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TYSTYSGRIF UWCHRADDEDIG ADDYSGU MEWN ADDYSG UWCH

POSTGRADUATE CERTIFICATE IN TEACHING IN HIGHER EDUCATION

Cylch Dysgu 3 | Teaching Cycle 3

Small Group Teaching - From Learners to Investigators

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Teaching Cycle 3

Small group teaching: from learners to investigators

The Teaching Situation

All academic staff are expected to undertake the duties of a personal tutor. In the Institute of Biological Sciences (now the biological sciences section of the Institute of Biological, Environmental & Rural Sciences - IBERS) tutorials are both pastoral and academic. Tutors are expected to meet with their tutees as a group five times per semester and hold one individual meeting with each tutee towards the end of each semester. An open-door policy is operated and tutees may see their tutor at any point in between the formal meetings.

Small group teaching can play an important role in developing students basic study skills as well as enhancing their knowledge, analysis and evaluative skills (Coltrell 2001). Academic tutorials in the biological sciences are aimed at increasing students' communication skills, critical evaluation, time management and self confidence. Tutorial groups are comprised of 6-8 students: the smallest teaching group found in biological sciences. Groups comprise students from a single degree scheme, or closely related schemes. There is no fixed agenda for tutorials, their content being at the discretion of individual members of staff, with the exception of two items of coursework from a general research skills module that are assessed within the tutor group by a combination of peer-marking and tutor assessment (see Appendix 4). Students change their tutor each academic year in order that they are exposed to different outlooks and research interests. The 3rd year tutor is the student's Honours Dissertation supervisor. I am tutor to two groups of first year students each year, studying on the Animal Behaviour and Zoology BSc (Hons) degree schemes.

What aspects of the teaching situation needed developing in order to improve student learning?

Given a list of choices, it is a relatively simple task to decide which to which one is best suited or which are the most appropriate to the relevant learning outcomes at hand. To be told that one can do anything can result if blank-paper syndrome: where to start and what to do? My appointment at UWA was my first as an academic member of staff and thus my two first year tutor groups were also my first experience of this role. First year
students tend to be more reticent than their second or third year counterparts, partly an effect of finding themselves in a new environment, with new acquaintances and unsure of the accepted procedures (Race 2005). I wanted to assess the effectiveness of the various activities I had devised to fill the tutorial slots for my two tutorial groups in terms of meeting the learning outcomes outlined above (to enhance students' communication skills (written and oral), critical evaluation, time management and self confidence) as well as to increase rapport between myself, as tutor, and my tutees and among the tutees themselves.

Which teaching methods were to be implemented?

I engaged in discussions with a number of colleagues as to how they ran their tutorial groups in order to gain a picture of general formats that seemed to work with small groups of students, rather than to copy specific programmes. Small group teaching allows a wider range of possible teaching methodologies than those available to very large groups (Race 2005; Lorenzo & Juste 2008) However, the nature of the tutorial group, with the tutor's role comprising pastoral as well as academic duties, can make for a different group dynamic to standard small group teaching (Forster et al 1995).

Tutorials are not an assessed module (excepting those aspects of other modules assessed in the tutorial setting), although attendance is expected, as is engagement in the tasks that are set. A key area that, from my point of view as a newly appointed tutor, required focus, was that of the effectiveness of different types of tutorial meeting: would students undertake written work, given that it was not assessed? Was echoing the assessments of modules a suitable and effective method of approaching the intended learning outcomes? How could the necessary confidence be engendered in the learners?

Tutorials are, by their very nature, student-focused and a tutorial plan that took a student focussed approach was necessary and appropriate (Bransford 2000; Lorenzo & Juste 2008). Generating new material that was relevant to the learning outcomes and social pressures of such a group required that attention be paid to the students themselves (Bransford 2000): who were they, what were their interests and why had they decided to study for their particular degree subject?

In my first year of tutoring I designed a range of tutorials aimed at their particular, academic interests as well as more general skills-based learning requirements. Those
which were attended by more than half the tutorial group are listed below (those attended by less than half the group are not included in this analysis. Numbers in brackets indicate the learning outcomes that each activity was designed to address (1) communication skills, (2) critical evaluation, (3) time management, (4) self confidence

- (1, 4) Introductions: Meet, greet, "why I chose this degree subject"
- (1, 2, 3, 4) Working in groups: finding "behaviour" on campus and describing it in terms of Tinbergen’s four questions
- (1, 2, 3, 4) Essay assignment (external module) and peer marking
- (1, 2, 3, 4) Nobel Prizes: what's new in zoology/animal behaviour: student presentations of recent research they had discovered in the peer-reviewed literature
- (3, 4) Christmas quiz (academic and Aberystwyth themes)
- (2, 3, 4) What makes a good paper? Analysing a peer-reviewed paper on a "cure" for hay fever
- (1, 3, 4) Just a Minute: Talking on a subject with no preparation: what makes a good presentation
- (1, 2, 3, 4) PowerPoint presentation assignment (external module) and peer marking

Method of implementation

Tutorials were held fortnightly, with five group meetings in each semester. The topic of each tutorial was provided to students in advance in a list for each semester. All tutorials began with an informal gathering of thoughts of and activities: what had the students done recently, how were they settling into their accommodation, any problems with modules. This was aimed at increasing rapport within the group prior to engaging in the task at hand.

Evaluation of Teaching Development

My aim was to assess all of the tutorials at the end of the academic year with a view to making alterations for the following year's intake. A questionnaire was designed to obtain student feedback on the activities and topics covered in the year's tutorial sessions (see Appendix 1). Students were asked to rate each activity according to their perception of how it met each of the intended learning outcomes.
Only a small number of tutees completed the response forms, making analysis of the responses unreliable. Nonetheless, the students’ ratings of each activity in terms of the learning outcomes suggested that their perceptions agreed with my aims for each activity: the mean student score for those learning outcomes I had ascribed to each activity (above) were greater than the mean scores assigned to the learning outcomes I had not assigned to each activity (3.6 vs. 3.0 respectively).

Qualitative comments provided support for my intention to provide a relaxed learning environment. The most frequent comments reflected positively on: having met the other students and formed friendships (80% of respondents), the relaxed nature of the group (70%) and a perception of a lack of pressure to answer questions (50%). In fact all students took an active role in the activities and discussions, suggesting that the relaxed nature of these groups enhanced the learning process by increasing learner interaction. The small group nature of tutorials therefore appeared to be successful at increasing active learning and students’ perception of the learning process, as has been found elsewhere (Macmillan & Mclean 2005). The only negative comments related to the time of day at which the tutorials were held (“too early” – 30%), something over which I had little control given the requirements to fit around a busy module timetable.

The small nature of the groups may have dissuaded students from responding honestly or at all, perhaps because, although they knew that I was interested in their replies as I had explained the reason for my request that they complete them (and it was not a faculty form or one issued by others) there may have been a perception that precise comments may have aided identification of the respondent, with consequent risk of a negative attitude about them being formed by the teacher (Fry et al 2003). However, students were willing to discuss the tutorials informally on a one-to-one basis when they came to see me for other matters or during the end of semester one-to-one meetings with tutees. These discussions confirmed the findings of the questionnaires and also highlighted the popularity of the active-learning sessions as compared with the seminar room or desk-bound activities. Although students generally prefer active-learning scenarios, they can be difficult to arrange, particularly for larger groups, and their value has been debated (Prince 2004). Nonetheless, when included in the curriculum, such sessions act as a marketing hook during recruitment events such as open days and the ratio of “practical” classes to formal lectures is a common question of visitors in the Institute of Biological Sciences.
At the end of the academic year the tutorial group approached me and invited me out for a drink. They said they had formed something of a tutorial social "clique" and would like to mark the end of the academic year with (another) drink, this time in my company. I was touched not only to be asked but to feel I might somehow have brought about the situation. While they may well have gone on to form a social group without my influence, or indeed in spite of it simply by being forced together in a tutorial setting, they suggested, individually, that it was the style and atmosphere of the tutorials that had helped them bond, working together on academic tasks as well as unwinding at the end of the day: evidence of a rapport that had developed both among the tutees and between tutor and tutees, thereby meeting one of the aims I had set as part of the process.

Further Development of Teaching

Given the relative success of the tutorials in terms of increasing rapport among tutees, as well as towards meeting the department's intended learning outcomes, I decided to develop them further in two ways. Firstly, by increasing the amount of active learning (Prince 2004) such as outdoor activities and those taking students away from the seminar room, and building on the rapport developed between tutees. I had observed that many of my tutees were only too glad to have the opportunity to talk about aspects of their degree that they found interesting, whether from their own experience, on television, or elsewhere. The common nature of degree structures across degree schemes in the biological sciences means that most modules have over 150 students registered and practicals, can be difficult to manage. Furthermore, students had little opportunity to escape the classroom or lab setting.

Secondly, I had observed that students would excitedly discuss such matters with each other (e.g. "Did you see the behaviour of X in last week’s David Attenborough?"). I intended to build upon this enthusiasm in a structured manner so as to make students the drivers of their own learning (Forster et al 1995).

Method of Implementing Discussions

I developed my tutorial sessions to include practical experience relevant to the degree schemes covered. I dropped some sessions from the previous year and replaced with opportunities to interact with animals and/or relevant active (practice-based) learning scenarios. One such was an afternoon visit to the red kite feeding centre at Nant yr Arian, 20 minutes outside Aberystwyth. I provided a sheet with general information on...
red kites at this centre (see Appendix 5) and binoculars for each student. Whilst viewing
the kites I provided some general information about them and the conservation efforts
that have resulted in their increased numbers in recent decades. Following this we
adjourned to the centre’s café for a discussion while the matter was fresh in the students’
minds and avoiding the distractions of campus.

Other tutorial activities included:

- visiting the Institute’s museum and handling the skeletons and preserved
  specimens prior to preparing a presentation (students worked in pairs on the
  presentation preparation).
- Visiting the Institute’s aquarium
- Observing animal behaviour on campus and relating it to Tinbergen’s four
  questions
- Visiting the local pub/cafe and discussing either items from the museum or recent
  papers from key journals to illustrate the range of research currently in progress,
  highlighting oddities (e.g. yawning canaries, fellatio in seals, biology of human
  attractiveness)

Figure 1: Tutees viewing kites at Nant yr Arian

The above activities were aimed at enhancing learning through practice-based learning,
designed to engender deeper learning by developing learning from fact-based knowledge
to its application and synthesis, moving up Bloom’s (1956) taxonomy. However, having
provided structured learning activities, I was keen to involve the students in conducting their own research, away from tutorials and timetabled sessions. Having attended a CPD session on “Wikis in Higher Education” I designed a Wiki for tutorial use whereby students could add items of interest as they came across them, make comments on other tutees’ contributions and develop their own interests by adding pages to the Wiki. In order to maintain the academic focus, within tutorial rapport and to ensure a safe online environment, Wikis were established within Blackboard, the online learning tool. When appropriate, the first few minutes of each tutorial session would be spent highlighting new additions since the previous tutorial.

Evaluating Tutorial Sessions

Given the low response rate from the questionnaire from previous tutees, I obtained feedback verbally, both informally during adhoc discussions and during the end of semester meetings. I also discussed the outcomes with colleagues to who had undertaken similar activities with their tutees and/or, following my suggestion, had set up a tutorial Wiki.

Tutee responses to the active-learning based sessions were unanimously positive, even when the weather had been inclement during outdoor activities. Many had no idea of the Institute’s museum collection and/or had not seen the aquarium since they had been shown it on one of the open days prior to commencing their studies. Tutees were keen to discuss not only what the skeletons were but how they differed and why, from an evolutionary point of view, suggesting synthesis and evaluation of the subject matter. Students also began thinking about and discussing how they could develop some of what they saw from a research point of view, as early planning for their eventual Honours Dissertation. Several indicated a willingness to be involved in the research projects of myself and my colleagues in the aquarium and elsewhere.

Although some research has found students not to engage in online learning such as Wikis when it is not assessed or required (e.g. none of 287 students created or edited a page within a Wiki during the course of one semester: Ebner et al 2008), their use can be positive (Richardson 2006). The history of usage and identity of contributors can be monitored easily using the closed-environment Wikis contained within Blackboard that were used. Contributions indicated that the students did engage, although the knowledge that the tutor would be checking contributions and they would be discussed at future tutorials may have acted as a spur. Nonetheless, the number of contributions and
detail in each suggested that students had gone beyond the bare minimum, actively engaging in the learning process, thereby widening their experience of research and enhancing their learning.

**Reflection & Future Development**

This Teaching Cycle set out to assess the effectiveness of tutorial activities I had devised to fill the timetabled slots for my two tutorial groups in terms of meeting the learning outcomes of tutorials in the Institute of Biological Sciences: enhance students' communication skills (written and oral), critical evaluation, time management and self confidence. In addition, I aimed to increase rapport between myself, as tutor, and my tutees and among the tutees themselves, building on these findings to enhance the tutorial group as an active learning learning environment that encouraged student-focussed and student-driven learning.

The first year of tutoring allowed me to assess the effectiveness and popularity of a variety of student-focussed tutorial activities. While popularity amongst students is not necessarily a measure of learning quality, students who enjoy the learning process are more likely to engage with it and enhance their learning (Race 2005). The focus on active-learning in subsequent years has met the department's specified learning outcomes whilst also increasing tutee interest and involvement in the learning process. I aim to continue to review and develop these tutorial activities to suit the students, their learning and the department's stated learning outcomes for tutorials. In particular, I am keen to develop the online element within my taught modules, engaging larger groups in an on-going learner-centred activity, effectively introducing peer-teaching as an additional learning process on an extra-curricular basis to timetabled sessions. I have also now designed, and had approved by Faculty, a new module "Animal Behaviour Field Course", a residential field course based on active learning and student-designed projects (see Appendix 7). Experience of colleagues elsewhere suggests that such field courses not only successfully meet the academic learning outcomes through active learning but increase learner-teacher rapport as a result of the learning process and intensive full-day, 7-day timetabling.

The inclusion of research elements to the tutorials (e.g. conservation at the red kite centre, behaviour research on campus, aquarium activities) has led to an increase not only in student learning based on these activities but an increased desire to become involved. This extra-curricular active-learning is not only of value to the learning process
but by contributing to that endeavour, enables students to see how knowledge is acquired in the wider scientific arena. Last year I recruited 34 volunteer students to a project surveying the 200 nestboxes I had erected on University land as part of my own research. The response to my general email to students on zoology related degree schemes yielded a greater pool of volunteers than I had envisaged and greatly assisted in the project. The project's findings were updated on a weekly basis on the department's foyer display monitor, detailing the number of active nests, eggs laid and young hatched (see Appendix 6). Furthermore, the students themselves were keen to engage in the project and follow its progress after the nestbox season had finished.

Some requested details of further such activities. To date I have managed projects which have involved student volunteers spending time in the Outer Hebrides recording birdsong and collecting comb jellies from coastal waters, subsequently analysing their behaviour in the aquarium. I have since offered suggestions to a number of colleagues who have also now begun to recruit successfully student volunteers to their research projects.

Since arriving at Aberystwyth University I have been appointed to be the department's Tutorial Coordinator. Having found the process difficult myself when first faced with developing my tutorials, as part of my role as Tutorial Coordinator I developed a guide to tutorial topics and themes (see Appendix 2) to provide new, and existing, tutors with some suggestions as to how to develop their tutorials. I also re-wrote the department's Guide to Tutoring (see Appendix 3). Both of these documents were distributed to other PGCTHE course participants as an example of good practice following the "Personal Tutoring in Action" CPD course (see separate report). Feedback from colleagues to date has indicated these to be of great use. Some staff have also suggested new activities. As a result, I keep both documents under continual development and review. Both are available to staff (and non-staff tutors) on Blackboard and are sent to new members of teaching staff.
Appendix 1: Teaching Cycle 3 – Tutorial Feedback Form

Tutorial Feedback

This questionnaire is to gauge the usefulness and enjoyment of this year's tutorial sessions to help improve or alter them for future years. All answers are confidential - please do not write your name anywhere on the paper. Once completed, please fold and return to the envelope on my office door.

Tutorials in this department are meant to help develop the following areas:

Communication skills (writing and oral).
Critical evaluation.
Time management.
Self confidence.

Below I have listed the main topics of our tutorials. Please can you give a mark for each tutorial session on these 4 criteria. Circle the appropriate number where 5 = a lot, 3 = no preference, & 1 = not at all. Leave blank if not relevant. Please feel free to write any other comments next to each tutorial.

1) Introductions, Meet & Greet, "Why I chose this degree subject"

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
Self confidence. 5 4 3 2 1

2) Working in groups, finding "behaviour" on campus and describing it's development, purpose etc.

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
Self confidence. 5 4 3 2 1

3) Essay assignment and peer marking

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
Self confidence. 5 4 3 2 1

4) Nobel Prizes: Who would you present a prize to and Why?

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
Self confidence. 5 4 3 2 1

5) What makes a good paper: analysing a bad one on a hay fever "cure"

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
Self confidence. 5 4 3 2 1

6) "Just a Minute" Talking about a subject with no notice. What makes a good presentation.

Communication skills (writing and oral). 5 4 3 2 1
Critical evaluation. 5 4 3 2 1
Time management. 5 4 3 2 1
7) PowerPoint presentations to the rest of your group. Marking each other.

- Communication skills (writing and oral). 5 4 3 2 1
- Critical evaluation. 5 4 3 2 1
- Time management. 5 4 3 2 1
- Self confidence. 5 4 3 2 1

8) Christmas quiz & mulled wine

- Communication skills (writing and oral). 5 4 3 2 1
- Critical evaluation. 5 4 3 2 1
- Time management. 5 4 3 2 1
- Self confidence. 5 4 3 2 1

9) What did you enjoy most about the tutorials?

10) What did you enjoy least about the tutorials?

11) Any other comments, suggestions or ideas?

Thankyou for completing this form.

Please place in the envelope outside my office: 207 Ed.Llwyd
Appendix 2: Teaching Cycle 3 - Notes for new tutors: Tutorial Topics & Themes

Tutorial Topics

Planning tutorials for the first time can be daunting: The aim is to encourage and improve students’ communication skills (oral and written), critical evaluation of material and boost their self confidence as scientists. Lecture sizes can be over 150, so tutorials provide a rare opportunity for small group discussions.

Below are an ad-hoc selection of themes for tutorial groups. Some may be more appropriate to some subject or year groups than others. The list is not exhaustive, nor is it mandatory, but aims to provide a few suggestions to help you. Discuss your tutorial ideas with other members of staff who may be able to offer guidance and suggestions on what is (or is not) likely to work. If you have 2nd year tutees, check with their 1st year tutor to see what they did the previous year.

You may find it useful to give out a sheet requesting anonymous feedback at the end of the semester/year in order to assess how your tutees found the tutorials - for staff taking the PGCTHE course, this can form the basis for one of your teaching cycles.

1. Plagiarism - provide a list of scenarios/examples and ask your tutees to discuss in pairs/small groups whether or not each is "plagiarism" or unfair practice. A list of examples that make a useful quiz is available on pages 5-7 of this paper: http://www.plagiarismadvice.org/media/2006papers/Savasubramaniam.pdf
For other resources, see http://www.plagiarismadvice.org

2. Your Research: - show your students where you conduct your research (e.g. your lab or field site). Most students have no idea what their tutors/lecturers do other than teach! What excites you? What do they find most interesting? How would they take your research forward?

3. Problem Modules: - cover areas of modules that your tutees find tricky. They could research & present themes: ask pairs to present a taxon / chemical structure / behavioural strategy etc.

4. Nobel Prizes: - ask your tutees to pick out and present the most interesting/note-worthy research from a peer-reviewed journal in the past 12 months. Or summarise their choice of Nobel Prize winner from the past 5 years. 5 mins per presentation and a vote for the most "worthy" or interesting. Present a mock-up certificate to the winner’ Good practice at preparing & giving presentations as well as reading the scientific literature.

5. Get outside: - very few 1st year courses involve field work. Tutees may appreciate seeing biology in the real world (e.g. red kite feeding at Nant-yr Arian; Borth or Tregaron bog; bird/mammal life on campus; gulls/invertebrates along the sea-front; lichen on Constitution Hill). Ask them to find/describe examples of relevant themes (e.g. Symbiosis, Adaptation, Tinbergen's Questions). For transport options, see end.

6. Abstract writing: - give your tutees (or pairs of tutees) a paper with the abstract cut out. Ask them to read the paper and write their own abstract. How is a paper structured? NB. Nature provide an excellent annotated & structured example, particularly useful for 3rd year personal projects, here: http://WINW.nature.com/nature/authors/gta/Letter_bold.pdf

7. Museum, Herbarium, Aquarium & Greenhouses (Botany gardens Penglais or Gogerddan): The 1st two are located in rooms 2.29 & 2.30, 1st floor Edward Llwyd (key available from Julian or the Porters). The aquarium is in the basement: ask Rory Geoghegan for the entry code. It contains a wide range of plant specimens, skeletons, stuffed animals including rare flightless parrots from New Zealand, wallabies, sheep and soft tissue, are in the museum. Spend a tutorial there or borrow items for discussion. Ask students to prepare a presentation to compare two or more items each (e.g. evolutionary adaptations of herbivores vs. carnivores, marsupials vs. mammals, reptiles vs. mammals/birds etc). Or use the visit as a basis for a Wiki (see [9J below).
8. **Pub / Café**: Breaking out of the academic/university environment can help tutees relax and be more open to discussion, especially if you use a seminar room for tutorials. Discuss an item from the Museum, a journal article or the latest David Attenborough programme. Try the Arts Centre, book the meeting room in the **staff club**, or a quiet pub close to campus (e.g. Black Lion, Llanbadarn, Coopers Arms at bottom of the hill).

9. **Wiki Tutorial**: Set up a Wiki on Blackboard for your Tutorial Group. Ask your students to add relevant degree-related material throughout the year from anything they hear/read/see in the media, magazines or elsewhere. Spend 5-10 mins of each tutorial going over and discussing new additions. It gives ownership of learning to students & helps them make sense of and apply their subjects in the wider world. To set up a wiki in Blackboard, click on: My Institution / My Expo Site / and, under Toolbox: Add New Site. The default subject and email content when inviting new members (your tutees) is for student PDPs and can be deleted, BUT you MUST keep the hyperlink as this is specific to your wiki - without it the students will never find it! For a quick, easy 3 minute guide on Wikis, click here: [http://www.youtube.com/watch?v=dl1QOTdnlY](http://www.youtube.com/watch?v=dl1QOTdnlY)

10. **Biochemistry of Life**: Ask each tutee to choose one or two elements from the periodic table and give an example of what they do in terms of biology: e.g. how they affect photosynthesis, growth, behaviour etc. Get the students to add these to the Wiki. Perhaps prepare a small demonstration.

11. **Name that organism**: Many students have problems with the latin/greek scientific names of organisms, particularly invertebrates. Ask your students to research the meaning of different names. Ask them to come up with new names for species, based on the same rules (in English): e.g. "striped headed weaver bird"

**Other useful things to know:**

- **Binoculars/telescope & tripod** can be borrowed for tutorials/teaching: contact Rupert Marshall or Ian Scott (ias) to book them out.
- **Microscopes & Lab equipment** can be borrowed for a tutorial - why not book a lab? Labs and lab equipment can be booked through Gareth Owen (goo).
- **The department car** can seat 4 plus the driver - it can be reserved by writing your name & the times you need it in the diary in the Edward L1wyd mail room. Note that it is stored in the Botanical Gardens car park at the weekend and may still be there early in the week! Register yourself as an approved driver first for insurance purposes: take your licence (both sections) to Rory Geoghegan (ryg) to fill in the forms.
- **The department minibus** is kept at Llanbadarn and can be reserved by contacting Neil Weston at Llanbadarn (cnw@aber.ac.uk Ext. 1633). This can ONLY be driven by those with category D1 on their licence (usually those who obtained their UK licence before 1997). The small hire charge can be booked under "Teaching". Remember to fill in both **Risk Assessment forms** (1 & 2) for all activities. See Alastair Johnstone if you have any questions relating to Risk Assessment. Click here for the blank forms and examples. [http://www.aber.ac.uk/safety-environment/england/handbook.htm](http://www.aber.ac.uk/safety-environment/england/handbook.htm) and [psac/aw ask asa/index.htm](http://www.aber.ac.uk/safety-environment/england/handbook.htm)

RC Marshall, Tutorial Coordinator (August 2009)
Appendix 3: Teaching Cycle 3 - Guidance Notes Developed for Tutors in my Department

Guidance Notes for Tutors 2009-10

Basic requirements of Tutors:

- Organise fortnightly group academic tutorial meetings (50 minutes; 5 per semester)
- Organise one individual meeting with each tutee at the end of each semester
- Be available to discuss medical/personal/academic difficulties etc with tutees.
- Ensure your tutees complete the APPR forms (Academic & Personal Progress Review): these also form a useful basis for the confidential individual meetings you have with each tutee at the end of each semester.

Who can be a personal tutor?

- Any academic member of staff (except Head of Dept and Deans)
- Any postdoc (with supervisor's permission) - 2nd year undergraduates only
- Any 3rd year PhD student (with supervisor's permission) - 2nd year undergraduates only

Is any training on tutoring?

Yes. A brief introduction for new tutors will be run for IBERS (Penglais) tutors in the week before term. Details will be emailed to tutors along with their lists of tutees in early/mid September.

The University also runs an "Introduction to Personal Tutoring" course. Check on the CDSAP website for details of when the next one runs.

Who are my tutees?

- Group(s) of 6 to 8 1st or 2nd year undergraduates whose degree subject is close to your research interests - you will be sent a list at the beginning of the year
- If a tutee wishes to move to another group they (or you) should contact the tutorial group organiser (Rupert Marshall, rmm@aber.ac.uk)
- Students are generally allocated a different tutor in each year of study.
- 3rd year students are allocated their project supervisor as their personal tutor but may also see any of their previous tutors for advice.

How do I find out more about my tutees?

- Use ASTRA - the University's student database. You can use this to look up individual students, the modules they are taking/have taken, previous module marks, previous tutors etc. It will also provide lists of students by tutor, module, degree scheme etc and will give you a photographic list of your tutees - useful for your first tutorial! To register to use ASTRA and for further information click here: http://public.mis.aber.ac.uk/user_registration/user_reg.php?lang=E
  Jane Watts must authorise your application.
  You may find it useful to attend one of the "Introduction to ASTRA" courses: visit the Information Services webpage here to see when the next one is running: http://www.inf.aber.ac.uk/courses/display.php

- Tutors who share an office (e.g. postgrads) are not eligible to use ASTRA for reasons of confidentiality and should ask Stuart Beckley for a photographic list of their tutees and any other information they require.
Where are tutorials held?

- In your office
- Room 1.13, (ground floor of Edward L1wyd: equipped with networked pc & projector)
- Room Z1.09 (ground floor of Ed. L1wyd Zoology extension) Book both the above in the Room Booking Diary in Teaching Office
- In a lab (book through Gareth Owen. Lab coats must be worn)
- Computer rooms in Cledwyn (G6 or G24): book through Information Services: operator@aber.ac.uk or Ext. 2483. Full list of computer rooms here: http://www.inf.aber.ac.uk/lns3-uwaonly/wsr_summary.asp
- Any centrally timetabled room in Edward L1wyd or elsewhere. Click here for a list of such rooms and the online booking form: http://www.aber.ac.uk/academicoffice/bookings.shtm

When are tutorials held?

- Fortnightly (approx). 5 group meetings per semester (50 mins each - as per lectures) plus one confidential one-to-one meeting at the end of each semester to discuss tutees' progress/well-being etc.
- 3’d year tutors may prefer to hold fewer group tutorials if you are meeting with your project students individually on a regular basis anyway.
- Tutorials are not timetabled centrally so it is up to you to arrange a time and tell your tutees where/when to meet. To avoid times when your tutees have lectures, check the timetables for the relevant year group (available from the Teaching Office or on Blackboard / Biological Sciences UNDERGRADUATE Information / Course Documents)
- Keep a register of who attends. If a student misses two tutorials without good reason (not necessarily consecutively), they should be reported to Stuart Beckley in the Teaching Office. The student will then be called in for a meeting with the Director of Learning & Teaching.

What do I do in a group tutorial?

(Suggestions of general tutorial topics are in a separate document "Tutorial Topics & Themes" on Blackboard)

The 1st tutorial of the year (1st year undergraduates):

- Introduce yourself and explain how the Institute's systems (modules, handing in/back of coursework etc), and your tutorials, operate.
- Show them where your office is, if you are not holding your tutorial there.
- Show them where coursework is handed in.
- Show them around the building, pointing out the main lecture theatres.
- Tell your tutees to check their University e-mail regularly.
- Ask tutees to come to see you as soon as possible if they have any special needs (medical problems, dyslexia etc). It is the student's responsibility to inform a tutor of anything that might affect his/her performance. (see "Special Needs & Pastoral Issues" below)
- Ask tutees to check they have registered for 120 credits worth of modules appropriate to their degree scheme.
• Remind students that you, as their tutor, are their first point of contact with the University and that the Institute operates an "open door" policy for access to academic staff, although arranging an appointment by email is often a good idea.

• Remind students to read their Student Handbook (available on Blackboard) and the University Examination handbook, including the marking guidelines & statements on plagiarism.

General points about tutorials:

• The key aims of academic tutorials are to improve tutees' communication skills (writing and oral)
  critical evaluation of material
  time management
  self confidence as scientists

1st year tutorials

• Go through the Institute's and University's statements on plagiarism. Make sure all tutees have clicked the boxes on Blackboard to say that they have read and understood them.

• Timetable in to your tutorials the requirements of the 1st year Research & Communication Skills module (BS 13310). Essays & presentations are marked by tutors/tutees in tutorial sessions. Separate information on this module's requirements will be posted on Blackboard. Go to "Biological Sciences Staff Information" and click on "Course Documents" in the left hand column, then scroll down to the appropriate heading. Direct queries to Mike Winson (module coordinator).

2nd years tutorials:

• In the 2nd semester, explain the mechanism of choosing an Honours Project. Basic information for 2nd years is provided on Blackboard / Biological Sciences / Undergraduate Information. See Glyn Jenkins or Rupert Marshall if you are not sure yourself.

• Remind students to read their Student Handbook (available on Blackboard) and the University Examination handbook, including the marking guidelines.

• Timetable in to your tutorials the requirements of the 2nd year Quantitative Biology & Information Technology module (QBIT - BS 22720) Web pages and presentations are marked by tutors/tutees in tutorial sessions. Separate information on this module's requirements will be posted on Blackboard. Go to "Biological Sciences Staff Information" and click on "Course Documents" in the left hand column, then scroll down to the appropriate heading. Direct queries to Mike Winson (module coordinator).

What paperwork needs filling in?

• Keep a register of attendance

• Make sure students fill in the APPR forms (Academic & Personal Progress Review). These are a useful basis for discussion at the end of semester confidential one-to-one meetings with tutees. Forms are available on Blackboard: Biological Sciences Staff Information / Course Documents (and for students under "Undergraduate Information").

• Fill in the marks/feedback forms as appropriate for the 1st year BS 13310 "RCS" and 2nd year BS 22720 "QBIT" modules (further information on Blackboard)
• Fill in the “Tutor's End of Session Report Form” for each tutee and hand to Stuart Beckley by the beginning of June. These forms (available on Blackboard as above) may be used as the basis for answering future requests for references from students.

Special Needs & Pastoral Care

• It is the student's responsibility to inform a tutor of anything that might affect his/her performance (e.g. medical problems, dyslexia, family issues).
• Medical certificates and other evidence (e.g. order of service for a funeral) should be handed in at the Teaching Office, accompanied by a Special Circumstances Form (available from the Teaching Office or here: http://www.aber.ac.uk/en/academic/special-circumstances/).
• Students with learning difficulties (e.g. dyslexia) should be assessed by the Language & Learning Centre in the Llandinam building. The centre will assign teaching support (e.g. note takers) as appropriate. See their website for details: http://www.aber.ac.uk/language+learning/index.htm
• Any information of this nature should be made known to Stuart Beckley in the Teaching Office.
• Do not discuss academic or personal issues with a student's parents unless you have the student's permission. If in doubt, seek advice from the Director of Teaching & Learning.
• Direct students to appropriate help points such as the University's welfare webpage: http://www.aber.ac.uk/en/undergrad/welfare/

Exam Boards

• You may speak on behalf of any of your tutees at Exam Boards (e.g. to mention any special circumstances etc). Boards are held after the January, May and August (supplementary/resit) examinations to discuss and finalise module marks & degree classifications.
• Postdocs and PhD students may not attend Exam boards and should contact Stuart Beckley, Rupert Marshall or a member of Academic Staff to ensure any issues they wish to raise regarding their tutees are brought up.
• Do not release exam results to students - their results will be posted online on their Student Record as soon as they are released by Academic Office (check with the Teaching Office for dates).

Writing references for your tutees

As a tutor you may be asked to provide a reference for your tutees, e.g. for a job, PhD application etc. Further guidance as to what can and cannot be said is available on this website: http://www.aber.ac.uk/infopolicies/ethical-data-protection-references.php

Further reading

A discussion of the role & effectiveness of personal tutoring is available on the Times Higher Education website here.

Useful Contacts

Rupert Marshall (Tutorial & APPR Coordinator) rmm@aber.ac.uk Exl. 2320
Useful Websites

ASTRA registration forms and information
http://public.mis.aber.ac.uk/user_registrations?user_reg_phPPlang=E
ASTRA (for registered users only): http://www.mis.aber.ac.uk

Blackboard (if you do not have access to the Biological Sciences Staff Information pages, please contact Rupert Marshal): https://blackboard.aber.ac.uk/

Dates of Term: http://www.aber.ac.uk/en/dates-of-term/

Degree Scheme Structure: http://www.aber.ac.uk/en/undergrad/courses/biology/
   Click the degree scheme in the left hand column
   Click "Course Structure" on the degree scheme page for a clickable list of modules for this scheme

Information Services course booking: http://www.inf.aber.ac.uk/courses/display.php?lang=en

Module List: http://www.aber.ac.uk/en/modules/

Staff Development/Training and course booking: http://www.aber.ac.uk/staffdevelopment/

Undergraduate Information: http://www.aber.ac.uk/en/ibers/studying/current/

University Policy on Personal Tutors: http://www.aber.ac.uk/en/academic/guidelines-handbook/3-0/3-2/

Vacation Research Funding for Undergraduates: http://www.aber.ac.uk/en/ibers/studying/current/vacation-research-funding/

YES (Year in Employment Scheme)
http://careers.aber.ac.uk/cas_webinterface/view_content.php?structure_id=739

Rupert Marshal! (Tutorial Coordinator)
August 2009
Appendix 4: Teaching Cycle 3 - Assessment Form for use in peer-marking

Assessment arrangements

Your tutor (and/or your peers in the tutor group) will assess your presentation according to the general criteria below. If you are involved in peer assessment, you should give a mark of either
O (item absent from the talk or poor),
I (satisfactory) or
2 (excellent) during or immediately after each individual talk.

It is important when putting together your file and talk that you consult the relevant PowerPoint instruction lectures on Blackboard and pay close attention to the marking scheme. You should also take note of the criteria 6-10 (which will be marked by your tutor) when planning and giving your presentation. Feedback on overall performance, including discussion of subject content, will be provided to you by your tutor as part of the tutorial system.

<table>
<thead>
<tr>
<th>Marking criteria</th>
<th>0,1,2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutee and tutor marking</td>
<td></td>
</tr>
<tr>
<td>1. Simplicity - appropriate number of slides and information on slides</td>
<td></td>
</tr>
<tr>
<td>2. Appropriate use of colour</td>
<td></td>
</tr>
<tr>
<td>3. Effective use of pictures / tables / video / sound etc where used</td>
<td></td>
</tr>
<tr>
<td>4. Effective introduction and conclusion</td>
<td></td>
</tr>
<tr>
<td>5. Clarity of speech and pace</td>
<td></td>
</tr>
<tr>
<td>Tutor marking only</td>
<td></td>
</tr>
<tr>
<td>6. Eye contact; engaging with the audience; enthusiasm</td>
<td></td>
</tr>
<tr>
<td>7. Timekeeping (5 minutes only) (1 mark lost for each complete minute over or wider time up to 2 minutes)</td>
<td></td>
</tr>
<tr>
<td>8. List of references cited</td>
<td></td>
</tr>
<tr>
<td>9. Responses to questions (must stay at the front to answer questions)</td>
<td></td>
</tr>
<tr>
<td>10. Timeliness of submission of work / bullet points</td>
<td></td>
</tr>
<tr>
<td>Total 120</td>
<td></td>
</tr>
</tbody>
</table>

Final Total /10 for module assessment

2010 - MARSHALL, R. - TC3 - Small Group Teaching - From Learners to Investigators

19
Tutorial trip to the Nant Y Arian red kite feeding centre

**DO**
- Stay on the gravel paths
- Inform Rupert Marshall if you feel unwell
- Turn off your mobile phone - the sound will disturb the kites
- Be careful when using the binoculars - don't fall over
- Backwards when following a bird!

**DON'T**
- Stand at the edge of the lake
- Drop the binoculars or touch the lenses
- Disturb other visitors

How to use Binoculars:

1. Close your right eye and focus the left eyepiece, using the wheel in the middle
2. Close your left eye (open your right) and adjust the right eyepiece by twisting the eyepiece itself.

While watching the kites, watch out for and think about the following.

- Kleptoparasitism (stealing food from another kite, often in flight).
  - Why do you think they do this?
- Why do they feed in bouts - why do they not come down immediately?
- How many do you see eating on the ground? Why do you think this is?
- Look carefully: What combinations of wing tags can you see? Note down as many different ones as you see (See below for what the wing tags mean)

Tags on the LEFT wing give the region the kite comes from:

<table>
<thead>
<tr>
<th>Tag</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Wales</td>
</tr>
<tr>
<td>Yellow</td>
<td>Chilterns</td>
</tr>
<tr>
<td>Blue</td>
<td>North Scotland</td>
</tr>
<tr>
<td>White</td>
<td>East Midlands (Rutland)</td>
</tr>
<tr>
<td>Orange</td>
<td>Yorkshire</td>
</tr>
<tr>
<td>Red</td>
<td>Central Scotland</td>
</tr>
<tr>
<td>Green</td>
<td>Dumfries &amp; Galloway</td>
</tr>
<tr>
<td>Pink</td>
<td>Northumberland</td>
</tr>
</tbody>
</table>

Tags on the RIGHT wing give the year they hatched:

<table>
<thead>
<tr>
<th>Tag</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime Green</td>
<td>1998</td>
</tr>
<tr>
<td>Black</td>
<td>1999</td>
</tr>
<tr>
<td>Pink</td>
<td>2000</td>
</tr>
<tr>
<td>Blue</td>
<td>2001</td>
</tr>
<tr>
<td>White</td>
<td>2002</td>
</tr>
<tr>
<td>Red</td>
<td>2003</td>
</tr>
<tr>
<td>Yellow</td>
<td>2004</td>
</tr>
<tr>
<td>Orange</td>
<td>2005</td>
</tr>
<tr>
<td>Green</td>
<td>2006</td>
</tr>
<tr>
<td>Purple</td>
<td>2007</td>
</tr>
<tr>
<td>Black</td>
<td>2008</td>
</tr>
</tbody>
</table>

Each tag has a stripe at the bottom with the colour of the tag on the other wing (in case you can only see one side of the bird). Ignore any numbers you see.
Red Kites FAQ:
Wingspan: up to 1.7 metres (5 feet 7 inches). Females are larger than males who are typically 1.44 metres (4 feet 8.5 inches across.
Length: 24-26 in.

Weight:
Male, 28 to 42 oz.
Female, 35 to 56 oz.

Breeding:
Sexual Maturity: 2 to 3 years.
Breeding Season: April to July
Fledging: 45 to 50 days
Incubation: 28 to 30 days.
Number of Eggs laid: 1 to 3

Lifestyle:
Pairs of life.
Courtship occurs annually.

Diet: Small mammals and birds, carrion, and fish.
Life Span: Usually 4 to 5 years, but individuals have lived to 26 years.
Appendix 6: Teaching Cycle 3 - Foyer Poster for estbox Survey

34 student surveyors

11 great tit nests

28 nests with eggs
... and counting!

200 boxes

13 blue tit nests
Module Descriptor

Module Identifier - BS30110
Module Title - Animal Behaviour Field Course
Academic Year - 2010/2011
Co-ordinator - Dr Rupert C Marshall
Semester - Semester I
Pre-Requisite - BS23520
Other Staff - Ms Eli R Saetnan

Course Delivery

<table>
<thead>
<tr>
<th>Delivery Type</th>
<th>Delivery length / details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>One lecture prior to the field course. Remaining lectures to be delivered during field course.</td>
</tr>
<tr>
<td>Practical</td>
<td>Field data collection and analysis (7 hours/day). Preparation of assessments (3 hours/day).</td>
</tr>
</tbody>
</table>

Assessment

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>Assessment length / details</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Assessment</td>
<td>N Hours Oral presentation Outcomes 1, 2, 3, 4, 5</td>
<td>30%</td>
</tr>
<tr>
<td>Semester Assessment</td>
<td>N Hours Poster presentation 1, 2, 3, 4, 5</td>
<td>30%</td>
</tr>
<tr>
<td>Semester Assessment</td>
<td>N Hours Practical report, submitted during field course 1, 2, 3, 4, 5</td>
<td>10%</td>
</tr>
<tr>
<td>Semester Assessment</td>
<td>N Hours Field notebook 1, 2, 3</td>
<td>10%</td>
</tr>
<tr>
<td>Semester Assessment</td>
<td>N Hours Practical report, to be submitted in Week 3, Semester I 1, 2, 3, 4, 5</td>
<td>20%</td>
</tr>
<tr>
<td>Supplementary Assessment</td>
<td>Extended practical report. Report to be based on sample data provided by module co-ordinator</td>
<td>100%</td>
</tr>
</tbody>
</table>

Learning Outcomes

On successful completion of this module students should be able to:

- Formulate and test hypotheses by designing appropriate observation regimes & experiments relating to animal behaviour and suggest avenues for future research
- Develop classification systems relevant to the collection and storage of behavioural data
Choose and apply appropriate analytical techniques to interpret field data
Collaborate as a group to reach research goals
Communicate their research findings effectively and concisely

**Brief description**
The module will train and assess students in the collection, analysis and presentation of field data to discern what animals do, why they do it and how that behaviour has evolved.

The module builds on the theoretical framework provided in BS23520 and provides students with an opportunity to put their knowledge into practice through problem-based learning. It provides a practical introduction to field sampling techniques for a range of animal groups (e.g. birds, mammals, insects), including skills relevant to data collection, behaviour observation, experimentation and data analysis. Students will experience the whole scientific process, from hypothesis formulation through data gathering to analysis, interpretation and presentation of results in a range of formats.

**Content**
This is a residential course based away from Aberystwyth. The field course is preceded by an introductory lecture in Aberystwyth outlining the format of the course, the daily schedule, methods of assessment and identifying essential pre-course reading. The course is divided into a number of projects, each preceded by a lecture introducing the assignment. Students are also required to devise and carry out their own independent project at the end of the course which will be assessed through a report submitted after the field course and an oral presentation to be given in the term following the field course.

The field course will make use of a variety of habitats including heathland and woodland where students will gain experience of handling mammals, birds & insects in the context of behavioural research. Students will work in small groups in tackling the assigned projects. Each project will be assessed by means of either a written report, poster, oral presentation or a combination of these, to be completed during the fieldcourse. Students are expected to discuss the data collected in the light of theories raised and knowledge acquired in Module BS23520 (Animal Behaviour).

The focus will be on answering Tinbergen's four questions of behaviour (function, causation, development and evolutionary history) by means of a variety of field observations and experiments. Training will be given in diverse data collection, surveying and sampling techniques. Specific behaviour topics will vary according to annual fluctuations in species abundance and weather conditions but will typically include foraging, predator-prey interactions, mate choice/guarding, decision making, territoriality, communication, as well as measurement & classification of morphological adaptations associated with particular behaviours.

**Module Skills**

<table>
<thead>
<tr>
<th>Skills Type</th>
<th>Skills details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of Number</td>
<td>Data collection, statistical analysis (parametric &amp; non-parametric), hypothesis testing</td>
</tr>
<tr>
<td>Communication</td>
<td>Written reports, oral and poster presentations prepared and assessed during and after field course.</td>
</tr>
<tr>
<td>Category</td>
<td>Details</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Improving own Learning and Performance</td>
<td>Attendance at lectures, observing demonstrations &amp; participation in practical sessions (problem-based learning). Reflective learning through small group discussions.</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Use of statistical programmes (Minitab) in data analysis; use of PowerPoint for presentations; Use of spreadsheets, graphing (Excel) and word processing software for data organisation, analysis and presentation.</td>
</tr>
<tr>
<td>Personal Development and Career planning</td>
<td>Reflective learning &amp; group discussions after each project. Skills learned will have value for subsequent careers in conservation, animal behaviour and related fields. Generic skills (data analysis, report preparation, oral &amp; poster presentations) applicable to a wide range of careers.</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Design &amp; implementation of experimental field studies.</td>
</tr>
<tr>
<td>Research skills</td>
<td>Design &amp; implementation of observational &amp; experimental field studies including data collection, animal handling, trapping, surveying techniques, statistical analysis, report writing and oral/poster presentations throughout field course. Critical assessment of scientific literature to underpin final report introduction &amp; discussion.</td>
</tr>
<tr>
<td>Team work</td>
<td>Directed projects undertaken in small groups. Independently designed projects undertaken in pairs.</td>
</tr>
</tbody>
</table>