Study of Fully Online NATS courses at York

MOTIVATION:
• To have faculty present course content in the best way so as to benefit students in large, introductory online general education science courses.

PRIMARY OBJECTIVE:
• To establish institution-specific best practices guidelines for online instruction.
Phases of Project

Three phases (1 year each):

Phase 1: Examination of presentation of online course content
(just finished)

Phase 2: Examination of student assessment methods in online courses
(currently running first set of surveys)

Phase 3: Examination of resources used for online course instruction
(segment on ebook usage as a resource - collected 3+ terms of survey data. Other resources to be addressed in future.)
Research Methodology

• Gauge student perspective & experience through multiple surveys and focus groups.

• Surveys obtained from NATS students taking 10+ different NATS fully online courses throughout 2017/18 academic year

• 3 surveys across all courses: beginning, middle, end of course

• Surveys track student perception and experience over time.

NATS provides large, diverse student sampling given:
• students are from all disciplines
• students are from all undergrad years
• total student sampling size ~ 2000.
Survey Methods

• Series of surveys (survey monkey) conducted over 3 separate terms to understand student engagement with online course content.

• Standard demographic questions in all surveys addressed:
  − age
  − gender
  − year level
  − enrollment status (part-time/ full-time)
  − program of study

• Diverse group of students polled from 15 courses (average enrollment ~150 students) offered from May 2017- August 2018
York U: Student Profile

Estimated Student Population (2017/18) ~ 53,000

Most undergraduate students are:

- Direct Entry from High School
- Domestic
- Local (i.e. native to Greater Toronto Area)
- Live at family home
- Commute on average 1 hr / day
Why do York students take online courses?

- Scheduling convenience is a key factor in taking online courses
- Choice made because course only offered online
- Typical York students commute for 1+ hr/day to reach campus. Eliminating the commute makes many students prefer online courses.
Online Courses at York

- 54% of students have taken a fully online course before.

- 94% of students consider themselves adequately proficient with tech / software required for course.

- Comfort level not correlated with previous online course experience.

![Graph showing level of comfort with technology/ software required for course.](image)
Approach to Delivering Online Courses

• Better understanding of student online experience & expectations needed.

• Results based surveys undertaken at York will lead to best practices guidelines for online courses that instructors can follow.

• Guidelines for Phase I (content) of study will be produced early January 2019.
York Student Access of Online Courses

- Apple devices most common
- Device used has significant impact → LMS browser based
- Students use both laptop and smartphones to access material.
- Students submit work mainly through laptops and increasingly, phones.
Time spent: In-class vs. Online

- A significant factor in online courses is time spent on material.
- In-class lecture hours = 3 per week.
- Average time spent is less than that online.
• Although online content presentation takes less time, students access the content more on average.

• Most access more than once a week, and most more frequently than that.
Approach to learning

- How content is accessed is a factor in the learning process.
- Students are aware that their approach to learning is affected by the method of delivery.

Do you think studying online changes your study habits from studying in a typical classroom based course?

- Yes
- No
- Not sure
Preferred Content Delivery Formats

Q12 Which type of course content did you find easiest to learn from? Check all that apply.

- Text files (e.g., MS Word)
- Short videos
- Recorded live lectures
- Recorded lectures (in-person)
- Recorded PowerPoint
- Recorded web-based
- MOODLE (course modules)
- Forums
- Writs
- Other MOODLE functions
- Required textbook
- Recorded document cam.
- External weblinks
- Other (please specify)

Content with both visual and audio elements is clearly preferred.

Q13 Which type of course content did you find hardest to learn from? Check all that apply.

- Text files (e.g., MS Word)
- Short videos
- Recorded live lectures
- Recorded lectures (in-person)
- Recorded PowerPoint
- Recorded web-based
- MOODLE (course modules)
- Forums
- Writs
- Other MOODLE functions
- Required textbook
- Recorded document cam.
- External weblinks
- Other (please specify)

Plain text or readings seem to pose greater challenges.
Learning “On-Demand”

• Students tend to have more flexible times at which they access the material.

• Comments from students also reinforce the idea that the course is ‘on-demand’ and this flexibility is a key element for taking online courses.

Q18 With respect to studying for this course, please check all that apply

- [ ] I have a regularly scheduled study time
- [ ] Given that it is online, I study differently for this course than I do f...
- [ ] I would prefer to be offered the ability to have exams and tests invigilated...
Note taking is a key element in material retention. With material easily available, online courses may discourage these practices. Results suggest however that students do still take notes.
Interruptions

- With online courses, student attempt to multitask may disrupt the learning process.

- It is clear that interruptions are a consideration in how students will be able to interact with the material.
I’d like to see more online course options, as it allows for schedule flexibility.

Online courses are a lot harder to manage but most students including myself prefer to take electives online to avoid tutorials. It’s somewhat difficult to know exactly what the professor wants since the tone isn’t emphasized over moodle or someone may understand something completely different from what is being told or asked. It is difficult to study for an online course especially for midterm-finals which are based on so many topics that it’s hard to differentiate what the main area of focus is sometimes.

the online course was very convenient because i was able to repeat the recorded lecture many time when i couldn’t understand the topic for the first time’”

PROs

CONs
Conclusion: Overall experience

- Although comments from students provided a wide range of comments both positive and negative, overall more than half would take an online course again.

Q20 If the same course were offered in-class vs. online with no scheduling conflicts, which would you choose to take?
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