activity theory (Cohen & Felson, 1979). For a comprehensive, contemporary review of the rational choice perspective, readers should consult Cornish and Clarke (2017). In brief, this perspective assumes that offenders make the 'best' choices available to them in the specific time and place. These are 'bounded' rational choices because they are constrained by offender-related factors, such as cognitive capacity and the incompleteness of the information they are drawing from, and context-related factors, such as limited time to choose and the immediate perceived ratios of cost (risk/effort) and benefits (rewards) for their choices. The immediacy of the cognitive calculus weighing risk-reward-effort is considered to have a much greater influence on offending choices, in comparison to longer-term consequences if punished. Importantly, the rational choice perspective considers anyone could offend, provided they encountered an offending opportunity that provided a boundedly rational risk-reward-effort ratio that made sense to them. Furthermore, this perspective considers crime events are influenced by factors that occur before, during, and after the crime (like a script in a play, Leclerc, 2017), with offending decisions varying at each stage of the script (more about this, below).

The second framework, routine activity theory, was first proposed by Cohen and Felson (1979). This theory helps explain the non-random distribution of crime across time and space, by proposing that the minimum requirements for a crime to occur are the temporal and spatial convergence of three elements: a likely offender (anyone with the motivation and capacity to commit a crime), a suitable target/victim (deemed vulnerable and accessible by the likely offender), and the absence of a capable guardian (able to detect and act when a crime might be occurring). Routine activity theory forms the basis of the problem-analysis triangle (Eck, 2003), which

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<sup>1</sup>In brief, from Felson and Clarke (1998). *Opportunity makes the thief: practical theory for crime prevention – Police Research Series, Paper 98*: (1) opportunities play a role in causing all crime; (2) crime opportunities are highly specific; (3) crime opportunities are concentrated in time and space; (4) crime opportunities depend on every day movements; (5) one crime produces another; (6) some products offer more tempting crime opportunities; (7) social and technological changes produce new crime opportunities; (8) opportunities for crime can be reduced; (9) reducing opportunities does not usually displace crime; and (10) focused opportunity reduction can produce wider declines in crime .



**Fig. 2.1** The problem analysis triangle. (Based on versions published in Clarke & Eck, 2005; Eck, 2003)

demonstrates the potential for ‘controllers’ to operate on each side of this triangle to reduce the opportunity for the crime problem to occur (see Fig. 2.1, with controllers represented as handlers, guardians, and place managers). As Eck (2003, p. 89) explains,

Controllers are at the heart of any useful theory of problems. Or to put it more precisely, problems are created when offenders and targets repeatedly come together, and controllers fail to act. It is the breakdown of controllers that is the most important feature of this explanation, as offenders and targets often come together without any problem being created. (p. 89)

The potential to influence the immediate risk-reward-effort of academic misconduct and the breakdown of controllers within the intersection of offenders-targets-places will all be revisited later in this chapter (with some POP-related examples focused on academic misconduct problems). For now, however, it is important to briefly summarise the take-home messages from this section. Crime is always non-randomly distributed across time, place, offenders, and targets. Opportunity-based theories that focus on crime (rather than criminality) are best-placed to explain these non-random patterns. Through the insight provided by these theories, the non-randomness of these problems is very useful, because prevention efforts can be targeted and they can focus on removing existing opportunities for crime. The flow-on effect of this is that crime is not inevitable. With this summary in mind, the next section explains the development of the POP framework for targeted,

partnership-based prevention strategies that can be highly effective and sustainable. Most importantly, these positive-POP results are dependent on the removal of crime opportunities, rather than requiring increased detection, apprehension, and prosecution. In a crime context, this has benefits for society, as it results in less offending/offenders, fewer victims, and less costs to the criminal justice system. Shifting contexts (and deviance) to academic misconduct, the flow-on effects of successful POP-style implementation within a tertiary setting would be fewer students engaging in misconduct, those who do commit misconduct doing so less often/less seriously, fewer assessment items being targeted for misconduct, and reduced demand on academic misconduct processes within universities: all without depending on catching more people doing the wrong thing. Next, the POP-framework is outlined to explain why this approach is different from traditional policing approaches and how it works. In the section after that, the POP is translated for academic misconduct purposes.

## **A Framework for Preventing Non-Random, Opportunity-Based Crime Problems: Problem-Oriented Policing**

During consecutive decades of rapidly increasing crime rates in the United States, Goldstein (1979) released, "Improving policing: a problem-oriented approach." Goldstein was motivated by finding new and better ways to control crime and was motivated by seeking to change the conditions that lead to crime. POP was proposed as a framework for improving police capacity to prevent crime and meet community expectations. As an alternative to the policing strategies being emphasized in the late 1970s (i.e., increased staffing, use of undercover operatives, and increasing agency efficiency), Goldstein's vision for POP advocated for police to develop innovative responses to discrete types of policing problems, with these novel approaches grounded in analysis, preventative in focus, not exclusively dependent on the criminal justice system, and thoroughly evaluated to see if they worked. Goldstein explained that this shift in focus would require a fundamental rethinking of what the basic unit of police work should be: moving away from a crime/case/call for service/incident, and moving towards 'problems': a term that Clarke and Eck (2005, p. 40) operationalised as a "recurring set of related harmful events in a community that members of the public expect the police to address." (p 40).

Repeatedly returning to the same place or dealing with the same problems caused by the same offenders and unable to deal with call volumes has a detrimental impact on police morale (Clarke & Eck, 2005). Goldstein's (1979) alternative was to propose a four-stage approach: (1) scan existing data to look for meaningful patterns of related problems that police were dealing with; (2) analyse these problems, looking for causes (including acknowledging the failures of what is already being done to respond); (3) develop new, creative ways to respond to these problems; and

(4) assess the impact of the new interventions: were they implemented and did they work (with a negative response to either/both of these triggering another problem-focused attempt). This POP implementation process has been termed the SARA model: scanning, analysis, response, and assessment (Clarke & Eck, 2005).

The following section will translate the POP/SARA framework to the academic integrity context. Before that, however, it is important to emphasize some caveats, all of which are expanded by Clarke and Eck (2005). POP is typically used when ‘traditional’ responses have failed. As a result, it is unreasonable to expect quick and complete fixes. Committing to the SARA process will rarely be linear and will often involve multiple feedback loops through the four stages. For example, detailed scanning and analysis may require a revisiting of the problem-focus. This, in turn, may lead to creative searches for additional data to use for future analysis. Post-intervention, failure to influence the problem may require restarting the whole process, revisiting the selected responses, or focusing on implementation issues. Those seeking to utilise this framework must commit to all four SARA steps. Resist jumping directly to responding without clarifying and understanding the problem, as this will likely lead to suboptimal, ineffective solutions and wasted time/resources. Also avoid discarding the approach if it does not work the first time. Remember that what is already being done is failing and this framework is a better alternative for finding effective, sustainable solutions moving forwards, relative to business as usual.

## **Adapting Problem-Oriented Policing to Academic Integrity**

In exploring options for prevention and the importance of context/opportunity, here is a brief list of some important academic misconduct characteristics to remember. First, based on population prevalence estimates, engaging in academic misconduct to some extent is ‘normal’ (Curtis & Vardanega, 2016), which is consistent with the patterns for deviance more broadly. Second, the volume of misconduct tends towards the minor end of the scale, such as incorrect paraphrasing as opposed to submitting contract cheated assignments (Bretag et al., 2019). Third, students cheat more on some types of assessments than others (Bretag et al., 2019). Fourth, easy opportunities to cheat increase the likelihood of students engaging in academic misconduct (Hodgkinson et al., 2016). Further to this, the specific student context matters, with research demonstrating cross-cultural differences (e.g., Yukhymenko-Lescroart, 2014), variations between academic disciplines (Ottie Arhin & Jones, 2009), and differences between years of study (e.g., Khalid, 2015). There are also many methods by which students can engage in academic misconduct, some more active than others, and with varying degrees to which individuals can rationalise and neutralise their behaviours (Baird & Clare, 2017; Hodgkinson et al., 2016; Rundle et al., 2019, 2020). In addition to this, each academic institution presents its own, unique academic integrity context, with bespoke policies, guidelines, reporting processes, investigation processes, penalties, and appeals processes. Furthermore,

universities vary in the extent to which they train and support students to act with academic integrity, provide additional assistance to struggling students, integrate/support on-shore international students from diverse language backgrounds, and equip and train academic staff to produce high-quality, low-risk assessments. With these points in mind, this section will expand the context for each of the SARA stages and demonstrate the potential utility of this approach for responding to academic misconduct in a tertiary context.

### ***Scanning: Being Specific About the Problem***

The assumption that disrupting opportunity structures is the best starting point for preventing problems does not imply that there is a single, universal opportunity that applies to all problems: in fact, exactly the opposite (Felson & Clarke, 1998). Each type of problem will be the consequence of a very specific interaction of offender-place-target (relating to the many variables discussed in the previous paragraph). As a result, the starting point for a problem-focused intervention is to be as specific as possible about the unique type of problem that is being targeted. At its highest level, academic misconduct captures a broad range of misleading/deceptive behaviours intended to allow individuals to pass-off academic output as independent and original, when the work was undertaken by a third-party (Hodgkinson et al., 2016). Drilling down within this meta-category, there have been some recent attempts to classify meaningful types of academic integrity issues. Hodgkinson et al. (2016) identified three broad categories of academic dishonesty: plagiarism, cheating on tests, and collusion, each with different problem characteristics and involving different offending strategies. Lim and See (2001) asked students to consider 21 types of academic misconduct, and (looking within 'contract cheating', specifically) Bretag et al. (2019) asked respondents to consider contract cheating with respect to 13 different assessment tasks. Furthermore, the author's university's current misconduct reporting system identifies 23 behavioural variants, distributed across the categories of collusion, cheating, fabrication, falsification, and plagiarism.

When seeking to apply a POP framework to an academic misconduct problem, high-level misconduct category labels like 'plagiarism' are too broad to be useful. Looking back to the original Goldstein guidelines for specifying a POP-problem (Clarke & Eck, 2005), an academic integrity problem could be defined as a recurring set of related harmful integrity events in a tertiary setting that members of the university community expect the university administration to address. In their problem solving guide, Clarke and Eck (2005) outline the CHEERS test for defining a problem. CHEERS asks six questions: (1) who is the community affected by the problem; (2) what harms are created by the problem; (3) what are the expectations for the response; (4) what types of event contribute to the problem; (5) how often do these events recurr; and (6) how are the events similar? The key to developing an optimal POP-intervention is being as specific as possible about the problem being targeted, and these questions assist in enhancing specificity.

To work through an example, within the high-level misconduct label of ‘falsification’, there could be (at least) the following divisions of behaviours: (a) making up records of attendance, participation, or completion, (b) citing non-existent sources, and (c) falsifying information/documents to gain an academic advantage. Within all of these, further meaningful distinctions will exist relating to the types of assessments being targeted, the process for completing the misconduct, and the reasons for the behaviour. The falsification of medical records for extensions on assessments presents a different problem than fabricating academic records to gain entry to postgraduate courses.<sup>2</sup> The CHEERS test will be useful in helping define the clearest POP-problem possible, which then facilitates the assessment phase of the SARA process (outlined in the next section).

### *Analysing the Academic Integrity Problem*

With a clear focus on a specific academic integrity POP-style problem, the next step of the SARA process is to undertake comprehensive problem analysis. Clarke and Eck (2005) explain that this is when the problem is researched (has anyone else dealt with a similar problem?), hypotheses are formulated and tested, and novel data sources are identified. It is useful to consider how the problem is occurring. Within the crime prevention literature, practitioners are encouraged to adopt a ‘think thief’ perspective (Ekblom, 1995: if you were going to commit the offence, contemplate how you would do it, what would deter/encourage you about the current opportunity context, and what would change the opportunity context), with the same being possible in an integrity context by ‘thinking cheat’. Attempting to place oneself in the shoes of the academic misconduct perpetrator can provide insight into how a particular type of misconduct is undertaken. For example, returning to the example of a student who wants to submit falsified medical documentation to gain an unjustified extension, this person must complete a process (including, but not limited to): (1) interacting with a third-party to obtain the medical documentation; (2) submitting the internal documentation to request the extension; and (3) not getting caught for falsifying the documentation. ‘Thinking thief’ exposes the necessary sequence of events required to complete this process (the before, during, and after crime ‘script’ required to successfully complete the misconduct, see Leclerc, 2017, for a comprehensive discussion of this framework within a crime context). Connected to this is the Haddon Matrix for injury prevention (Haddon Jr, 1980), which deconstructs problem contexts into three time periods (before, during, and after the problem event) and examines the role of three different factors in the problem (human involvement, equipment involved, and the physical/social

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<sup>2</sup>Interested readers are encouraged to review: Eaton, Carmichael, & Pethrick (2023). *Fake Degrees and Fraudulent Credentials in Higher Education* (1 ed.). Springer. <https://doi.org/10.1007/978-3-031-21796-8>



environment). As is explained in the next section, these event stages can create opportunity-reducing interventions that can make the offending less rational (increasing risk/effort, reducing reward/provocations, and/or removing excuses), identify controller failures that need to be ameliorated, and expose equipment/processes that is facilitating the problem occurring in its current context.

When thinking about the metrics available to give insight into current levels of a specific problem, it is important to remember that there is no single correct way to measure any form of deviance. Within an academic integrity context, some recent work focused on contract cheating details the range of measures available to those interested in measuring the size of these problems (Clare & Rundle, 2022; Curtis & Clare, 2023). Depending on the specific POP problem, a wide variety of data types will exist, ranging from administrative data relating to integrity reports/findings, talking to whistleblowers, reviewing self-report offending survey responses, monitoring the extent to which the institution's intellectual property is being shared on file-sharing sites, and looking for unusual patterns in student performances within the same unit and across different assessment types (e.g., Clare et al., 2017).

When concluding the assessment stage of SARA it is important to be able to answer some problem-specific questions (Clarke & Eck, 2005). (1) What happened? Including thinking through the crime script involved and the breakdown of the Haddon Matrix components. (2) Where did it happen? Was the problem online, on-campus, a mixture of both, are there specific sections of the University that always/never experience this problem, etc.? (3) When did it happen? A contract cheated essay must be requested, purchased, and then submitted for assessment, involving a number of different times. (4) Who was involved? How many offenders, how many assessment items, how many integrity breaches, was there a person who failed to intervene, did anyone else witness the misconduct in action? (5) Why did the people involved act the way they did? What contextual factors influenced the bounded rationality of the offender and, when there were third-parties involved, why did they behave in the way that they did? (6) How did the perpetrator carry out the misconduct? Each instance of misconduct involves steps between initiation and completion, with perpetrators making decisions throughout the process. These answers will help the implementation of a novel response to the problem, which can be developed by utilising the strategies discussed in the next section.

### ***Responding to the Problem in a Novel, Targeted Way***

This section describes some complementary strategic approaches for developing new ways to respond to specific misconduct problems. First, the 25 techniques of situational crime prevention (SCP) are overviewed. Next, the potential to integrate SCP with the problem-analysis triangle is discussed, along with the benefits of seeking to work in partnerships and to share responsibility for prevention with partners. After this, the benefits of integrating SCP and the problem-analysis triangle with the crime script/Haddon matrix messages are explained.

Motivated by manipulating the opportunities that enable crime, SCP (Clarke, 2017) has been highly successful in preventing crime since the early 1980s. This framework has expanded over time to incorporate 25 techniques that are grouped into five main mechanisms: increasing the risk and effort involved, reducing the reward and provocations for crime, and removing the excuses for doing the wrong thing (see Table 2.1 from Clarke, 2017, for a comprehensive discussion of this framework, and <https://popcenter.asu.edu/> for a collection of successful case studies across a wide range of crime contexts). The intent of these techniques is to throw all appropriate, feasible interventions at a problem in parallel, with Clarke (2017) explaining, “[SCP] is more effective when it adopts a package of measures, each of which is directed to a particular point of the process of committing the crime.” (p. 292).

There have been four attempts to demonstrate the utility of the SCP framework to preventing academic misconduct. First, Hodgkinson et al. (2016) proposed hypothetical ways to use the SCP techniques to address plagiarism, cheating on tests, and collusion. Next, in an applied context and focused on preventing a range of contract cheating behaviours, Baird and Clare (2017) demonstrated the utility of the SCP framework for removing the opportunity for academic misconduct in a business capstone class. Most recently, Clare (2022) outlined how SCP could be used to reduce a range of behaviours that constitute contract cheating and artificial intelligence facilitated academic misconduct (Birks & Clare, 2023). It is beyond the scope of this chapter to reproduce all the summary SCP tables generated across these four attempts, so interested readers are encouraged to review these papers independently.

To provide an example for current readers and to build on the falsification of medical certificates example, Table 2.2 attempts to populate the relevant techniques of the SCP framework. As is clear from this example, specific intervention strategies can be located within more than one technique-mechanism, and not all of the techniques are relevant/useful for addressing this specific misconduct problem. Both of these outcomes are unproblematic from a SCP perspective, as these techniques and mechanisms are not mutually exclusive, and practitioners are not required to use all of them every time they want to respond to a problem.

When utilising these SCP techniques to reduce academic misconduct, practitioners are encouraged to ‘work the triangles’ and seek to shift and share the prevention responsibility. Clarke and Eck (2005) suggest manipulating at least two sides of the problem triangle in as many ways as possible. This would mean operating in parallel to handle likely offenders (high-frequency misconduct perpetrators) better, provide improved management of high-risk assessment items, and seek to reduce repeat ‘victimisation’ (misconduct targeted at the same or very similar assessment items). Keeping in mind what is known about the reasons why students do not cheat (Rundle et al., 2019, 2020, 2023), the SCP framework can be used to reduce the ‘rationality’ of engaging in academic misconduct by doing things like reducing provocations for misconduct (e.g., increasing student supports and using incompleteness of minor, low-stakes assessments as a risk indicator that triggers internal University-led support mechanisms) or increasing the effort involved with undertaking misconduct (e.g., working with staff members to help reduce suitability

**Table 2.1** The 25 techniques of SCP, with crime prevention examples of each technique. (From Clarke, 2017)

Increase effort	Increase risk	Reduce rewards	Reduce provocations	Remove excuses
1. Target harden Steering column locks and ignition immobilizers Anti-robbery screens Tamper-proof packaging	6. Extend guardianship Go out in group at night Leave signs of occupancy Carry mobile phone	11. Conceal targets Off-street parking Gender-neutral phone directories Unmarked armoured trucks	16. Reduce frustrations and stress Efficient lines Polite service Expanded seating Soothing music/ muted lights	21. Set rules Rental agreements Harassment codes Hotel registration
2. Control access to facilities Entry phones Electronic card access Baggage screening	7. Assist natural surveillance Improved street lighting Support whistle-blowers	12. Remove targets Removable car radios Women's shelters Pre-paid cards for pay phones	17. Avoid disputes Separate seating for rival soccer fans Reduce crowding in bars Fixed cab fares	22. Post instructions 'No parking' 'Private property' 'Total fire ban'
3. Screen exits Tickets needed for exit Export documents Electronic merchandise tags	8. Reduce anonymity Taxi driver IDs 'How's my driving?' Decals School uniforms	13. Identify property Property marking Vehicle licensing and parts marking Cattle branding	18. Reduce temptation and arousal Controls on violent pornography Prohibit racial slurs	23. Alert conscience Roadside speed display boards Signatures for customs declarations 'Shoplifting is stealing'
4. Deflect offenders Street closures Separate bathrooms for women Disperse pubs	9. Use place managers CCTV for double-deck busses Two clerks for convenience stores Reward vigilance	14. Disrupt markets Monitor pawn shops Controls on classified ads License street vendors	19. Neutralise peer pressure 'Idiots drink and drive' 'It's OK to say no' Disperse school troublemakers	24. Assist compliance Easy library check out Public lavatories Litter receptacles
5. Control tools/weapons 'Smart' guns Restrict spray paint sales to juveniles Toughened beer glasses	10. Strengthen formal surveillance Red light cameras Burglar alarms Security guards	15. Deny benefits Ink merchandise tags Graffiti cleaning Disabling stolen mobile phones	20. Discourage imitation Rapid repair of vandalism Sensor details of modus operandi	25. Control drugs and alcohol Server intervention programs Alcohol-free events

of previously ‘hot’ assessments, thus reducing risk of revictimization). The university sector should also look for partnership opportunities with other interested parties, such as student associates, tertiary labour unions, the private sector, and governments/tertiary funding bodies. Crime prevention research has demonstrated the most sustainable interventions are those that move beyond a focus on apprehension/punishment and operate in partnership with non-crime agencies (Eck, 2015).

Assessment developers are also encouraged to build on the advice from the crime scripts approach and the Haddon matrix framework (discussed, above). When implementing SCP and working the triangles, remember it is possible to intervene to reduce the opportunity for misconduct (a) before it occurs (e.g., blocking access to known cheating sites or banning medical certificates from known problem providers), (b) during the misconduct decision-making (e.g., remote proctoring of online tests and automated integrity pop-ups when submitting medical certificates online), and (c) after the misconduct occurs (e.g., whistle blowing and monitoring of repeat users of medical certificates across subjects during their course of study).

Finally, those seeking to reduce the opportunity for specific types of academic misconduct using the POP approach can be confident that designing out opportunities to cheat does not mean that compliance with rules gets harder for students who are already doing the right thing. In addition, prevention gains can be achieved without relying on detection, apprehension, and prosecution. This is particularly important in a contemporary misconduct context, at a time of artificial intelligence and large language models, which mean that there is potential for students to submit original (but unacceptable) responses to assessments that would not be detected by text matching software (see Birks & Clare, 2023, for a discussion of this issue with respect to prevention). The next section concludes the translation of the POP framework for the academic integrity context by summarising the main essential elements of the assessment stage of the SARA process.

### ***Assessing the Effectiveness of the Intervention: What Does Success Look Like?***

Clarke and Eck (2005) explain that the final stage of the SARA process is focused on answering two main questions: (1) did the problem decline, and (2) did the intervention cause the decline? In its simplest form, answering these questions requires at least two types of evaluation. The first, a *process* evaluation, is focused on determining if the intervention was implemented as planned. The second, an *impact* evaluation, focuses on the outcomes of the intervention. To return to the example of falsifying medical documents, if the range of strategies proposed in Table 2.2 were intended to be implemented, the process evaluation would monitor to see how well this occurred. An essential element to undertake the impact evaluation is clarity about what success would look like (e.g., fewer people engaging in the problem behaviour, less serious cases of the problem behaviour, less assessments being

**Table 2.2** Potential strategies for responding to falsifying medical documents using the 25 techniques of SCP. (Adapted from Clarke, 2017)

Increase effort	Increase risk	Reduce rewards	Reduce provocations	Remove excuses
1. Target harden	6. Extend guardianship	11. Conceal targets	16. Reduce frustrations and stress Provide additional training and guidance, including optional extra practice of assessments Scaffolding – Building skills and reducing the need to cheat	21. Set rules University regulations, departmental guidelines, and unit/course specific guidelines prohibiting fraudulent medical certificates
2. Control access to facilities	7. Assist natural surveillance Facilitate anonymous peer feedback (whistle blowing)	12. Remove targets	17. Avoid disputes Distribute academic misconduct information	22. Post instructions University regulations, departmental guidelines, and unit/course specific guidelines prohibiting fraudulent medical certificates
3. Screen exits	8. Reduce anonymity	13. Identify property	18. Reduce temptation and arousal Distribute academic misconduct information Scaffolding – Building skills and reducing the need to cheat	23. Alert conscience 'Fake medical certificates breach misconduct policy' Online pop-ups requiring authenticity declarations when lodging forms
4. Deflect offenders Implement routine monitoring of high-frequency users of medical extensions	9. Use place managers	14. Disrupt markets	19. Neutralise peer pressure 'Fake medical certificates make our University sick' signage Facilitate anonymous peer feedback (whistle blowing)	24. Assist compliance
5. Control tools/weapons Pattern matching software used on medical certificates Ban use of certificates from known problem medical practices	10. Strengthen formal surveillance Implement routine monitoring of high-frequency users of medical extensions	15. Deny benefits Enforce misconduct procedures whenever possible Automatic zero for falsifying medical documents	20. Discourage imitation Enforce misconduct procedures whenever possible Publicise enforcement of misconduct procedures	25. Control drugs and alcohol

targeted for the problem behaviour, longer time intervals between the problem behaviour, etc.). This clarity influences what the baseline for the problem is prior to intervention and also determines what needs to be measured before, during, and after the targeted changes are implemented. Remembering the various, imperfect ways of measuring academic misconduct, optimal strategies will likely consider triangulating a range of different metrics to gauge the extent of specific problems over time. Eck (2011) and Clarke and Eck (2005) provided detailed summaries for non-researchers about the types of evaluations that could be designed to assess the outcomes of problem-focused interventions. Randomised controlled trials are excellent research designs for testing cause-and-effect and also controlling for bias, however, when addressing prevention-focused applied interventions a more realist evaluation perspective (as discussed by Tilley & Burrows, 2010) may be more appropriate.

Some assessment lessons from other prevention contexts are important to note (Clarke & Eck, 2005). First, be clear that you will not remove all incidents, but you can operate in targeted ways to minimise opportunity. Second, take heart from the general lack of displacement of crime problems that have been observed in other studies, and take further heart from the potential diffusion of benefits that may mean the positive impact of your intervention reaches further than you anticipated (Johnson et al., 2014). Third, understand that POP is process that requires ongoing commitment. The latest technology (i.e., generative large language models) will soon be replaced and new facilitators and problem types will emerge. You may also experience process and/or impact failures, meaning you must learn from what you did, adjust your response, and try again.

## Final Thoughts

By way of a final thought about academic misconduct in the modern university context, it is worth revisiting a message from Goldstein (1979), who commences his argument for POP with a quote from an UK newspaper article from 1977 entitled, “Get rid of the people, and the system runs fine.” This quote outlines a situation where bus drivers speed past queues of people at bus stops, smiling and waving as they pass, with this behaviour justified by the fact that it is impossible for the drivers to keep to the bus timetable if they have to stop for passengers. Goldstein (1979) uses this example to caution, “All bureaucracies risk becoming so preoccupied with running their organizations and getting so involved in their methods of operating that they lose sight of the primary purposes for which they were created. The police seem unusually susceptible to this phenomenon.” (pp. 236–237). This message from over 40 years ago rings true for the tertiary education sector, today. While this chapter is advocating for an alternative approach to reducing the frequency of academic misconduct, it is important to revisit the origins of the problem-oriented approach that is being translated. As explained, above, with the examples relating to responding to academic misconduct problems, opportunities can be reduced by

manipulating risk-reward-effort-provocations-excuses, by making alterations before, during, and after misconduct may occur, and by looking at targets and places, in addition to likely offenders. In addition to taking appropriate and sensible steps with respect to target hardening and policy, universities must also hold a mirror up to the extent to which they are legitimately engaging with students to provide necessary and appropriate supports for students and staff. Goldstein (1979) describes a “‘means over ends’ syndrome” (p. 238) that took hold of policing in the 1970s. It is important for universities to avoid similar situations so that the academics involved with education do not have to drive the metaphorical assessment busses past the problems.

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