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"A little leaven corrupteth the whole lump": academic cheating as a hindrance to achieving quality in higher education

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Academic cheating (academic dishonesty) is of increasing concern in international higher education. One common form of academic cheating is plagiarism, which some local higher education institutions have confronted through training and employing detection software. However, in reality, academic cheating is a complex construct that extends far beyond plagiarism to include a wide range of student beliefs, attitudes, and practices that act to corrupt recorded achievement scores. From an educational measurement perspective, individual academic cheating and other irregularities in test practices contribute to *construct-irrelevant variance*, which invalidates decisions based on *assessment warrants*. Assessment warrants are generalisations about achievement captured in certificates, diplomas, and other credentials. Therefore, from a quality assurance perspective, high levels of academic cheating within an institution will prove a threat to quality and must be explicitly addressed in internal and external quality assurance schemes. In this paper, we consider the issue of academic cheating in Trinidad and Tobago centred on a study of three different higher education institutions. We explored students' perceptions of cheating along with motivations and student practices. These findings are used to reflect on the role of tertiary institutions and accreditation agencies in managing this important quality-related issue.

Keywords: academic cheating, plagiarism, educational assessment, higher education quality.

Student assessment matters in higher education quality

Over the last two decades, there has been increasing clarity on the important and powerful role of assessment within higher education (Joughin, 2010). Once viewed simply as an add-on to curriculum, teaching and learning components in the quality agenda, the central role of assessment as an agent in the process of student learning is now much more recognized. Indeed, even in traditional higher education settings, "doing assessments" was always considered very important because it took up a considerable amount of time and was a central part of students' lives (Tang, 1994). Perhaps, more importantly, in the context of assuring quality, important questions that arise are: (1) What is the possible impact of assessment on student learning and attitudes towards learning, and (2) what features of a student assessment system facilitate the achievement of quality outcomes?

Sambell and McDowell (1998) discussed the critical role of assessment in the construction of the hidden curriculum. They argued that students' negative reactions to different assessment modalities might not be typical but rather dependent upon students' learnt experiences and motivations. Likewise, Tang (1994) considered the washback effect (defined as the impact of assessment on student learning, teacher preparation, and organization of the institution) to be closely related to students' perception of the demands and requirements of the assessment. She found evidence that student perceptions and the demands of some assessment tasks could lead to surface approaches to studying (Entwistle

& Ramsden, 1983). Different assessment modes might have differential impacts upon curriculum and teaching-learning. For example, in a study of portfolio versus objective tests, Tang et al. (1999) found that the portfolio assignment has greater alignment with the espoused constructivist philosophy of Problem Based Learning (PBL).

In reality, student assessment should be regarded as a complex, multidimensional activity that requires alignment, balance and rigour in order to assure quality outcomes (Joughin, & Macdonald, 2004). Biggs (2003), for example, talked about the need for the constructive alignment of both teaching and assessment with curriculum objectives. Increasingly, then, in repairing and improving assessment practices within institutions the focus has rightly been on the overall assessment scheme, inclusive of management systems, policies, beliefs and practices. This improved understanding of assessment's nature, role, and impact within higher education systems is increasingly informing the quality assurance practice in developed countries. For example, the framework for quality assurance in higher education in Europe (European Association for Quality Assurance in Higher Education (ENQA)) explicitly recognizes this enhanced and complex role of assessment (ENQA, 2005). For example, Standard 1.3 states that *"students should be assessed using published criteria, regulations and procedures which are applied consistently"* (p. 6).The focus of this standard is therefore on ensuring alignment, transparency, rigour, and consistency in student assessment. These critical characteristics are further elaborated in the expanded guidelines summarized in Table 1.

Table 1. European Requirements for the Evaluation of Assessment Systems in Quality Assurance.

Stated requirements for student assessment in Standard 1.3 (EAQA, 2005)	Assessment Characteristic
1) Designed to measure the achievement of the intended learning outcomes and other programme objectives	Aligned
2) Appropriate for their purpose, whether diagnostic, formative or summative	Aligned
3) Clear and published criteria for marking	Rigour
4) Undertaken by people who understand the role of assessment in the progression of students towards the achievement of the knowledge and skills associated with their intended qualification	Aligned
5) Not rely on the judgements of single examiners	Rigour Consistency
6) Take account of all the possible consequences of examination regulations	Rigour
7) Have clear regulations covering student absence, illness and other mitigating circumstances	Rigour
8) Ensure that assessments are conducted securely in accordance with the institution's stated procedures	Rigour
9) Be subject to administrative verification checks to ensure the accuracy of the procedures.	Rigour
10) Students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance*	Transparency

*This requirement is stated in the text on page 17

The features of rigour and alignment relate to the critical assessment criteria of validity and reliability. As shown in Table 1, even when innovative or authentic assessments are used, these criteria will still be applicable. In higher education, teachers bring different perspectives on assessment based on discipline as well as overall philosophical frameworks. Some have a scientific view of assessment, while others have a legal or an aesthetic perspective (Knight, 2006). Thus, one possible concern is whether the criteria of rigour and alignment also apply to continuous assessments as it does to final examinations. The question arises because in learning oriented continuous assessment, formative purposes dominate whilst in final examinations, summative purposes are more important. To be sure, there will always be a natural tension between formative and summative purposes (Palmer, 2004). Formative continuous assessment in the form of feedforward assessments and cumulative coursework (QAA, 2007) can surely serve as a motivator and director of learning especially if the task is also authentic; but, if there is also a score or grade that also contributes to final certification, then rigour and alignment must be considered.

When trust might be misplaced

Knight (2007a) used the term "warranting" to refer to the high stakes processes that cover the production of grade point averages, classifications, and awards in higher education. The term assessment warrant is an important one because it captures the reality that awards or certificates in higher education can also become a license to practice even in the professions. This is especially so in countries of the South where licensing systems are often embryonic or absent. Thus, in Trinidad and Tobago for instance, in several but not all of the health professions, it is possible for graduates from one or more local higher education institution to add their name to the register of professionals upon being awarded a credential from the institution. Heyneman (2004), however, has warned of the deleterious effects of this practice on quality, noting that

> . . . the process by which individuals leave higher education and apply to practice or be certified in their professions should be separated from the higher education institutions themselves. No matter how excellent, no university should provide a license to practice medicine. The license to practice medicine should be made of a board of medical examiners that manages a system of testing to which all medical applicants must pass. Similar systems must be established for law, accounting, and others (pp. 640-641).

Moreover, as it stands, a warrant of achievement, such as certification or a license to practice based on university certification might not be valid if the assessments in the awarding institution lack sufficient rigour. A related issue might occur in courses assessed through 100% coursework. The need for innovativeness, authenticity and formative purpose may be at odds with the quality assurance requirements of rigour and alignment. If the standards for rigour and alignment are not enforced, questions can be raised about the validity of the warrant. Further concerns might also be raised about the assessment of what Knight (2007b) has called "wicked competencies." These generic skills are often highly valued in the real world and include competencies such as creativity, teamwork and emotional intelligence (World Bank, 2008). These areas are not easily or rigorously

measured using current assessment methods in higher education institutions even if they are at the core of what some might consider employability.

Trust in warrants of achievement might also be misplaced if there is significant academic cheating within an institution or across a country's higher education system, as now happens in many former countries in the Soviet Bloc. According to Osipian (2008), in these countries, plagiarism is often regarded as the normal way of writing papers. The problem is also common in several other countries. For example, in India, Chattopadhyay (2008) has noted that:

> Copying in examinations by students is only the tip of the iceberg; faculty also participate in corrupt practices, including plagiarism in dissertation, and manipulating data and case records. Similarly, the administration becomes dishonest when it falsifies staff strength, recruitment criteria, etc., prior to an inspection by regulatory/statutory/supervisory bodies, in order to meet the requirements of recognition of a college (p. 1509).

Examining academic cheating

To ensure rigorous assessment, academic cheating must be minimized. Academic cheating is a violation of academic integrity (Kitahara, Westfall, & Mankelwicz, 2011). Academic cheating can occur at either the institutional or individual level. In institutional cheating, a higher education institution might attempt to inflate scores, perhaps to ensure that its students do well. This might happen on transnational programmes where the awarding body is an external service provider. In such a case, it is in the interest of the local service provider to inflate scores so as to maintain market share. However, the negative impact on quality will be significant if the awarding body or the accrediting body does not have a rigorous quality assurance system to limit such practices in the provider countries.

This paper focuses on individual cheating, which refers to acts by students in an institution. In its most basic form, academic cheating involves students attempting to pass off someone else's work as their own (Jensen et al., 2002). Cizek (2004) has provided an expanded definition of academic cheating that covers the complexity of the behaviour along with the measurement implications. This definition highlights the intentional nature of the action, the possible motive behind the act, as well as the impact on validity and fairness. He defined academic cheating as:

> . . . any intentional action or behavior that violates the established rules governing the administration of a test or the completion of an assignment, gives one student an unfair advantage over other students on a test or an assignment, or decreases the accuracy of the intended inferences arising from a student's performance on a test or an assignment (p. 308).

There are several categorizations of individual cheating behaviour (Stephens, 2008). These are summarized in Table 2. As shown, academic cheating may range from the use of unauthorized materials in an examination to presenting a false medical to gain an advantage. Common in distance learning programmes or systems where there are high levels of coursework is plagiarism and fabrication. Students may work together to cheat on both examinations and coursework, or they may be non-cooperative in group-based assignments It is likely that there are different reasons for these different forms of

cheating behaviour and the reasons may not always relate to moral or ethical issues. For example, academic procrastination might be a common cause of fraudulent excuses for a late assignment (Roig & Caso, 2005).

Table 2. Classification of cheating behaviours.

Gehring, Nuss, & Pavela, G. (1986)	Newstead, Franklyn-Stokes, & Armstead (1996).	Some recent authors
Cheating-Use of unauthorized materials as in Crib sheets	Plagiarism	Traditional/conventional cheating
Fabrication of information including references and results	Collaborative cheating	Digital or Internet-based cheating
Plagiarism-Copying verbatim work without proper attribution	Collusion in Examinations	
Facilitating-Helping other engage in academic cheating	Lying to gain an advantage (e.g. Medicals)	
	Non-collaboration in Group Assignments or Examinations	

Solely using a moral or ethical lens to analyze academic cheating will provide limited insight because of the nature of the issue. It is always best to consider also factors such as general awareness of the issue, personal values, and context. For example, although some studies have found a correlation between religiosity and cheating (Rettinger & Jordan, 2005), other studies suggest that moral values have limited impact on the incidence of cheating behaviour. For example, Semerci (2006) noted that although medical students in Turkey thought that cheating was unlawful and a sin, they were still able to cheat. Importantly too, there may be differences in the level of academic cheating among students from different disciplines, with business studies students more likely to cheat. This might be because business students are more motivated by self-interest or they might be exposed to stronger academic pressures (McCabe, Butterfield, & Trevino, 2001).

Notably, differences in academic cheating might occur across cultures. These differences are possibly related to the variation in personal value systems founded on characteristics such as idealism, opportunism, and tolerance (Rawwas, Al-Khatib, & Vitell, 2004). Lupton and Chapman (2002) found that Russian students were more likely to define cheating narrowly and to report a higher incidence of dishonesty compared with American students. Similarly, Teixeira and Rocha (2006) found that students in Spain were more prone to dishonesty compared with those in Portugal. The age of the student might also be a factor because most studies suggest that younger children are less likely to cheat, whereas cheating behaviour among adolescents is more common. Younger adults, however, are more likely to cheat than older adults in a higher education context. Although cheating may be considered an epidemic in the secondary school, the frequency of such behaviour may have increased in the higher education environment with the increase in numbers of students and the use of online modalities. Academic cheating remains a threat to all higher education modalities, however.

From the above, it is clear that academic cheating must be regarded as complex, multidimensional behaviour not easily explained by any single framework or perspective (Gallant & Drinan, 2006). Thus, using different analytical lens can provide greater insight into analyzing and remediating complex behaviour. For example, from a psychological

perspective, cheating is likely to impinge upon learning, motivation, and development (Anderman & Murdock, 2007). In terms of a motivation perspective, individuals cheat for a variety of reasons, including maintaining face and assuring self-efficacy on difficult and complex or high stakes tasks. Cheating may be considered somewhat of a cognitive shortcut precluding the use of complex self-regulatory strategies often favoured in mature learners. From a developmental perspective, cheating will likely occur in various quantities dependent on individual and contextual actors.

One of the flaws of past research on academic cheating was the tendency to focus on cheating as a unitary construct (Passow, 2006). However, there is no single behaviour that captures cheating fully and consequently neither will a single strategy work. Although there might be multiple behaviours involved in cheating, individuals may have different understandings of what actually constitutes cheating. This means that it is important to survey what students believe or do not believe to be cheating. Some recent research has paid attention to modelling the variables involved. For example, Passow (2006) developed a model based on the theory of planned action and included predictor variables at different levels, including moral obligation not to cheat; attitudes about cheating; evaluation of the costs and benefits of cheating; perceived, social pressures to cheat or not to cheat; and perceived effectiveness of academic dishonesty policies. Likewise, Murdock and Anderman (2006) developed a motivational model that focused upon the propensity to cheat. They included both individual and motivational variables along with different guiding motivational questions such as: (1) what is my purpose, (2) can I do this, and (3) what are the costs? Thus, a useful strategy in studying academic cheating is to consider a variety of understandings, motivations and intentions.

Different perspectives on the role of academic cheating in quality
Brimble and Stevenson-Clarke (2005) provided an explanation of the threat to quality posed by high levels of academic cheating, noting that:

> Firstly, it threatens the equity and efficacy of instructional measurement, so that students' relative abilities are not accurately evaluated; and secondly, students who cheat probably reduce their level of learning so they are less prepared for advanced study or application of the material presented in a course. At the broader, societal level, it is likely that students who do not respect academic integrity while at university will not respect integrity in their future professional and personal relationships (p. 19).

The wider society would also experience the impact of high rates of cheating because of the reduced value of the certification or earned award. Thus, the match between the award and the promised skills will not be valid or warranted. From this perspective, academic cheating undermines the value of the assessment data as an indicator of student learning. Such an issue therefore must be a significant concern for quality assurance agencies and the standards that they promulgate.

To understand fully the threat of academic cheating to quality in higher education institutions, it is useful to analyze the phenomenon from different lenses of theoretical perspectives. The three useful analytical lenses on cheating and quality are from the viewpoint of the *(1) assessment warrant, (2) construct irrelevant variance (CIV), and (3) corruption.* The concept of assessment warrants is a useful perspective because it focuses

on the impact to the employer and the wider society, highlighting the limited value of an award where there is a high or undetermined level of individual cheating within an institution. To illustrate, an employer might expect a graduate to be able to demonstrate some specific skills as attested to in the description that accompanies the certification, but if that graduate has achieved the certification only because of cheating, then that legitimate expectation would remain unfulfilled. Moreover, in the future, questions of trust would arise for that particular certification, the awarding institution, and even the local institution in the transnational arrangement. Invalid assessment warrants might be a significant problem in online courses, if there is little verification and monitoring of student assessment. It may also be a problem in professional courses making use of virtual delivery with little opportunity to validate the development of practical competencies.

      Construct irrelevant variance (CIV) is a concept that provides a useful measurement perspective on the impact of cheating. Haladyna and Downing (2004) considered CIV to be the error variance in test scores that arises from systematic error. CIV implies that something other than the construct is being measured and is one of the more notable threats to validity in a high stakes setting. Following Messick's (1989) model and definition of validity, high construct irrelevant variance means that stakeholders will not be able to make meaningful interpretations for that the construct based on the obtained test scores or designated awards. This is important because from the standpoint of a validity argument, it is interpretation of the test score that must be assured (Kane, 1992; Downing & Haladyna, 2004). Thus, both individual and institutional cheating will lead to a lack of trustworthiness in achievement data from an institution.

      From a third perspective, both individual and institutional cheating are essentially forms of corruption in education (Hallack & Poisson, 2007). Hallack and Poisson (2002) defined corruption as "the systematic use of public office for private benefit, whose impact is significant on the availability and quality of educational goods and services, and, as a consequence, impacts on access, quality or equity in education" (p. 58). Examinations and certifications are an important target area for corrupt practices, both for individuals and institutions. On the one hand, institutions might engage in several practices such as nepotism, favouritism and the selling of information. On the other hand, individuals may engage in several types of academic fraud including the purchase of coursework and final examination grades (Heyneman, Anderson, & Nuraliyeva, 2008). The cost of corruption in education can be high, especially impacting upon stakeholder's perceptions of quality. Ospian's (2009) study of corruption in higher education in the former Soviet bloc suggests that corruption may also have far reaching effects on the magnitude of inequalities and on the generation of high-quality human capital.

Responding to the threat of academic cheating
The complexity of cheating behaviour requires that multiple strategies be used to monitor and respond to the threat. Currently, local institutions face an upsurge in cheating possibly because of larger class sizes, the increased use of technology, the diversity of student populations and the widespread use of cross-border education through virtual environments. There is a need, then, not only for appropriate institutional responses but also for explicit quality assurance standards in accreditation that support and recognize these institutional responses. Quality assurance must acknowledge institutions that are attempting to deal with the problem of academic cheating by implementing a variety of strategies to reduce or minimize the impact. However, in the event that no such strategy

is employed, the question becomes, can the award from a higher education institution really be trusted?

Strategies aimed at reducing academic cheating might range from the implementation of honour codes to the use of software to detect plagiarism. Honour codes are common in some higher education institutions in the United States. In most honour codes, students promise to abide by a code that captures expectations for desirable and undesirable behaviour. Honour codes may work because they make clear wrongdoing and reduce the possibility of rationalizations, which are often a part of cheating practice. An important feature of honour codes is that it shifts the focus from Faculty to students. Honour codes are not common locally, but some institutions have mounted courses to train students in an attempt to prevent academic cheating. Some institutions have also instituted detection systems (McCabe & Trevino, 1993). The apparent success of honour codes in some contexts point to the need for developing an institutional culture that supports and promotes academic integrity (McCabe, Trevino, & Butterfield, 2001).

The recommended approach would certainly be the development of a coherent institutional policy on academic integrity (Morris, 2010). Such a policy would likely be developmental in intent, designed to create an environment in which students choose to act with integrity. A four-stage process for implementing such a policy might be: (1) recognition and commitment, (2) response generation, (3) implementation, and (4) institutionalization (Bart, 2009). Faculty and student support should be a part of the overall plan since both have an important part in effecting the procedures (WCET, UT TeleCampus, & Instructional Technology Council, 2009).

Designing the exploratory study

The first step towards developing a policy of academic integrity is to assess the situation. Using an action research model, we designed an exploratory study to determine the extent of individual academic cheating in two disciplines within three higher education institutions in Trinidad and Tobago. Action research is focused on social or institutional change and involves four steps: diagnosing, planning, taking action, and evaluating for the next step. In the action research model, education practices are regarded as social practices to be changed through collaborative action in the taking action phase (Kember & Gow, 1992; Yasmeen, 2008). The three researchers collaborated on the data collection exercise in order to gather information that would allow comparison of beliefs and cheating behaviours across the institutions. The information would allow a better understanding of the nature of cheating patterns and the way it relates to the institutional context. The second author designed the study and instrument, which was administered in collaboration with the third author. This paper deals only with the data from the first step (diagnosing) but considers also the alternatives available for taking action.

The three institutions in the sample were very different in size and purpose. Institution A was a large traditional university, which was the target of the survey. Institution A already had some programmes for managing cheating. Institution B was a new university. Institution A and B both offer a broad range of academic programmes. Institution C was a medium sized higher education institution specializing in hospitality and tourism. The total number in the sample was 167 with 57 from institution A, 92

from institution B, and 14 from institution C. Nineteen were male and 142 were female. 26.4% were between 16-21 years of age, 21.5% (22 to 25 years), 21.5% (26-30 years), 19.6% (31-40 years), and 10.4% were 40 and over. 84% belonged to a religion, with 85.8% attending more than once per month.

The main data collection tool was a survey instrument designed by one of the team members and organized into three parts. The first part of the questionnaire collected demographic and institutional data. The second part required the student to assess selected cheating behaviours and also measured attitudes and motivations that might lead to cheating. Sample items included statements such as "It is important to me that my classmates think that I am good at my work" and "One of my goals is to show others that I am good at my class work". The third part of the questionnaire focused on judgments of cheating behaviour either by self or peers. Sample items included "I helped someone else to cheat on a test" and "I copied from another student during a test".

Three scales were used in sections 2 and 3, a three-point scale of yes, not sure and no, a five-point scale, and never, once, and more than once in the academic year. The five constructs measured in sections 2 and 3 of the questionnaire were as follows:

(1) The students' definition of cheating with higher scores indicating a broader understanding of what constitutes cheating behaviours
(2) The acceptance of rationalizations for cheating with higher values indicating greater rationalization
(3) The perceived level of cheating at the particular institution
(4) A self report of the student's reaction to cheating, with higher values indicative of greater concern for the act of cheating
(5) A self-report measure of cheating behaviour by the student

Both descriptive and inferential statistical analyses were used including One-Way Analysis of Variance (ANOVA) used to determine group differences and OLS Regression.

Table 3. Items in scale for measuring definition of cheating.

Statements in Definition	Yes	No	Not Sure
1) Allow other students to copy my work.	64.4	6.7	25.8
2) Turn in work that I copied from another student.	83.4	0.6	14.9
3) Work on assignments with other students when the lecturers asked for individual work.	38.6	11.4	50.0
4) Copy a few sentences from a site on the internet without writing the source in a paper or assignment that I submit.	74.5	3.7	21.7
5) Copy almost word for word from a book or magazine without writing the source of the information in a paper or assignment that I submit.	84.7	17.7	0.0
6) Turn in a paper that I paid someone else to do.	82.2	0.6	16.7
7) Get answers to questions from someone who took the test in an earlier class.	72.0	5.0	23.0
8) Help someone else cheat on a test.	82.0	1.2	16.1
9) Copy from another student during a test.	85.2	0.6	14.2
10) Use secret notes in a test.	85.1	1.2	13.0

Findings

What do students consider cheating?

Table 3 shows the items in the define cheating scale with the percentage responding yes, no, not sure to each of the items. Overall, most students in the sample agreed that nine of the ten actions could be described as cheating. However, more than one-fifth of the students were not sure that cheating applied to practices such as allowing others to copy their work, copying a few sentences from the internet without acknowledging the spruce, and getting answers from someone who took the test earlier. It was noticeable that some students differentiated between copying a few words from the internet with acknowledgment and copying word for word from a book or magazine. This could be reflective of a technology detachment problem. The majority of students were unsure that working collaboratively with other students when the task explicitly required individual work counted as cheating. In this instance, it might be that the respondents saw this collaboration as beneficial rather than unethical.

Cheating across the institutions

Table 4 shows differences between the institutions on motivations and perceptions of academic cheating. As shown, there were statistically significant differences between the institutions on definitions of cheating, perceived cheating incidence, and self-reported cheating behaviour. The broadest definition of cheating was held by students in institution A (17.4), followed by those in institution B (15.34) followed by students in institution C (10.14). The differences were statistically significant with a medium effect size. A similar pattern was seen for students' reactions to cheating, with students of institution A reporting the highest score (7.71) and students from institution C the lowest (6.36). The magnitude of the difference as measured by the effect size, however, was small. The differences in perceived cheating incidence was also statistically significant and medium sized, but showed the reverse pattern, with institution C having the highest rate (17.93), followed by institution B (12.42) and institution A (10.05). This pattern was also seen in the medium sized difference for self-reported cheating behaviour; with students from institution C having the highest scores (3.71). Thus, it appears that students in institution C had the most restrictive definition of cheating, smallest reactions to cheating, and highest incidence of self-reported cheating behaviour.

Relationship among variables

Table 5 provides the size and statistical significance for Pearson's correlation coefficient of the key variables in the study. As shown, self-reported cheating behaviour was moderately correlated with perceived cheating incidence. This meant that students who perceived a climate of dishonesty in the institution also tended to report a higher incidence of personal misconduct. Perceived cheating incidence was also negatively correlated with definitions of cheating, indicating that students holding to broad definitions of academic dishonesty were less likely to report cheating among peers. Reactions to cheating were positively correlated with cheating rationalizations, indicating that students who provided many rationalizations for academic misconduct also reported a greater reaction to cheating incidents.

Table 4. Differences across institutions on selected cheating variables.

Institution	--- Means --------------------------------					
	Motivation to Cheat	Definition of cheating	Cheating Rational-izations	Perceived Cheating Incidence	Reaction to Cheating	Self-Reported Cheating Behaviour
Institution A (Large)	64.60	17.14	10.89	10.05	7.71	.96
Institution B (Large Prog.)	65.32	15.34	9.92	12.42	7.01	2.25
Institution C (Medium)	66.21	10.14	8.79	17.93	6.36	3.71
Total	65.14	15.51	10.16	12.08	7.20	1.92
Statistical Significance	.803	.001	.755	.000	.061	.003
Effect Size	.003	.089	.004	.126	.035	.071

Effect Size benchmarks: Small-0.01. Medium-0.06. Large-0.138

Table 5. Intercorrelation matrix for variables in study.

	Motivation to Cheat	Definition of cheating	Cheating Rational-izations	Perceived Cheating Incidence	Reaction to Cheating	Self-Reported Cheating Behaviour
Motivation to Cheat	1.00					
Definition of cheating	-.158*	1.00				
Cheating Rationalizations	.165*	.052	1.00			
Perceived Cheating Incidence	-0.24	-.171*	-.105	1.00		
Reaction to Cheating	.130	.152	.188*	.035	1.00	
Self-Reported Cheating Behaviour	-.046	-.136	-.053	.362**	-.084	1.00

Effect Size benchmarks: Small-0.01. Medium-*0.06.* Large-0.138

Influence of individual and demographic variables on self-reported cheating

Tables 6 and 7 provide information from the OLS regression of nine individual variables on self-reported cheating and the definition of cheating. The nine variables only explained 14% of the variables in self-reported cheating. The only statistical variable was age (BETA=-.380, p=.002), with younger students reporting higher levels of cheating. The same set of variables explained 18.9% of the variance in the definition of cheating, with the only statistically significant variable being the level of the programme. Students who were in postgraduate classes tended to have a broader definition of cheating.

Table 6. Regression of individual variables on self-reported cheating.

Dependent Variable: Self Reported Cheating				
R-SQUARE= 0.140; F=2.289; P=.021				
Individual Variable	Beta	B	SE	Part Correlation
1) Gender	-.141	-.360	.229	-.129
2) Age	.-.380**	-.791	.246	-.264
3) Marital Status	.016	.094	.619	.012
4) Number of Children	.036	.204	.634	.026
5) Religiosity (Freq of church attendance)	-.010	-.024	.191	.-.010
6) Prior Education	.078	.210	.242	.071
7) Time in Institution.	027	.133	.438	.025
8) Level of Programme Enrolled	-.139	-.870	.579	-.124
9) Progress in Programme	.194	.788	.410	.158

Table 7. Regression of individual variables on self-reported cheating.

Dependent Variable: Definition of Cheating				
R-SQUARE= 0.189; F=3.375; P=.001				
Individual Variable	**Beta**	**B**	**SE**	**Part Correlation**
1) Gender	.033	.187	.494	.0309
2) Age	.185	.857	.537	.126
3) Marital Status	.051	.650	1.34	.038
4) Number of Children	.050	.638	.1.36	.037
5) Religiosity (Freq of church attendance)	-.024	-.119	.405	.-.023
6) Prior Education	.160	.938	.520	.142
7) Time in Institution	.021	.228	.933	.019
8) Level of Programme Enrolled	.219*	3.61	1.24	.1964
9) Progress in Programme	-.044	-.391	.976	-.035

Discussion

The exploratory study highlighted a number of useful areas for further study. Perceptions of cheating were lower in the more traditional higher education institution, which offered a range of awards, from undergraduate to postgraduate degrees. This might have been because of the implementation of several safeguards and the greater degree of awareness in the student population. The understanding of academic cheating was lowest in the medium sized higher education institution, which also reported the highest incidence of self-reported academic cheating. This institution catered for graduates from high school and offered certificate and diploma-level courses. These younger students did not always agree with the older students from the other institutions and indeed, the younger students admitted that they freely practiced some of the cheating behaviours. The new higher education institution with the large numbers of students was positioned midway between these two institutions in terms of cheating incidence.

The wide variation in self-reported academic cheating behaviour in the three institutions suggests the need for explicit training at all three sites. This might be approached through an awareness programme. However, safeguards and academic integrity codes are also viable options, especially for the medium sized institution. Academic cheating behaviour was not easily explained given standard personal and individual variables with only age and level of programme having explanatory value. In the religious oriented societies of the Caribbean, religiosity might have been expected to have greater impact. These findings suggest the need to better study cheating behaviour in the local context. Could there be a backlash from the secondary school, with its alleged high rate of fraud in the School-Based Assessment (a component of the Caribbean Examinations Council examinations)? Is plagiarism fully understood by young students entering higher education institutions? Do administrators and staff share these perceptions? Studying academic cheating at the secondary school level should be an important focus in future research.

Educational implications

Quality assurance schemes cannot simply ignore the implications of high rates of cheating within academic higher education institutions. Such practices are real threats to quality because they limit the usefulness and credibility of marks and awards. The implications of this kind of corruption must be made clear and institutions should be encouraged to

develop practices that foster and develop academic integrity among students. Academic cheating has a cultural dimension and it is quite possible for this malpractice to be significant to the local culture given the relative newness of many institutions, the modes of delivery chosen, and the nature of the alliance between cross-border service providers and local institutions.

The higher education regulation system in Trinidad and Tobago must pay greater attention to important issues such as academic cheating, which may impact on the quality of outcomes. Perhaps, this is already captured in the current standards used to evaluate collaborative trans-national programmes by the Accreditation Council of Trinidad and Tobago (ACTT). Criterion 3.5 of the Application for Recognition of Transnational Qualifications states, "The awarding institution is responsible for the assessment of students and award of qualifications" (ACTT, 2010, p. 4). The criterion implicitly points to the need for assuring academic integrity in credentialing. However, it would have been more helpful if the instruction were explicitly stated. A guide to best practice is the United Kingdom's quality assurance Code of Practices which explicitly considers the issue of cheating in student assessment, states that institutions must "encourage students to adopt good academic conduct in respect of assessment and seek to ensure they are aware of their responsibilities" (QAA, 2006, p. 27).

It is important that quality assurance frameworks and standards in the Caribbean are both evidence-based and relevant to the context of the higher education environment. In this regard, the lack of support of a research community in higher education is worrying. Without the inputs of indigenous research, it is possible for quality assurance frameworks to become corrupted, mechanical or stylized. Attention should also be paid to developing greater collaboration between institutions as well as facilitating the sharing of best practice. This might require the development of systems similar to the Centre for Academic Integrity in the United States (Drinan & Gallant, 2008). Perhaps, however, the real issue is that not enough attention has been paid to the role and impact of educational assessment in the provision of a quality learning experience and even less has been paid to issues such as plagiarism and other forms of academic cheating. A robust external quality assurance system is a critical element in preventing corruption and this can only be achieved through high quality staff, continuous training and a supportive research programme that identifies issues and obstacles in the achievement of quality.

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