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Reducing undergraduate students' trust of commercial contract cheating websites with an academic support literacy intervention

Sydney Kreitz¹ and Brenda M. Stoesz^{1*}

*Correspondence:

Brenda M. Stoesz

Brenda.Stoesz@umanitoba.ca

¹University of Manitoba, Winnipeg, Canada

Abstract

The acquisition of products and services from the commercial contract cheating industry has an extensive history, with the industry experiencing significant growth during the COVID-19 pandemic. Since then, these commercial entities have added generative artificial intelligence (genAI) to their websites to ensure continued use of their services by postsecondary students. Cheating providers use various other persuasive features (e.g., assurance of quality work, use of the words 'guarantee' and 'secure') to convince students to trust them and become customers. To counter the efforts of commercial cheating services, education about the cheating industry and academic integrity should reduce any trust that students have in them. We developed an academic support literacy module about appropriate (e.g., university assistance, legitimate tutors) and inappropriate (e.g., contract cheating services) academic support. Before and after the module, 39 introductory psychology students rated how much they trusted various websites using a 12-item consumer trust scale. Although a drop in trust after viewing the module was significant for all three types of academic support websites, it was greatest for contract cheating websites. Significant correlations were also found between the non-planning aspects of impulsiveness (as measured by the Barratt Impulsiveness Scale [BIS-11]; Patton et al. *J Clin Psychol* 51(6):768–774, 1995) and reputation ratings given for the contract cheating websites. Further study of perceptions (using objective and subjective measures) of contract cheating websites and how aspects of impulsiveness on website perceptions is necessary for the continued development of educational interventions to reduce temptations to engage with the industry. Our study findings contribute to the literature on the promotion of academic integrity and prevention of academic misconduct, particularly contract cheating, through education.

Clinical trial number

Not applicable.

Keywords Academic literacy, Contract cheating, Educational intervention, Educational support service, Trustworthiness, Tutorial



Student engagement in contract cheating has increased over the past 40 years, with an estimated average of 15.7% of students admitting to using commercial cheating services (see Newton 2018; for a review). Use of these inappropriate academic supports spiked during the COVID-19 pandemic (Hill et al. 2021). Contract cheating is defined as the act of paying third parties to complete academic assessments and then submitting the outsourced work to their instructors as if it were students' own work (Clarke and Lancaster 2006). If caught, students submitting assessments they did not complete often face consequences ranging from failing grades to expulsion, with permanent notations on their academic records reflecting these infractions. Importantly, the validity of assessments as measures of learning is compromised when students engage in any form of academic misconduct, negatively affecting their education and career journeys. Not only are students at risk of experiencing the academic and career consequences when they engage in academic misconduct, they may also be blackmailed by contract cheating suppliers, such as employees of commercial contract cheating companies, when they refuse to purchase additional services (Draper et al. 2021; Yorke et al. 2020).

Although some students engage in contract cheating knowingly, others may be misled by guarantees of high quality, timely delivery, and passing grades to perceive such services as legitimate (Hill et al. 2021; Rowland et al. 2018). These persuasion techniques are designed to form favorable first impressions (Kim and Fesenmaier 2008), leading to increased trust, purchase intentions (Qalati et al. 2021), and ultimate outsourcing of assessments to commercial contract cheating providers. Preventing contract cheating by fostering cultures of integrity through multifaceted approaches at multiple levels of postsecondary institutions (i.e., administration, faculty members, students) is regarded by experts as critical (Bertram Gallant and Drinan 2008; Davis et al. 2009; Stephens 2016). The development and implementation of educative approaches is one aspect of a wholistic institutional strategy for promoting academic integrity and reducing academic misconduct. The purpose of this study was to determine if an educational intervention in the form of a training module about appropriate (i.e., university support, legitimate tutoring services) and inappropriate (i.e., contract cheating services) educational support and website persuasion techniques would reduce students' trust ratings for contract cheating websites. Beyond the study, the indirect effect of reduced trust of contract cheating providers should be a reduction in seeking assistance from them.

Literature review

Students risk outsourcing their academic assessments for any number of reasons. Amigud and Lancaster (2019) examined 5,000 student comments posted to 10 contract cheating providers' social media accounts from one social media platform. The advantage of this method was that the researchers were not required to depend on the participants' recollections regarding the context surrounding the reasons for cheating. After several rounds of coding, 246 messages indicated reasons for cheating that generally fell into five categories, listed here in order of most to least common: Perseverance ("I can't look at it anymore"), academic aptitude ("please teach me how to write an essay"), self-discipline ("I procrastinated until today"), personal issues ("I have such a bad migraine"), and competing objectives ("I work so I don't have time") (Amigud and Lancaster 2019, p. 102). The researchers also found that some messages contained direct invitations for

“someone” to help them, and that payment would be provided. These reasons for cheating are grounded in frustration, fear of failure, panic, and high stress levels (Ferguson et al. 2023), although some students may simply be disengaged and have no intention to learn.

For many students, moving from intention to the act of engagement in contract cheating is likely related to the decision that the benefits of outsourcing outweigh the risks of getting caught and suffering the consequences. In a discrete choice experimental study, Rigby et al. (2015) asked 90 students to evaluate outsourced papers based on price, grade/quality, risk (of getting caught), and penalty, and then consider purchasing them for an upcoming assignment. Half of the participants indicated they would never cheat under any circumstances, and the remaining indicated their willingness to buy an outsourced paper at least once. Seven students from the latter group showed evidence they would cheat repeatedly. Thus, the students who stated they would buy papers would likely be easier to convince to seek assistance from inappropriate sources, especially if they believed they would earn low grades for submitting their own academic work. Given that the turn-around time for requesting bespoke assessments can be relatively short (e.g., 5 days on average) (Ellis et al. 2018; Wallace and Newton 2014), it is not surprising that vulnerable students may turn their intentions into actions.

Despite the consequences of and negative attention to the commercial contract cheating industry in higher education and in the media, administrators, educators, and students may be unaware of the extent and seriousness of the problem. This is interesting given that the outsourcing of academic work by postsecondary students and the cheating industry itself have extensive histories (e.g., Buerger 2021, 2022, 2023). The dawn of the Internet followed by the emergence of social media platforms have enabled the commercialization of cheating to flourish (Amigud and Lancaster 2020; Lancaster 2019). Rates of contract cheating during the COVID-19 pandemic increased considerably (Comas-Forgas et al. 2021) and contributed to the current state of contract cheating as a multi-million-dollar industry (Lancaster 2020). Since then, these commercial entities have added generative artificial intelligence (genAI) to their websites to ensure continued use of their services by postsecondary students. In some jurisdictions, when students submit outsourced assignments, students and providers may be held liable for serious crimes, including fraud, false statements, forgery, and conspiracy to defraud (e.g., Ahsan et al. 2022; Steel 2017). Students may also be blackmailed (Draper et al. 2021; Yorke et al. 2020), leading some academic integrity experts to liken the commercial contract cheating industry to organized crime (Eaton and Carmichael 2023; Grue et al., 2021). Vulnerable students, such as those who fear failure in their studies, may be lured to purchasing these illicit products and services through specific marketing tactics embedded within the website design of the online contract cheating companies.

Persuasive features online shopping websites

The established *source credibility theory* (Hovland and Weiss 1951; Hovland et al. 1949) posits that the credibility of any face-to-face, written, or electronic communication (e.g., a website) increases the perceived credibility of the source (e.g., the company). Interestingly, trusting the source does not impact the acquisition or retention of facts obtained from the communication but does influence whether opinions about the position or topic presented within the communication will change (Hovland et al. 1949). Source

credibility theory has been examined in the context of online marketplaces, where buyers have little to no prior relationship with the sellers, which may be perceived as a high-risk situation for buyers. Established and familiar marketplaces, which have solid customer bases and post positive reviews of customer satisfaction, serve as reputable intermediaries for sellers. This approach raises buyers' trust in online sellers and reduces some of the negative feelings associated with risks of making purchases, including credit card fraud, poor product quality, fake reviews, and insecure payment methods (Pavlou and Gefen 2004). Unsurprisingly, then, higher levels of trust are associated with increases in decisions to purchase, even when the decisions lead to negative consequences (McKnight et al. 2002). Thus, persuading consumers of the credibility of a company (i.e., that it has expertise and is trustworthy) is critical to its success in the marketplace (Lowry et al. 2014). Whereas the credibility and trust of physical storefronts often begins with the interactions between potential customers and salespeople, online shops must use other measures to persuade consumers to purchase their products and services. Therefore, successful online businesses must induce positive first impressions (Kim and Fesenmaier 2008), influence viewers' attitudes, beliefs, and behaviours, and promote increased sales (Díaz and Koutra 2013; Lowry et al. 2014) through the art of persuasive design.

Using a framework of persuasiveness explored in the management industry, Rowland et al. (2018) examined a selection of websites published by contract cheating providers and summarized their design features into four categories of persuasion: Informativeness, credibility, involvement, and reciprocity (after Díaz and Koutra 2013). All the examined websites contained the features of online ordering, descriptions, and availability of their services (i.e., informativeness), and emphasized that quality writers would support them by using words and phrases, such as 'expertise', 'years of experience', and 'qualified', to convince viewers of their credibility. To provide a convenient service, commercial cheating providers indicated that potential customers could create personal login accounts (which may also be a tactic for obtaining personal information; Draper et al. 2021), and that support was available 24/7 (i.e., involvement category). The cheating websites that were examined were also careful to avoid words related to cheating, integrity, or dishonesty (Rowland et al. 2018), although this appears to be changing as the industry becomes bolder in their communications. When academic integrity statements are present, these appear as tactics to absolve cheating providers of any legal responsibility if students' work is identified as violating institutional academic integrity policies. Finally, these services emphasize the struggles that most students face in attempts to entice them to purchase outsourced academic work that they otherwise might not purchase (Rowland et al. 2018). Similar findings were reported by Sutherland-Smith and Dullaghan (2019) who purchased 54 papers from 18 contract cheating sites, and experienced delivery, quality, support, and privacy issues with 83% of the purchases.

Philosophers and researchers have argued that persuasion guides others to think and act ethically and is truthful, whereas manipulation involves the use of tactics to intentionally deceive and cause harm (see Danciu 2014; Hoffeld, n.d.). Manipulations or "dark commercial patterns" employed by online businesses to convince "consumers to purchase, purchase more of, or continue to purchase, a good or service that they would otherwise not purchase or purchase in lesser quantity; to spend more money on a purchase or time on a service than desired; or to give up more personal data than desired – with the ultimate purpose of increasing business revenue" are on the rise (Organisation for

Economic Co-operation and Development [OCED], 2022, p. 8). This could not be truer than for the online commercial contract cheating industry.

Educative approach to reduce contract cheating

When applied to postsecondary students and the contract cheating industry, the findings from the research on advertising and marketing, online marketplaces, consumer psychology, and behavioural economics may be particularly useful for developing interventions that aim to reduce students' intentions to purchase from commercial contract cheating providers. Postsecondary institutions have created interventions in the form of workshops, e-learning tutorials, and blended approaches to educate students about learning with integrity and avoiding academic misconduct. In addition, many researchers have explored tutorial effectiveness (e.g., Curtis et al. 2013; Djokovic et al. 2022; Stoesz and Los 2019). For example, Curtis et al. (2013) tested introductory psychology students' understanding of plagiarism before and after completing an academic mastery module consisting of 18 online tasks of increasing difficulty. Completion of the module was associated with improvements in understanding of sham paraphrasing (i.e., verbatim but acknowledged as paraphrased), illicit paraphrasing (i.e., paraphrasing without acknowledgement), and recycling (i.e., duplicate submission of assignments). In addition, students who completed the tutorial (vs. those who did not) perceived plagiarism as more serious infractions. Stoesz and Los (2019) reported similar findings for a general game-based academic integrity tutorial. In two studies involving 190 high school and middle school students, perceived seriousness of academic misconduct rose significantly after completing the tutorial, and the change in perception was associated with agreeable personalities, as measured by the Brief Version of the Big Five Personality Inventory (BFI-10; Rammstedt and John 2007). In general, educational interventions support shifts in attitudes about academic integrity and increase perceived knowledge and understanding of the topics presented (see Stoesz and Yuditseva 2018).

To our knowledge, training students to recognize manipulative web design features of commercial contract cheating providers has not been studied formally but is crucial, as the internet is the primary means by which students access information. As such, we developed a brief module intended to increase students' academic support literacy, which we defined as the capacity to obtain, process, and critically evaluate the content and services of providers of tutoring and educational support services to make more positive academic decisions. The module also contained information about the persuasive tactics of inappropriate educational support services, consequences of contract cheating, and academic integrity. Presumably, this knowledge would enable students to evaluate educational support services more critically and make better choices about their academic assessments in the long term. In the shorter term, however, we posited that increased awareness of the manipulative tactics of contract cheating websites could be determined by measuring students' trust of various educational support services before and after completing a tutorial.

The present study

The present study had two primary goals: (1) to measure undergraduate student trust of educational support websites; and (2) to determine if academic support literacy training affects perceptions of educational support websites. Specifically, our objectives were to

assess students' perceptions of trust in commercial contract cheating websites as sources of educational support, determine if students perceive cheating websites as more or less trustworthy than other types of educational support services (i.e., university academic support, legitimate tutoring services), and analyze if academic support literacy training affects perceptions of commercial contract cheating websites. We also explored whether the tendency to act impulsively was related to higher trust for inappropriate academic assistance, as significant relationships between impulsiveness and academic misconduct (Anderman et al. 2009; Goel and Garg 2025; McTernan et al. 2014), and consumer trust (Hubert et al. 2018) have been found. Our expectation was that some aspects of impulsiveness (e.g., self-control) would play a role in students' trust of commercial contract cheating websites. As a personality trait, impulsiveness can impact purchasing behavior; in turn, impulse purchasing behaviour can stimulate the brain's "reward system" (Hubert et al. 2018), contributing to possible perpetuation of the behaviour.

Methods

Participants

Students ($N=39$, 34 women, 4 men, 1 unspecified) enrolled in introductory psychology classes at the University of Manitoba participated in this study and received partial course credit for doing so. As the tasks in this study involved viewing images and a short video tutorial, normal or corrected-to-normal vision and hearing were required to participate. Participants' ages ranged from 18 to 28 years ($M=19.7$, $SD=2.8$). Ten participants completed high school outside of North America, whereas 29 completed high school in Canada, and English ($n=33$) was the language most often spoken with family and friends. Most participants ($n=35$) were enrolled in full-time studies with the remaining studying part-time ($n=4$). Participants were in their first ($n=30$) and second or third ($n=7$) year of postsecondary study and were enrolled in a first-year general ($n=27$), faculties of science ($n=9$), or arts or health sciences ($n=3$) programs.

Materials and procedures

Given previous research in which students may falsely indicate that they have completed academic integrity tutorials and that inattention to tutorials reduces their benefits (Kirsch and Bradley 2012; Stoesz and Los 2019), we asked participants to view the educational intervention in our laboratory, one at a time, in individual sessions that were about 1.5 h in duration. After providing written informed consent, participants were asked to read and respond to items designed to collect information about general demographics (e.g., age, gender, language, educational background; 10 items), academic support literacy (9 items), and impulsiveness (30 items). This survey was presented on a computer screen via an online survey platform (i.e., Qualtrics, Provo, UT). Participants completed the *Trust of Academic Support Websites Task* before and after viewing the *Academic Support Literacy Module*. Study materials are described below. The study protocol was reviewed and approved by the University of Manitoba Research Ethics Board.

Academic support literacy scale

The Academic Support Literacy Scale was a modified version of a 10-item eHealth Literacy Scale (Norman and Skinner 2006) that measures self-perceived skills, familiarity, and comfort with electronic technology (Cronbach's $\alpha=0.85$ to 0.88 ; Hove et al. 2011).

In the present study, one item (How useful do you feel the internet is in helping you make decisions about which academic support services to use?) was rated on a Likert-type scale from 1 = *not at all useful* to 5 = *very useful*. One item (How important is it for you to be able to find academic support services on the internet?) was rated from 1 = *not at all important* to 5 = *very important*. Eight items (e.g., I can tell the difference between high-and low-quality academic support services on the Internet. and I know what kinds of academic support services are available on the internet?) were rated from 1 = *strongly disagree* to 5 = *strongly agree*. An overall Academic Support Literacy Score was calculated by averaging responses for each participant—scores of more than 3 suggested higher levels of skill, familiarity, and comfort with academic supports.

Barratt impulsiveness Scale – Version 11 (BIS-11)

The BIS, the most widely used measure of impulsiveness (cited over 2,000 times as of August 23, 2025, Web of Science), is a 30-question self-report measure designed to assess impulsiveness in research and clinical settings and has been used with undergraduate students (Patton et al. 1995) similar to the sample that participated in the present study. The BIS-11 includes six first-order and three second-order factors. The six first-order factors include *Attention* (focusing on the task at hand; 5 items), *Motor impulsiveness* (spur of the moment action; 7 items), *Self-control* (planning and thinking carefully; 6 items), *Cognitive complexity* (enjoying challenging mental tasks; 5 items), *Perseverance* (consistent lifestyle; 4 items), and *Cognitive instability* (racing thoughts; 3 items). Second-order factors were comprised of two first-order factors: *Attentional* (attention and cognitive instability; 8 items), *Motor impulsiveness* (motor impulsiveness and perseverance; 11 items), and *Non-planning* (self-control and cognitive complexity; 11 items).

Items from the BIS-11 are rated on a four-point Likert scale of 1 = *Rarely/Never*, 2 = *Occasionally*, 3 = *Often*, and 4 = *Almost Always/Always*. After reverse scoring 11 items, responses are summed to produce the first- and second-order factor scores (range varies) and total score (*Range* = 30–120). Higher total and factor scores suggest higher levels of impulsiveness. Patton et al. (1995) reported mean total scores of 63.82 (*SD* = 10.17) and 69.26 (*SD* = 10.28) for undergraduate students and for patient groups and prison inmates, respectively. Internal consistency coefficients for the BIS-11 total score range from 0.79 to 0.83 for various populations, including undergraduate students (Patton et al. 1995), and was acceptable in our sample (Cronbach's α = 0.71).

Rating the trust of educational Support websites

This task involved viewing screenshots of the websites of commercial contract cheating (n = 10), university academic support (n = 10), and legitimate tutoring (n = 10) services. Screenshots of the websites of identified commercial contract cheating providers were chosen from a set of 610 collected previously by the second author. Identification of these websites was accomplished over many years (2019–2023) using a search engine and phrases similar to “write my essay.” The first 200 results of each search were then subjected to review using the criteria published in the peer-reviewed and gray literature on contract cheating providers (Ellis et al. 2018; Quality Assurance Agency for Higher Education [QAA], 2017; Rowland et al. 2018). Ten screenshots from Categories A and B shown in Table 1 were randomly selected from the set of 610 for use in this study. Screenshots of the websites of university support pages and legitimate tutors were also

Table 1 Categories and criteria for identifying commercial contract cheating services

Category	Definition and criteria
A – Blatant Contract Cheating Website	Makes no attempt to hide that they are a contract cheating site. Openly advertise their service of providing assessments. Uses various methods of persuasion to lure students to their site rather than their competitors.
B – Subtle “Helping” Website	Identifies, at first glance, as a service to help/coach/tutor students and may attempt to hide contract cheating services. Uses assurance tactics, interactivity, and/or emotional appeal to lure students.
C – Proofreading and/or Editing Services	Solicits business from students and academics to proofread and/or edit documents. Does not advertise completing assessments on its customers’ behalf.
D – Identified as problematic in the literature	Various researchers have implicated the commercial entity as a problem. Many of these entities also fall under Categories A and B.
E – Suspicious website	Some features suggest that unethical services are part of the service package, but the evidence is too sparse for inclusion in Categories A or B.

collected. Legitimate tutoring services were verified by university support staff and student tutors who were employees of the services, and by checking their features against the criteria in Table 1. We then chose a selection of each randomly.

While viewing each screenshot (presented one at a time in random order), participants responded to 12 statements to measure their overall trust of the website (after the consumer trust scale; Kwong et al. 2010). Perceived reputation, size (Jarvenpaa et al. 2000), trustworthiness, website and service quality, and intent to purchase from the website (McKnight et al. 2002) were each measured using the ratings (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *strongly agree*) from two statements. An example item from the trustworthiness subscale was “I am prepared to give private information, including payment details, to this educational support website.” After reverse-scoring four items, averages of items were calculated to create Overall Trust Ratings and subscale scores for ratings made before and after viewing the educational intervention.

Academic support literacy module

The Academic Support Literacy Module took approximately 10 min to view. The module was composed of 10 PowerPoint slides with voice over (presented as a video) to provide information about the: (1) persuasive features of websites in general and contract cheating websites more specifically (Rowland et al. 2018), (2) contract cheating and academic integrity (Stoesz and Los 2019), and (3) appropriate educational supports for postsecondary studies. Although the module was designed to educate students at any postsecondary institution in Canada, it also contained specific details about our university’s academic misconduct procedures.

Results

Academic support literacy

Due to a technical issue, data for one item of the Academic Support Literacy Scale was not recorded. In addition, two participants omitted one question each; these were replaced by their mean responses to the other 8 items. The mean response to the 9 items was then calculated for each participant to create an overall Academic Support Literacy Score ($M = 3.9$, $SD = 0.5$, $Range = 2.4–4.6$), which was significantly higher than the 3.0 midpoint of the scale [$D(39) = 3.63$, $p < .001$, $r = .58$]. This score suggested that our full sample of undergraduate students were, on average, at least somewhat knowledgeable

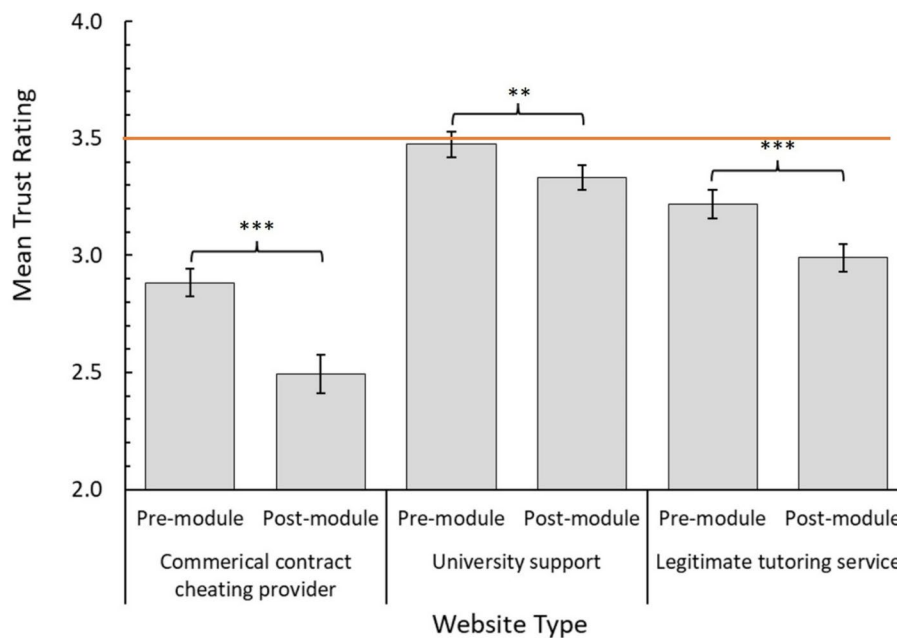


Fig. 1 Differences in Overall Trust Ratings of Websites as a Function of Time and Service Type. Note. ** $p < .01$, *** $p < .001$. Undergraduate psychology students' ($N = 28$). Overall Trust Ratings of screenshots of three types of academic support websites before and after an educational intervention. The orange line at the value of 3.5 on the vertical axis indicates the minimum value required to signify trust. Possible trust scores ranged from 1 to 5. Error bars indicate standard error

about and skilled at identifying appropriate academic support services. The internal consistency for our sample ($N = 39$) was also deemed acceptable (Cronbach's $\alpha = 0.79$).

Barratt impulsiveness scale

Nine (0.77%) responses from seven participants were missing in the dataset for the BIS-11. We replaced the missing values with the mean value of the other responses for a given participant, before calculating the BIS-11 Total and subscale scores. The resulting mean of the BIS-11 Total Scores was 63.6 ($SD = 7.7$, $Range = 49-78$) and was similar to those reported in the literature for undergraduate students [$t(38) = 0.17$, $p = .87$, two-tailed, $d = 0.03$] (see Patton et al. 1995).

Trust of educational support websites

Responses to 108 (0.38%) items were missing from the data set for the Rating the Trust of Educational Supports task. A missing value analysis indicated that 11 participants did not answer 6.7–50% of items (pre-intervention: 15.3–46.4% for 2 participants; post-intervention: 13.3–100% for 11 participants). Data from these participants were excluded from the analyses. Before conducting comparisons between the different support websites between pre- and post-intervention, we conducted a series of one-sample t -tests (two-tailed) comparing Overall Trust Ratings to 3.5, the halfway point between *neither agree nor disagree* and *agree*, which we interpreted as the minimum value indicating that participants trusted the website types. In five of the six comparisons, trust scores were significantly below 3.5, suggesting an overall lack of trust [$t(27) \geq 3.17$, $p \leq .004$, $d \geq 0.60$] (see Fig. 1). The exception to this result was the pre-intervention trust scores for university support websites, with the non-significant result suggesting no evidence for the

lack of trust [$t(27) = 0.46, p = .65, d = 0.09$]. In other words, participants indicated trust of university websites before the intervention.

To determine whether academic support literacy training reduced trust of contract cheating websites, Overall Trust Ratings were submitted to a 2 (Time: Pre-intervention, Post-intervention) $\times$ 3 (Service: Contract cheating, University support, Legitimate tutors) analysis of variance (ANOVA), with repeated measures on both factors. Significant main effects of Time [$F(1, 27) = 61.73, p < .001, \eta_p^2 = 0.70$] and Service [$F(2, 54) = 63.37, p < .001, \eta_p^2 = 0.70$] were revealed. These main effects were interpreted in light of a significant interaction between Time and Service [$F(2, 54) = 5.81, p = .005, \eta_p^2 = 0.18$] (see Fig. 1). Follow-up least squares difference (LSD) tests revealed that the Overall Trust Ratings for each type of educational support website dropped significantly ($p \leq .01$, for all three comparisons); results that were most surprising for university support websites. Further exploration revealed evidence of a medium effect size [$t(27) = 3.22, p = .003, d = 0.61$], suggesting that the fall in trust ratings for university websites after viewing the module would be noticeable. As expected, the drop in overall trust after viewing the Academic Support Literacy Module was significantly greater for contract cheating websites than legitimate tutoring services ($p < .001$), which was significantly greater than for university supports ($p < .001$). Younger age in years was also associated with a greater drop in trust of contract cheating provider websites [$r_s(26) = -0.39, p = .04$]. Thus, the module's impact on trust of contract cheating websites was highest and most beneficial to the youngest undergraduate students participating in our study.

Associations between impulsiveness and trust of contract cheating websites

We were interested in the relationship between *Academic Support Literacy Scores* and the pre-intervention *Trustworthiness* and *Purchase Intention* subscale scores for contract cheating websites. Greater *Academic Support Literacy Scores* tended to be associated with greater *Trustworthiness* for contract cheating websites [$rs(26) = 0.38, p = .05$] but not with intentions to purchase [$rs(26) = -0.30, p = .12$].

Given the research on impulsivity and cheating behaviour (Anderman et al. 2009; Goel and Garg 2025; McTernan et al. 2014), examining the relationships between the BIS-11 *Non-planning* factor with consumer trust for commercial contract cheating providers' websites before participants viewed the intervention was of interest. Significant positive correlations between the *Reputation* ratings and the *Non-planning* factor [$rs(26) = 0.63, p < .001$] were found. Not surprisingly, the related first-order *Self-control* [$rs(26) = 0.47, p = .01$] and *Cognitive complexity* [$rs(26) = 0.53, p = .004$] factors were also positively correlated with reputation ratings for contract cheating provider websites. Only the latter relationship held after viewing the module [$rs(26) = 0.41, p = .03$].

Discussion

The commercial contract cheating industry offers easily accessible, inexpensive, and anonymous services by "experts," making them convenient options for students to "fix" their academic problems quickly (Rowland et al. 2018). Arming students with knowledge of the manipulation tactics that the commercial contract cheating industry uses on their online storefronts may reduce temptations to use these illicit services, but this might also depend on the tendency to act impulsively. In this study, we explored the impact of viewing a brief educational intervention about the persuasive website design features

on rating of trust for cheating provider websites. Several interesting findings emerged. Firstly, our Academic Support Literacy Scale scores suggested that our sample of undergraduate students at least somewhat knowledgeable about and skilled at differentiating appropriate and inappropriate academic support services. Secondly, participants' overall trust ratings of screenshots of contract cheating provider websites dropped significantly after they viewed our Academic Support Literacy Module; this drop was significantly greater than that seen for other websites. Thirdly, higher academic support literacy scores were associated with the tendency to trust contract cheating websites more but reduced intentions to purchase. Lastly, even within our small sample, higher scores on the non-planning factor of impulsivity (including lower levels of self-control and increased cognitive complexity) were associated with higher reputation ratings for contract cheating websites before the intervention. We discuss each of these findings in detail below.

We introduced and defined the term, academic support literacy, describing it as the capacity to acquire, process, and critically evaluate the content and services of providers of tutoring and educational support services to make informed academic decisions. We measured university students' academic support literacy using an adapted version of the eHealth Literacy Scale (Hove et al. 2011; Norman and Skinner 2006) and found that our sample of undergraduate students' academic support literacy was relatively high. With this finding, one might argue that the greater awareness of educational support (whether appropriate or inappropriate) that we observed in our sample explained the low overall trust in educational support websites. The only exception to this was that students indicated trust of websites describing university support. After exposure to the Academic Support Literacy Module, however, overall trust fell significantly for all three types of educational support websites presented. Reduced trust ratings for websites after completing training about persuasive features is consistent with findings reported in the literature on eHealth literacy. For example, Hove et al. (2011) assessed adolescents' self-perceived skill and comfort in using information technology (i.e., websites) as a health resource. In their study, three e-learning sessions about persuasive web design resulted in increased eHealth literacy and reduced their confidence in the health information provided on commercially branded websites. Thus, similar to other academic integrity tutorials (Stoesz and Yuditseva 2018), one specifically designed to combat contract cheating can have a significant positive impact on students.

An interesting and concerning finding requiring further discussion was the significant drop in trust of university support websites after viewing the module. Although little research has been published on the trust between students and higher education institutions, including campus personnel (according to Calderone and Fosnacht 2023), the results that have been published may provide insight into the present study's result. Fosnacht and Caderone (2020), for example, analyzed the responses to two multi-part questions about trust on the 2020 National Survey of Student Engagement (NSSE) that were provided by 8,351 first year and final year students enrolled 29 US postsecondary institutions. Overall, students reported little trust of their colleges and universities, but the level of trust depended upon demographic characteristics including race/ethnicity, gender, home community (i.e., urban, suburban, rural), ability status, and parental education. Highest levels of trust in educational institutions are most likely before students begin their postsecondary studies, when their impressions are largely based

on institutional reputations and recommendations from family and friends (Dagmara 2022). These initial levels of trust are fragile and can fall rapidly as students experience professional and communication incompetence, unjust treatment, and lack of support (Dagmara 2022). It would be interesting in future research to examine how trust and changes in trust of academic support websites vary by additional demographic variables or previous experiences of trust violations.

Interestingly, we also found that participants who scored higher on the Academic Support Literacy Scale tended to trust contract cheating websites more but indicated less intention to purchase from those same websites. One explanation for the first association is that our scale did not measure literacy but rather subjective feelings of familiarity, which is associated with increased trust (Zhang and Ghorbani 2004). Familiarity promotes non-analytic and efficient processing (Garcia-Marques and Mackie 2001), and is influenced by prior experience, repeated exposure, level of processing, and forgetting rates (see Zhang and Ghorbani 2004). As young people spend considerable time online and are exposed to influencers (of which some may be fellow students) promoting commercial contract cheating (Amigud 2020; Draper et al. 2021), feelings of familiarity for cheating websites are probable. Researchers have found, however, that familiarity does not directly influence trust, but mediates the relationship between experience, satisfaction, and emotional cues associated with products and services and trust of a web brand (Goel and Garg 2025; Ha and Perks 2005). Future research could examine the possibility that these relationships hold true with contract cheating websites and student populations.

Given the research on impulsivity and cheating behaviour (Anderman et al. 2009; Goel and Garg 2025; McTernan et al. 2014), we examined the relationships between impulsiveness and trust of commercial contract cheating websites. In our sample, the non-planning factor of impulsivity (consisting of cognitive complexity and self-control) was correlated (significantly and positively) with website reputation ratings, an aspect of consumer trust, before students viewed the module. The relationship between self-control and reputation did not hold after viewing the module. These findings are consistent with the work of Hubert et al. (2018) who showed that consumer impulsivity was linked to higher trustworthiness evaluations of online eBay offers. When additional information that backed up or rebutted the offer was provided to individuals with greater impulsiveness (vs. less impulsiveness), their evaluation of the new information had a greater effect on the perception of trustworthiness. Hubert et al. also imaged participants using functional magnetic resonance imaging (fMRI), and behavioural results were consistent with imaging data—in those classified as impulsive, areas of the brain known to be involved in trustworthiness evaluation, risk perception, and cognitive control all showed lower brain activity, whereas regions associated with affect-based decisions were more activated during tasks involving judgements about trust.

Interestingly, much of the previous research linking familiarity, trust, and impulsiveness have used textual information. Some researchers have explored trustworthiness of visual information, such as colour, logo design, and general aesthetics (Robins and Holmes 2008) on purchase intention (Broeder and van Doremalen 2021; Hagtvædt 2011; Lowry et al. 2014). Hagtvædt (2011), for example, blanked out parts of company logos; participants perceived the companies with these incomplete typeface logos as less trustworthy, however ratings of innovativeness increased, indicating an inverse relationship

between trustworthiness and innovation. Broeder and van Doremalen (2021) found that ratings of trustworthiness moderated the effect of colour, specifically the colour blue, on intentions to purchase that brand. These previous study findings suggest that examining how postsecondary students respond to the visual information presented on commercial contract cheating provider websites, in addition to persuasion/manipulation tactics used, is crucial for developing educational interventions to reduce their temptation to purchase. Future research could also manipulate the “source” of the website, including displaying contract cheating website content with the name of an actual or fictitious university or removing identifying source information to determine whether trustworthiness ratings would differ from the results of the present study.

Our findings suggest that tutorials can be effective in increasing students’ awareness of manipulative tactics used by the commercial contract cheating industry. Relying solely on tutorials, however, will not be sufficient. University community members (e.g., faculty members, administrators, and support staff) are encouraged to enhance efforts to inform students about contract cheating (commercial providers, and even family and friends), support good decision making prior to common vulnerable periods (e.g., before major assignments or exams), and establish trust early and consistently throughout students’ academic experience. Creating educational environments that support positive academic behaviours involves implementing various measures to deter contract cheating and promote academic integrity and is the responsibility of all members of the educational community (Kjellgren et al. 2022).

Limitations and future research

We recognize that our study has limitations that must be considered when interpreting the results of our analyses. Firstly, the sample size was relatively small as several undergraduate students were unable to complete the full study, reducing the generalizability of the results to all postsecondary students. Despite this limitation, however, our study had sufficient power to detect an effect of the educational intervention, as observed by a shift in trustworthiness of contract cheating websites after the module that was associated with age. Evidence from previous research suggests that tutorials about academic integrity are most beneficial for the youngest of students (Stoesz and Los 2019), consistent with the findings here of a magnified effect of the educational module on trust in younger students. In a systematic review about the effectiveness of academic integrity tutorials, Stoesz and Yuditseva (2018) summarized results suggesting that postsecondary students older than 24 years of age (but not those with more years of education) were less likely to gain the full benefit of participating tutorials about plagiarism and citing. Researchers have suggested that findings of greater benefits from academic integrity tutorials in younger postsecondary students may be due to older students greater understanding that academic misconduct is unethical leading to fewer acts of cheating (Sheard et al. 2003).

Future research that begins in an earlier educational context (or, at minimum, collects data related to previous exposure to education around contract cheating) would confirm our intuition that providing students at middle and high school levels with information about website design would inoculate these younger students (at least to some degree) against manipulation tactics of the contract cheating industry. As Xu and Li (2023) rightly point out, however, focusing on students and their justifications for cheating or

lack of knowledge of the contract cheating industry is flawed. The commercial contract cheating industry is sophisticated, calculating, deceptive, and holds much power over students and their demand to satisfy higher education requirements. Students are the victims, Xu and Li argue, and more empirical research must be done, and practical steps must be taken to protect students from exploitation. Gaps in this line of work are evident (see Ahsan et al. 2022).

The second limitation of the study is the structure of the intervention. Although the Academic Support Literacy Module contained important information about persuasive (or manipulative, depending on the context) web design and how the commercial contract cheating industry capitalizes on design features, it was relatively brief, provided a passive learning experience, and lacked challenging activities that would deepen students' learning of the topic. Although learning often begins with awareness, this is insufficient for students to acquire the skills needed to identify the wide variety of marketing tactics used by businesses. In addition, students may benefit from understanding how manipulative online marketing and business tactics interact with their personal psychology to influence their decision-making processes, especially when their stress levels are heightened. Future research could assess how induced laboratory stress or naturally occurring stress during academic periods (such as examinations) influences trust perceptions of contract cheating websites and the effectiveness of modules designed to empower students with knowledge about manipulative marketing tactics. An interesting finding from previous research is that better decisions are made when information about how to make evidence-based decisions and rules for decision-making are provided (Neumann et al. 2022). Modifying our Academic Support Literacy Module to include more information (including the categories and definitions of contract cheating, see Table 1) and opportunities for practicing identification of persuasive and manipulative web design features and under what context students may be swayed by them is an important avenue for further investigation.

A third limitation of the present study was the narrow exploration of impulsivity in our sample. As our research protocol was already lengthy, we did not include survey items about previous or current engagement in contract cheating with friends, family, or commercial contract cheating entities. We also did not ask students about their perceptions of the tutorial and whether their new knowledge would have prevented them from outsourcing their academic work to third parties. As past research has provided evidence of a link between impulsiveness and academic misconduct (Anderman et al. 2009; Goel and Garg 2025; McTernan et al. 2014), investigating whether the relationship between this personality characteristic and contract cheating specifically is stronger or weaker may inform the development of more nuanced educational interventions.

The latter may be particularly important for students with neurodivergent conditions, such as attention deficit/hyperactivity disorder (ADHD), autism spectrum disorders (ASD), and learning disabilities, as they experience varying degrees of difficulties with executive functioning. Executive functioning is an umbrella term that encompasses higher order cognitive processes, such as attention, cognitive flexibility, emotion regulation, inhibitory control (or impulsivity), organization, planning, self-monitoring, and working memory (Naglieri and Goldstein 2013). Anderman et al. (2022) tested 855 students aged 14 to 18 years using the *Behaviour Assessment System for Children: 2nd edition Self-Report* (BASC-2-SRP; Reynolds & Kamphaus, 2004) to measure hyperactivity

(also impulsivity), inattention, and depression. The researchers found that inattention was directly *and* indirectly (mediated by hyperactivity) associated with increased self-reported cheating behaviours in the subsequent school year. Anderman et al. posited that academic misconduct would be more likely when students are unable to pay attention to their schoolwork, making them more vulnerable to impulsivity. Future research could examine the influence of educational interventions, such as the one developed for the present study, on trust ratings for contract cheating industry websites, and intent to purchase outsourced academic work, in students with neurodivergent conditions.

Conclusion

Academic integrity experts, specifically those focused on examining the commercial contract cheating industry, state that the owners, operators, and employees in this industry care very little about their student customers; their goal is simply to make as much money as possible (Draper et al. 2021), and they do so in ways that are manipulative, unethical, and harmful (Pitt et al. 2021; Rowland et al. 2018; Sutherland-Smith and Dullaghan 2019). Only a few jurisdictions, including Australia, New Zealand, Ireland, and England (e.g., Skills and Post-16 Education Act 2022, 2023; Tertiary Education Quality and Standards Agency Amendment (Prohibiting Academic Cheating Services) Bill 2019, 2020), have legislation in place to prohibit the advertising and operation of commercial contract cheating providers. Because of possible legal complexities (including international operations) and limited empirical evidence about the extent and impact of the problem, the governments in many other jurisdictions have not considered nor passed laws to sanction contract cheating providers (Adlington and Eaton 2021). If governments are unwilling and/or unable to protect students from harm, then educators and administrators must provide students with the opportunities to gain knowledge and skills to thwart the efforts of the cheating industry. In this study, we demonstrated that a brief, low-cost, easily implemented academic support literacy intervention that educates students about the persuasive marketing of cheating websites, in addition, to general academic integrity information, reduces ratings of trustworthiness of contract cheating websites. When students are armed with the knowledge of manipulation tactics used by the contract cheating industry, they can make wiser decisions if they find themselves vulnerable during their academic journeys.

Abbreviations

BIS-11	Barratt Impulsiveness Scale
genAI	Generative artificial intelligence
OCED	Organisation for Economic Co-operation and Development
QAA	Quality Assurance Agency for Higher Education

Author contributions

SK drafted the manuscript, recruited participants, collected data, and conducted preliminary analyses. BMS conceived of the project, confirmed results of initial analyses and conducted additional analyses, and reviewed, edited and finalized the manuscript for submission.

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Data availability

Data is unavailable as per the requirements of the research ethics board, and materials may be requested from Brenda. Stoesz@umanitoba.ca.

Declarations

Ethics approval and consent to participate

Review and approval of this study protocol has been obtained from University of Manitoba's Research Ethics Board, which follows the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 (2022), Canada.

Consent for publication

SK and BMS consent to the submission, review, and publication of this manuscript.

Competing interests

The authors declare no competing interests.

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References

- Adlington A, Eaton SE (2021) Contract cheating in Canada: Exploring legislative options. <http://hdl.handle.net/1880/114088>
- Ahsan K, Akbar S, Kam B (2022) Contract cheating in higher education: A systematic literature review and future research agenda. *Assess Evaluation High Educ* 47(4):523–539. <https://doi.org/10.1080/02602938.2021.1931660>
- Amigud A (2020) Cheaters on Twitter: an analysis of engagement approaches of contract cheating services. *Stud High Educ* 45(3):692–705. <https://doi.org/10.1080/03075079.2018.1564258>
- Amigud A, Lancaster T (2019) 246 reasons to cheat: an analysis of students' reasons for seeking to outsource academic work. *Comput Educ* 134:98–107. <https://doi.org/10.1016/j.compedu.2019.01.017>
- Amigud A, Lancaster T (2020) I will pay someone to do my assignment: an analysis of market demand for contract cheating services on twitter. *Assess Evaluation High Educ* 45(4):541–553. <https://doi.org/10.1080/02602938.2019.1670780>
- Anderman EM, Cupp PK, Lane D (2009) Impulsivity and academic cheating. *J Experimental Educ* 78(1):135–150. <https://doi.org/10.1080/00220970903224636>
- Anderman EM, Gilman R, Liu X, Ha SY (2022) The relations of inattention and hyperactivity to academic cheating in adolescence with executive functioning problems. *Psychol Schools* 59:784–799. <https://doi.org/10.1002/pits.22644>
- Bertram Gallant T, Drinan P (2008) Toward a model of academic integrity institutionalization: informing practice in postsecondary education. *Can J High Educ* 38(2):25–43
- Broeder P, van Doremalen L (2021) Persuasive colours for trust in E-commerce: Dutch blue or Russian red? *Russian J Communication* 13(3):253–266. <https://doi.org/10.1080/19409419.2021.1951066>
- Calderone SM, Fosnacht J, K (2023) Student trust in higher education institutions: how the pandemic influenced undergraduate trust. *Am Behav Sci* 67(13):1611–1631. <https://doi.org/10.1177/00027642221118263>
- Clarke R, Lancaster T (2006) Eliminating the successor to plagiarism: Identifying the usage of contract cheating sites. Paper Presented at the Second International Plagiarism Conference.
- Comas-Forgas R, Lancaster T, Calvo-Sastre A, Sureda-Negre J (2021) Exam cheating and academic integrity breaches during the COVID-19 pandemic: an analysis of internet search activity in Spain. *Heliyon* 7(10). <https://doi.org/10.1016/j.heliyon.2021.e08233>
- Curtis GJ, Gouldthorp B, Thomas EF, O'Brien GM, Correia HM (2013) Online academic-integrity mastery training May improve students' awareness of, and attitudes toward, plagiarism. *Psychol Learn Teach* 12(3):282–289
- Dagmara L (2022) Building and rebuilding trust in higher education institutions (HEIs). Student's perspective. *J Organizational Change Manage* 35(6):887–915. <https://doi.org/10.1108/JOCM-02-2022-0037>
- Danciu V (2014) Manipulative marketing: persuasion and manipulation of the consumer through advertising. *Theoretical Appl Econ* XXI(2):19–34
- Davis SF, Drinan PF, Bertram Gallant T (2009) Cheating in school: what we know and what we can do. Wiley-Blackwell. <https://doi.org/10.1080/00098655.1966.11477001>
- Díaz E, Koutra C (2013) Evaluation of the persuasive features of hotel chains websites: A latent class segmentation analysis. *Int J Hospitality Manage* 34(1):338–347. <https://doi.org/10.1016/j.ijhm.2012.11.009>
- Djokovic R, Janinovic J, Pekovic S, Vuckovic D, Blecic M (2022) Relying on technology for countering academic dishonesty: the impact of online tutorial on students' perception of academic misconduct. *Sustain (Switzerland)* 14(3). <https://doi.org/10.3390/su14031756>
- Draper M, Lancaster T, Dann S, Crockett R, Glendinning I (2021) Essay mills and other contract cheating services: to buy or not to buy and the consequences of students changing their minds. *Int J Educational Integr* 17(1):13. <https://doi.org/10.1007/s40979-021-00081-x>
- E Buerger G (2021) Pens for hire. *Can Perspect Acad Integr* 4(2):3–15. <https://doi.org/10.11575/cpai.v4i2.74183>
- E Buerger G (2022) Pens for hire: part 2. *Can Perspect Acad Integr* 5(1):3–20. <https://doi.org/10.11575/cpai.v5i1.75420>
- E Buerger G (2023) Pens for hire: part 3. *Can Perspect Acad Integr* 5(2):4–15. <https://doi.org/10.11575/cpai.v5i2.76456>
- Eaton SE, Carmichael JJ (2023) Fake degrees and credential fraud, contract cheating, and paper mills: overview and historical perspectives. In: Eaton SE, Carmichael JJ, Pethrick H (eds) *Fake degrees and fraudulent credentials in higher education*. Springer, Cham. https://doi.org/10.1007/978-3-031-21796-8_1
- Ellis C, Zucker IM, Randall D (2018) The infernal business of contract cheating: Understanding the business processes and models of academic custom writing sites. *Int J Educational Integr* 14(1). <https://doi.org/10.1007/s40979-017-0024-3>
- Ferguson CD, Toye MA, Eaton SE (2023) Contract cheating and student stress: insights from a Canadian community college. *J Acad Ethics* 21(4):685–717. <https://doi.org/10.1007/s10805-023-09476-6>
- Fosnacht K, Calderone S (2020) Who do students trust? An exploratory analysis of undergraduates' social trust [Conference session]. Presented at the Annual (Virtual) Conference of the Association for the Study of Higher Education, Virtual Meeting, 2020. <https://scholarworks.iu.edu/dspace/handle/2022/25947>
- Garcia-Marques T, Mackie DM (2001) The feeling of familiarity as a regulator of persuasive processing. *Soc Cogn* 19(1):9–34. <https://doi.org/10.1521/soco.19.1.9.18959>

- Goel P, Garg A (2025) Virtual personalities, real bonds: anthropomorphised virtual influencers' impact on trust and engagement. *J Consumer Mark*. <https://doi.org/10.1108/JCM-05-2024-6915>
- Grue D, Eaton SE, Boisvert S (2021) Parallels between the contract cheating industry and organized crime. <https://doi.org/10.11575/PRISM/38793>
- Ha H-Y, Perks H (2005) Effects of consumer perceptions of brand experience on the web: brand familiarity, satisfaction and brand trust. *J Consumer Behav* 4(6):438–452. <https://doi.org/10.1002/cb.29>
- Hagtvedt H (2011) The impact of incomplete typeface logos on perceptions of the firm. *J Mark* 75:1547–7185. <https://doi.org/10.1509/jmk.75.4.86>
- Hill G, Mason J, Dunn A (2021) Contract cheating: an increasing challenge for global academic community arising from COVID-19. *Res Pract Technol Enhanced Learn* 16(1). <https://doi.org/10.1186/s41039-021-00166-8>
- Hoffeld D (n.d.) (ed) The difference between persuasion and manipulation. <https://www.hoffeldgroup.com/the-difference-between-persuasion-manipulation/>
- Hove T, Paek HJ, Isaacson T (2011) Using adolescent eHealth literacy to weigh trust in commercial web sites: the more children know, the tougher they are to persuade. *J Advertising Res* 51(3):524–537. <https://doi.org/10.2501/JAR-51-3-524-537>
- Hovland CI, Weiss W (1951) The influence of source credibility on communication effectiveness. *Source* 15(4):635–650. <https://doi.org/https://www.jstor.org/stable/2745952>
- Hovland CI, Lumsdaine AA, Sheffield FD (1949) Experiments on mass communication. Princeton University Press. <https://doi.org/http://www.jstor.org/stable/j.ctt1m3nzc2>
- Hubert M, Hubert M, Linzmajer M, Riedl R, Kenning P (2018) Trust me if you can – neurophysiological insights on the influence of consumer impulsiveness on trustworthiness evaluations in online settings. *Eur J Mark* 52(1–2):118–146. <https://doi.org/10.1108/EJM-12-2016-0870>
- Jarvenpaa SL, Tractinsky N, Vitale M (2000) Consumer trust in an internet store. *Inf Technol Manage* 1(1/2):45–71. <https://doi.org/10.1023/A:1019104520776>
- Kim H, Fesenmaier DR (2008) Persuasive design of destination web sites: an analysis of first impression. *J Travel Res* 47(1):3–13. <https://doi.org/10.1177/0047287507312405>
- Kirsch Ba, Bradley L (2012) Distance education and plagiarism prevention at the university of South Carolina upstate. *J Libr Inform Serv Distance Learn* 6(2):79–99. <https://doi.org/10.1080/1533290X.2012.693903>
- Kjellgren R, Hamilton-Smith N, Fraser A (2022) SCCJR Criminal Grades? Contract cheating and student exploitation in higher education
- Kwong T, Ng H-M, Kai-Pan M, Wong E (2010) Students' and faculty's perception of academic integrity in Hong Kong. *Campus-Wide Inform Syst* 27(5). <https://doi.org/10.1108/10650741011087766>
- Lancaster T (2019) Social media enabled contract cheating. *Can Perspect Acad Integr* 2(2):7–24. <https://doi.org/10.11575/cpai.v2i2>
- Lancaster T (2020) Academic discipline integration by contract cheating services and essay mills. *J Acad Ethics* 18(2):115–127. <https://doi.org/10.1007/s10805-019-09357-x>
- Lowry PB, Wilson DW, Haig WL (2014) A picture is worth a thousand words: source credibility theory applied to logo and website design for heightened credibility and consumer trust. *Int J Hum Comput Interact* 30(1):63–93. <https://doi.org/10.1080/10447318.2013.839899>
- McKnight DH, Choudhury V, Kacmar C (2002) Developing and validating trust measures for e-Commerce: an integrative typology. *Inform Syst Res* 13(3):334–359. <https://doi.org/10.1287/isre.13.3.334.81>
- McTernan M, Love P, Rettinger D (2014) The influence of personality on the decision to cheat. *Ethics Behav* 24(1):53–72. <https://doi.org/10.1080/10508422.2013.819783>
- Naglieri JA, Goldstein S (2013) Comprehensive executive function inventory: manual. Multi-Health Systems
- Neumann M, Hengeveld M, Niessen ASM, Tendeiro JN, Meijer RR (2022) Education increases decision-rule use: an investigation of education and incentives to improve decision making. *J Experimental Psychology: Appl* 28(1):166–178. <https://doi.org/10.1037/xap0000372>
- Newton PM (2018) How common is commercial contract cheating in higher education and is it increasing? A systematic review. *Front Educ* 3(August):1–18. <https://doi.org/10.3389/educ.2018.00067>
- Norman CD, Skinner HA (2006) eHealth literacy: essential skills for consumer health in a networked world. *J Med Internet Res* 8(2):e9. <https://doi.org/10.2196/jmir.8.2.e9>
- Organisation for Economic Co-operation and Development (OCED) (2022) Dark commercial patterns. <https://doi.org/10.1787/44f5e846-en>
- Patton JH, Stanford MS, Barratt ES (1995) Factor structure of the Barratt impulsiveness scale. *J Clin Psychol* 51(6):768–774
- Pavlou PA, Gefen D (2004) Building effective online marketplaces with institution-based trust. *Inform Syst Res* 15(1):37–59. <https://doi.org/10.1287/isre.1040.0015>
- Pitt P, Dullaghan K, Sutherland-Smith W (2021) 'Mess, stress and trauma': students' experiences of formal contract cheating processes. *Assess Evaluation High Educ* 46(4):659–672. <https://doi.org/10.1080/02602938.2020.1787332>
- Qalati SA, Vela EG, Li W, Dakhan SA, Hong Thuy TT, Merani SH (2021) Effects of perceived service quality, website quality, and reputation on purchase intention: the mediating and moderating roles of trust and perceived risk in online shopping. *Cogent Bus Manage* 8(1). <https://doi.org/10.1080/23311975.2020.1869363>
- Quality Assurance Agency for Higher Education [QAA] (2022) Contracting to cheat in higher education: How to address essay mills and contract cheating. (Issue October). https://www.qaa.ac.uk/docs/qaa/guidance/contracting-to-cheat-in-higher-education-third-edition.pdf?sfvrsn=2fbfa581_14
- Rammstedt B, John OP (2007) Measuring personality in one minute or less: A 10-item short version of the big five inventory in english and German. *J Res Pers* 41(1):203–212
- Reynolds CR, Kamphaus RW (2004) BASC-2: behavior assessment system for children, 2nd edn. American Guidance Service
- Rigby D, Burton M, Balcombe K, Bateman I, Mulatu A (2015) Contract cheating & the market in essays. *J Econ Behav Organ* 111:23–37. <https://doi.org/10.1016/j.jebo.2014.12.019>
- Robins D, Holmes J (2008) Aesthetics and credibility in web site design. *Inf Process Manag* 44(1):386–399. <https://doi.org/10.1016/j.ipm.2007.02.003>
- Rowland S, Slade C, Wong KS, Whiting B (2018) Just turn to us': the persuasive features of contract cheating websites. *Assess Evaluation High Educ* 43(4):652–665. <https://doi.org/10.1080/02602938.2017.1391948>

- Sheard J, Markham S, Dick M (2003) Investigating differences in cheating behaviours of IT undergraduate and graduate students: the maturity and motivation factors. *High Educ Res Dev* 22(1):91–108. <https://doi.org/10.1080/0729436032000056526>
- Steel A (2017) Contract cheating: will students pay for serious criminal consequences? *Altern Law J* 42(2):123–129. <https://doi.org/10.1177/1037969X17710627>
- Stephens JM (2016) Creating cultures of integrity: A multilevel intervention model for promoting academic honesty. In T. Bretag (Ed.), *Handbook of Academic Integrity* (pp. 995–1007). Springer. https://doi.org/10.1007/978-981-287-098-8_13
- Stoesz BM, Los R (2019) Evaluation of a tutorial designed to promote academic integrity. *Can Perspect Acad Integr* 2(1):3–26. <https://doi.org/10.11575/cpai.v2i1>
- Stoesz BM, Yuditseva A (2018) Effectiveness of tutorials for promoting educational integrity: A synthesis paper. *Int J Educational Integr* 14(6). <https://doi.org/10.1007/s40979-018-0030-0>
- Sutherland-Smith W, Dullaghan K (2019) You don't always get what you pay for: user experiences of engaging with contract cheating sites. *Assess Evaluation High Educ* 44(8):1148–1162. <https://doi.org/10.1080/02602938.2019.1576028>
- Tertiary Education Quality and Standards Agency Amendment (Prohibiting Academic Cheating Services) Bill 2019, Pub. L. No. 257/19, Parliament of Australia (2020)
- UK Parliament (2023) Skills and Post-16 Education Act 2022, Pub. L. No. 2022 c. 21
- Wallace MJ, Newton PM (2014) Turnaround time and market capacity in contract cheating. *Educational Stud* 40(2):233–236. <https://doi.org/10.1080/03055698.2014.889597>
- Xu Y, Li W (2023) The causes and prevention of commercial contract cheating in the era of digital education: A systematic & critical review. *J Acad Ethics* 21(2):303–321. <https://doi.org/10.1007/s10805-022-09457-1>
- Yorke J, Sefcik L, Veeran-Colton T (2020) Contract cheating and blackmail: A risky business? *Stud High Educ* 47(1):53–66. <https://doi.org/10.1080/03075079.2020.1730313>
- Zhang J, Ghorbani AA (2004) Familiarity and trust: Measuring familiarity with a web site. In: *Proceedings of the Second Annual Conference on Privacy, Security and Trust (PST)*. Fredericton, New Brunswick, Canada, 23–28. <https://dblp.org/rec/conf/pst/ZhangG04.html>

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