

99th BCcupms Meeting - Statistics Subcommittee Minutes

May 13, 2021 – Zoom

Attendees: Mahshid Atapour (Cap U), Jeannie Cameron (NIC), Susan Chen (Camosun), Bruce Dunham (UBC-V), Dan Henschell (Douglas), Claude Hurtubise (OC), Andrea Hyde (COTR), Simin Jolfaee (BCIT), Gabriella Kakushkin (VCC), Nam Le (UCW), Michael Lo (Langara), Gary MacGillivray (UVIC), Colin Macleod (KPU), Zahra Mahyari (Acenda), Gillian Mimmack (UFV), Harsha Perera (SFU), Mateen Shaikh (TRU),

Chair: Bruce Dunham

Secretary: Andrea Hyde

1. Introductions – reminder to email Susan Chen (chen@camosun.bc.ca) to get added to the BC statistics email list
2. Approval of Agenda
 - a. Change – move item: Election of Secretary to immediately after approval of agenda.
 - b. Motion: Dan Henschell, Seconded: Susan Chen, Passed
3. Election of Secretary
 - a. Thank you to Michael Lo for the previous three years
 - b. Nominations: Andrea Hyde (COTR) - Acclaimed
4. Approval of Minutes from 2020
 - a. Adjustments: Correction – erase (last page) Susan shared 80% students... should say “synchronous”, not “asynchronous”
 - b. Motion: Mateen Shaikh, Seconded: Dan Henschell, Passed as amended
5. Matters arising from Minutes
 - a. Statistics 12 High School (Bruce Dunham) – Have people had contact with local teachers regarding this new course?
 - i. Bruce – some local schools inform they have had not enough students to offer Stats 12.
 - ii. Gary MacGillivray – No offerings that he knows of in Victoria area
 - iii. Dan – might there be interest in an online offering district wide?
 1. Bruce – has proposed co-teaching without uptake
 - iv. Gillian Mimmack – UFV runs some summer stats 106 (intro business stats) sessions for local high school students - can fill one or two sections each summer. Are currently running an online section
 - v. Susan – Camosun tried to offer a workshop for HS teachers but didn't get any interest
 - vi. Zahra Mayyari – HS teacher in New West – not many students interested in the more specialized courses that don't open general doors – want better pre-reqs. Online students tend to be for student who just want to get it done – less about interest

- b. Open Access Resources (Bruce)
 - i. Bruce – might be nice to maintain a list of recommended online resources.
- 6. Institutional Reports - Covered in main session and written reports
 - a. Dan – WeBWork will be installed – will be using Open Intro text. Appreciates feedback/tips/tricks – please email with your ideas
 - i. Bruce – it is possible to integrate WeBWork with R via some Perl code developed at UBC and now incorporated into the current release of WeBWork. Contact Bruce with challenges – anything you can do in R, can be done in WeBWork.
 - ii. Gary – operational issues – requires sufficient memory allocation or WeBWork will fail
 - b. Andrea – Stat labs in R being developed at COTR
 - c. Questions about other reports?
 - i. Susan – looking OER texts for probability and stats for sciences (SFU Stat 270, UBC-V Stat 251 comparable). Currently using Devore text. Particularly looking for good problem sets.
- 7. Reflections on the year of online instructions: what was learned?
 - a. Class structure and access to learning materials
 - i. Mateen – lots of International students in online – preferred typed lectures over video – Mateen prepared materials in R Markdown with a good student.
 - ii. Gillian – made full notes with Minitab, screen shots, everything. Provided partial notes prior to class and students help fill in the gaps in the class – again, students liked it. Class Example Worksheets – list of exercises to do that were all done together in class. Students liked them and hadn’t thought of it as a way to practice.
 - iii. Susan – teaches social science students and engineers – very different feedback between the groups. Engineers preferred asynchronous with full notes, social students preferred synchronous with partial notes to fill in.
 - iv. Bruce – asking how students spend their time – consuming vs. creating. Looking for ways to move into creating more than consuming – pre-class quizzes in LMS and in-class activities. Term 2 was better than term 1 for participation and buy-in.
 - v. Andrea – flipped classroom where Andrea provided highlights or answered questions in the main class then used breakout rooms for in-class activities
 - b. Assessments and Academic Integrity
 - i. Andrea – use of articles to evaluate student understanding of concepts and misleading statistics
 - ii. Bruce – open book exams – students didn’t do very well and didn’t prepare as well as they normally do because they thought “open-book” meant easy. Two stage exam with individual and group portions using WeBWork and LMS.
 - 1. Gillian – what do you mean by invigilation? Bruce – used Zoom to watch that students did the work independently.

- iii. Mateen – used interpretive exams over calculation – students had to explain how to do the questions and how you modify if something changed
- iv. Gary – students don't know how to prepare for open book exams. Looking things up costs time. Encourage them to study just the same as a face to face closed book exam. Can't ask easy questions – students might be communicating but it doesn't necessarily help.
- v. Susan – used multiple shuffled versions of multiple choice that can't be googled. Fed up with cheating and use of Chegg etc. Didn't allow students to go back to questions once they completed it. Started with a bonus question about no going back and that it had to be independent. Fine for social science students, hated by engineers. Used real data sets of varying sizes that couldn't be cheated. Encouraged a one-page study sheet. Question: When doing a group portion – how do you manage it? Bruce – some parts written, some on WeBWork. Students were already in groups based on projects. All students did one student's version for the group portion. Gillian – how do you monitor screens in exams? Bruce – no fail-safe way to eliminate certain kinds of misconduct
- vi. Bruce – locking/blocking questions is essential for minimizing cheating on websites or groups
- vii. Susan – Chegg set up an idea that instructors send exams so they block those questions. She isn't interested in it!
- viii. Gillian – planning to increase the number of versions of written exams – must submit fully written answers
- ix. Michael – Getting students to prepare properly – treat it as a closed book exam. Students don't seem to type well and that makes it more challenging. Locked exams – D2L tracks student timing in question. Some students spend a long time on the first questions and much less on the later questions – thinks it's fishy in the way it worked. Did not like the idea of sending exams to Chegg. Who knows what they will do with them?
- x. Zahra – uses questionnaire to find out what student thought was a fair assessment. Working to make questions less wordy for students with reading challenges
- xi. Gary – used blocked exams – kept parts to the response time on Chegg to reduce its use. UVIC has a Chegg account and a grad student whose job it is to monitor and report. Thinks students have retreated to cheating from each other. 3 part exams – part 1 - m/c, t/f, etc., part 2 – written explanations, part 3 – detailed responses with full solutions – easier to catch cheating if it's so detailed.
- xii. Bruce – hearing that students are getting coached by lawyers for academic misconduct interviews with students. Advice seems to be to confess. Gillian – students are replying about specific questions and then are only getting penalized on those questions. Michael – re: students confessing on only one question. Any kind of cheating leads to a full zero. Dan – No part marks for not-cheating!

- xiii. Mateen – blocked/multiple part exams. Has had issues with students taking phones to the bathroom in face to face exams. In face to face they were moving to multi-part exams where students can only use the bathroom between the parts. Students who couldn't do this could register with accessibility services.
 - xiv. Bruce – how to manage open book exams face to face. Allowing students to use R, online text, laptops etc. Working on ideas
 - xv. Dan – be very upfront about what academic dishonesty looks like online. Ask them to do some soul searching upfront about the kind of person they want to be. Really turn the responsibility back to the students. Bruce is skeptical but doesn't think it can do any harm.
- c. Open Access Resources (new in particular)
- i. Please see institutional/departmental reports
 - ii. Dan – My Open Math – for a math class
 - iii. Bruce – Shiny Apps – free for academic institutions (around 425 free simultaneous users). Look in StatSpace to see them. iClickers – used in online classes just like in face to face.
 - iv. Susan – used iClickers as well but replaced it with Collaborate online but it's not the same – can't track student responses for grades. Dan – in Collaborate can you run a Blackboard quiz instead of a poll? Susan – never tried
8. Any other business?
- a. Data Science courses and programs
 - i. Bruce - UBC has introduced DSCI code for data science courses. Can indicate joint ownership between computer science and stats. Institutions who are interested may consider this code. You can find info about DSCI on UBC's website <https://www.stat.ubc.ca/course-lookup> or contact Bruce (b.dunham@stat.ubc.ca) . For info on how this fits in, see Bruce's institutional report.
 - ii. DSCI 100 is in R but they are working on a Python version – will articulate both.
 - iii. DSCI major/degree is in the works. Minor keeps the requirements quite modest. Requires some coding but not language specific.
9. Motion to Adjourn
- a. Motion: Gillian, Seconded: Dan, Passed