To Catch a Cheater: Overview and Use of Hi-Tech Cheating Detection Methods

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Simon Fraser University says 47 students were guilty of plagiarism.

By Tom Barrett

The University College of the Fraser Valley is investigating an employee who is accused of being the centre of one of the largest cases of academic cheating in its history. The employee is accused of helping 47 Simon Fraser University students cheat on a statistics test.

Roger Blackman, SFU's associate dean of arts, said Monday the university has concluded that the students were guilty of plagiarism.

"We have found that the students who cheated on the test have plagiarized the work of another student," Blackman said. "We are taking this very seriously and have initiated an investigation.

Blackman said that the investigation is ongoing and that more details will be released when it is complete.

He added that the university is working closely with the police to ensure that all necessary steps are taken to hold the culprits accountable.

The university has also taken steps to reinforce its policies on academic integrity and prevent future occurrences of cheating.

"We take academic integrity very seriously and are committed to ensuring a fair and honest learning environment," Blackman said. "We will continue to work with our students to educate them on the importance of academic honesty and the consequences of cheating.

The university has also announced that it will be reviewing its policies and procedures to ensure that they are effective and up-to-date.

The investigation is expected to be completed within the next few weeks, and the results will be shared with the public.

In the meantime, the university has asked the students involved to meet with faculty members to discuss the situation and to take any necessary steps to ensure their academic progress.

The university has also launched a series of educational sessions to help students understand the importance of academic integrity and the consequences of cheating.

The university hopes that these efforts will help prevent future occurrences of cheating and ensure a fair and honest learning environment for all students.

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Teaching assistants set unofficial strike date

UBC teaching assistants (TAs) held a general membership meeting January 21, where they agreed upon an unofficial strike deadline of February 12. Members of CUPE local 3278, who cannot officially make a strike deadline until they finish mediation, which began mid-January.

TAs could stop marking student papers, or start giving students 150 per cent on all papers, on the day of the deadline. Although the strike will be an all-out strike, the executive was given freedom to alter strike tactics if necessary.

The TAs are upset with what they feel is a 15 per cent pay cut this year, due to an increase in tuition which went into effect this September. In comparison, UBC TAs earn $2.30 per hour less than TAs at SFU. TAs at SFU also have a full health and dental plan, while UBC has removed the same plan for the TAs.

At the membership meeting, TAs also agreed upon a strike pay of $20 per hour—each TA could potentially earn up to $200 per week. In many cases this is more than TAs make while working. An Exceptional Circumstances Fund was also created for members for whom strike pay may cause an excessive burden.

MBA students continue their suit against UBC

A group of former Master of Business Administration (MBA) students continued the next step of their suit against UBC this past Friday.

In the statements of claim, students said UBC agreed to a fee of $7000 for a five-month MBA program before March, but tuition for the program was raised to $29,000—a 400 per cent increase.

The former MBA students—set to begin the MBA program this past fall—until an increase in tuition forced them to drop out—are fighting UBC with Science in charge of discipline, and said he hasn’t seen any increase in pressures on students. He said one way to reduce the amount of cheating and plagiarism is to increase awareness of the need for academic integrity to students and professors but said it is a challenge.

“Of course, if students feel [cheating and plagiarizing] is happening,” Harrison said.

His counterpart in the Faculty of Arts, Associate Dean Margery Fie, would love to see the number of disciplinary cases go down.

“It’s hard to know exactly what to handle [cheating and plagiarizing] and we are working quite hard to make sure we are preventing it rather than just punishing it,” said Fie.

Fie suggests preventative measures like the increased support available to students at the Learning Commons workshops. She also suggests, especially to Arts students, that they go to an Arts advisor when they need help and are having trouble with their workload.

“It’s better to ask for help then do something wrong,” said Fie.

But all agree that it is only a minority of students who are cheating and plagiarizing. Szeto said these students make it unfair for the honest ones.

“I’ve been in classes where I see people cheat on exams. It’s hard to know what to do in that situation. Do you disrupt the middle of your final exam, disrupt the whole class by pointing out the guy next to you in cheating?” said Szeto.

“They make it extremely unfair for the people who are honestly trying to do the best that they can. Then you
Methods of detecting cheating

- multiple choice tests only
- invigilators
- other (i.e., student) report
- Frary (1993)
Methods of detecting cheating

• Frary, Tideman, & Watts (1977): $g_2$
  – identical # of responses (right, wrong, or omission)
  – expected number of identical answers given no copying

• Wollack (1997): $T$
  – better Type I error control

• not mutually exclusive
Detecting PCPs

- pairwise comparison
- identical incorrect responses
- too similar: flagged as a “potential cheating pair” (PCP)
- no knowledge of seating arrangement
- good Type I error control (Bonferroni)
The present research

- self-report cheating: subclinical psychopathy is the best predictor
- Large undergraduate class (N = 221)
- Two exams: each exclusively multiple choice
  - seating charts
- Battery of personality questionnaires
  - Big 5 (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness to Experience)
  - Perfectionism (Self-oriented, Other-oriented, Socially-prescribed)
  - Dark Triad (narcissism, Machiavellianism, psychopathy)
## Results: Correlations with cheating

### Big 5

<table>
<thead>
<tr>
<th>Trait</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.10</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-.07</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-.10</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.00</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>-.13</td>
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</table>
### Results: Correlations with cheating

**Perfectionism**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Correlation</th>
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</thead>
<tbody>
<tr>
<td>Self-oriented</td>
<td>-.09</td>
</tr>
<tr>
<td>Other-oriented</td>
<td>-.08</td>
</tr>
<tr>
<td>Socially-prescribed</td>
<td>-.02</td>
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</table>
## Results: Correlations with cheating

**Dark Triad**

<table>
<thead>
<tr>
<th>Personality Trait</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narcissism</td>
<td>0.08</td>
</tr>
<tr>
<td>Machiavellism</td>
<td>0.09</td>
</tr>
<tr>
<td>Psychopathy</td>
<td>0.19</td>
</tr>
</tbody>
</table>
Discussion

• this technique works!
• replicates previous results: power of subclinical psychopathy
• low cheating rate, but we get good results
Future directions

• additional invigilators
• alternate forms
• cheater v. “cheatee”
• other forms of academic dishonesty