Peer Dialogue Record - Brief Plan of Taught Session

Session plan

By the end of the session, students should be able to:

1. Understand Generalised Additive models and how this extends additive models
2. Understand the flexibility gained by moving from GLMs to GAMs
3. Understand how to implement GAMs in R, as well as how to perform model checking

Time	Topic focus	Planned student learning activities	Additional notes (optional)
10 minutes	Recap additive models		
10 minutes	Introduce GAMs and how they extend AMs in the same way as GLMs extend LMs		
25 minutes	Illustrate how to fit GAMs in R, with a real life example of modelling ratio of male to female births	This should be an interactive sessions, where students are asked to contribute in implementing GAMs on the computer	
5 minutes	Clarify what is required of the students for the assignment		
Intended ways of assessing this learning (formative/summative):		One question on GAMs on each of the formative and summative assessments	

Appendix 4 Option A

Session Observation Record

- The **first** section gives suggestions for points that the observer can look for during the taught session, and provides a space for him or her to record a summary of their observations. (Please ensure that the observer receives a brief session plan (A1) before the session begins.)
- The **second** section encourages the person who has been observed to reflect upon the observer's comments, and upon his or her own views of the class, in the context of the purpose as set out in the first section.

1 Key Information	
Name and role of person observed	Theo Economou
College or area of Professional Services	CEMPS
Programme of study/course	Mathematics
Title and level of module (where applicable)	Advanced Statistical Modelling
Type of class (lecture, lab, seminar...), and location of class within the module (e.g. week number within the total weeks)	Lecture
Number of students	15
Name and role of observer	Jan Sieber

2 Observation of the session

To be completed *during the class* by the observer, and given, with verbal feedback, to the colleague being observed.

Opening the session

Clarity of purpose/intended learning outcomes - review of previous work - links to other classes/modules/ programme - reference to assessment?

A brief link back to additive models was given in the lecture in very nice and basic terms. I think that is entirely appropriate (more was not necessary). An extensive look-ahead was not necessary, since the material in the lecture was directly related to the (assessed) problem sheets and the students had a complete set of notes available. Generally, the topic that was supposed to be covered was clear from the outset.

Main part of the session

Appropriateness of structure, presentation and pace - sensitivity to students' reactions – variety of learning activities - conveying enthusiasm? Engagement of students in active, research-like thinking and learning?

The pace was appropriate. The lecturer frequently paused to confirm with the students if any points were unclear. While students were always somewhat slow to react, several of them had the computer code discussed in front of them (on their laptops) and were comparing their own computations with what was shown in the lecture.

Trevor Bailey (the other lecturer of the module) was present and interjected frequently asking for clarifications or giving additional comments.

The lecturer is an absolute expert on the topic and on R programming, which showed during the lecture and puts the module close to research relevant questions (making the "advanced" in the title appropriate). The topic gives plenty of opportunity for discussion of real-life problems. The problems have been prepared by the lecturers in advance and are used for the formative assessment (coursework).

One of the courseworks/problem sheets is due soon, so problems from that sheet formed a natural centre of the lecture.

Closing the session

Summary of learning achieved - further linking to later/parallel work - expectation of learning activity to be undertaken after the class?

The lecture had a natural ending with one of the example discussions finished. The students are expected to continue working on this example. I think this is all that's necessary. TB gave a quick outlook what's next (and when the notes are on ELE) and reminded the students of his office hours.

Overview

Appropriateness of structure/pace - effectiveness of presentation - encouragement of personal skills

The class was mostly for providing background knowledge and demonstrating a typical approach to problems. The skill development comes from the engagement of the students with the problems (nearly always the case in mathematics and, in particular, in statistics).

development - appropriate use of resources - rapport with students - motivation/engagement of students?	So, overall, the presentation was very suitable and well done. Focussing on fine details of presentation is unnecessary for an advanced 3rd-year module.
Points of good practice worthy of being shared more widely and/or to be taken up by the observer	Theo was quite expert in demonstrating computer code and its results during class. That is something that I struggle with. The class was driven by interesting problems (as is the entire module). This makes it naturally challenging and intellectually stimulating for the students. The topic permits a great variety of problems. In my opinion, the current maths curriculum lacks complex problem solving activity, so this module sets a good example (I think there could be more of this).
Suggestions for areas to develop	The notes in their current state are not a good compromise. The current notes discourage note-taking by the students, but are also not comprehensive enough, not really giving precise definitions or descriptions of algorithms. This lures many students into a somewhat passive-reception attitude during the lecture (noticeable when the lecturer asked questions). I did not find detailed notes on the ELE website, either. While the goal is to enable students to pick an appropriate modelling approach for problems they encounter, I am not sure that the problems are of sufficient complexity to force the students to make and justify difficult decisions. I lack expertise in R, but to me the black-box component seemed rather large: for every problem problem there is a R routine that does what is requested. Most of the demonstration appeared to me to consist of calling these black-box routines. At which point is the students' complex-problem-solving ability challenged? As Theo is planning to take over the module completely next year, this is an opportunity to leverage his expertise and ramp up the active complex problem solving component of the class. We discussed afterwards potential changes: Theo suggested an increase of the coursework credit percentage, a change of the exam style, and an adjustment of the notes. All of these make sense, and I leave it to Theo to adjust the module in all aspects to make it fit closely to his personal preferences and his research. Other small points (for future changes): * add “further reading” to ELE page, * remove “blink-blink” from ELE page.
Barriers/challenges to	Nothing serious.

good practice **of which the College/University should be made aware**	I personally don't understand how learning outcomes in a statistical modelling class can be assessed by written exam with a weighting of 70%. What kind of statistical problem can students solve in a 2-hour exam?

3 Reflection following the session

To be completed by the person who taught (or supported learning in) the class/session, following conversation about the points made by the observer.

Reflection on achievement ***To what extent do you feel you achieved your aim(s) for this session? What were you particularly pleased with?***	I would say the aims were overall achieved. The students seemed to enjoy the mix of lecturing from slides, writing on the whiteboard and illustrating things on the computer.
Reflection on planning ***If anything did not go as planned, was it a problem or a benefit? What is there to learn from it with regard to future planning?***	Some of the plotting on the computer did not work properly, so checking this out before the lecture would have been beneficial.
Reflection on observer's feedback ***Are these fair comments? Did anything here surprise you?***	The comments were more than fair, and certainly constructive. I will be leading this course next year and will take on board the observer's comments regarding the exam-coursework split. His comments regarding the introduction of computer tutorials, and more challenging assessment questions will also be taken on board. He is quite right in

What action will you take to build on and share with colleagues the points of good practice noted by the observer, and to follow up any suggestions for development?	that this course does not fully take advantage of the plethora of challenging problems from y own research that can be given to the students as part of the assignment. He is also absolutely right that the lecture slides are very wordy but at the same time not very comprehensive. This will also be addressed.

Peer Dialogue Scheme - Summary of Activity

Name
Theo Economou

Role
Lecturer

College/Subject area
CEMPS/Statistical Science

Date/Academic Year
24/2/2016 (2015-2016)

1 Nature of Peer Dialogue activity undertaken

(e.g. Peer Teaching Review; Peer/group dialogue on an identified area of practice. Describe briefly what you and your colleague(s) did, and what came out of the activity in relation to developing your own *academic/professional practice.)*

Peer Teaching Review. Jan Sieber observed me during my lecture to third year students. His constructive feedback was very useful and has helped me think about my lecturing style/methods, but also to think in terms of restructuring the course to suit its applied nature.

2 Points of good practice arising

(Please summarise areas of good practice as agreed by you and your reviewer(s))

The observer pointed out that I was an expert in delivering a lecture which is a mixture of demonstrating code and going through slides. He also said that that the lecture was very motivating by relating the statistical theory to challenging real-life problems

3 Challenges or barriers to effective practice

(*Please note any issues you feel could or should be addressed by the College or University.*)

Nothing major was noted, however the observer has pointed out some things that could be done to improve the module as a whole:
- Increase the assignment-exam ratio
- Introduce dedicated computing classes
- Make the slides more concise where possible

What do you need to do with this form?

- **Please email one copy of this summary form to your Academic Lead or line manager, to be discussed as part of the annual PDR process.**
- **Send one copy to your Director of Education or Programme Director, where applicable, to inform Annual Programme Monitoring. This should be done by 31 August each year.**
- **In addition, you are *invited* (although this is not a requirement) to send a copy of this summary form, anonymised if you prefer, to your College Education Adviser, via James Gregory (Education Enhancement) at J.Gregory@exeter.ac.uk – please clearly state your College/Service. Your College Adviser will then distil key areas of good practice and challenges/ barriers to good practice for each College/Service, sending an anonymised summary to the Associate Dean for**

Education and/or relevant Head of Service.