

Completing the Essay Assignments (updated 2/21/2013)

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RATIONALE

The essay assignments are our way of measuring your progress in meeting course goal/objective #3 “Apply”. Comprehension (goal/objective #2) is necessary prior to application of knowledge. Application of knowledge precedes synthesis across multiple sources (goal/objective #4). The essay learning activity is designed to help students prepare to meet the following learning outcomes expected of all our graduate students (source: *TAMU Teaching and Learning Roadmap Committee Report 2009*; downloaded 1/25/2012 from <http://provost.tamu.edu/initiatives/quality-enhancement-plan/FinalTLRCreport.pdf>)

- **“Apply subject matter knowledge in a range of contexts to solve problems and make decisions.”**
- **“Communicate effectively”**

The purpose of each essay is to apply the keyword concepts from the textbook to personal supplemental materials chosen for each part of the course. This learning activity is designed to (1) increase relevance for career development, (2) increase motivation to learn about topics of personal interest, and (3) aid students in identifying what is similar and different between their pre-existing knowledge of the subject matter and the conceptual framework of the course.

Each essay should be 1 - 2 pages, single-spaced, with a list of references cited in the text. The textbook or journal “Behavioural Ecology” should be used as a guide to formatting. The elearning [assignment] tool will be used to upload each essay. Details about due dates, procedures and the grading form are available on the [assignment] tool. Students have 2-3 weeks to write each essay, one for each of 5 modules in the course.

PROCEDURE

The general procedure for completing each essay assignment will be as follows:

STEP 1. Make a list of keyword concepts in the chapters assigned for this module (keyword concepts are the words that are in the table of contents, in bold type within the chapter headings and subheadings, in the index at the end of the textbook and are used in search engines to find relevant primary literature)

STEP 2. Read the paragraphs explaining the keyword concepts that interest you the most. Pick out one or two of the references that were cited, which will be most relevant to you in your career path.

STEP 3. Use the Web of Science search engine to obtain a couple peer-reviewed sources from your list in Step 2. Use the [times cited] tab to find more recent articles on the topic. Mark the ones that are of interest to you. Use the [view related records] tab to identify the “hot” key articles on this topic. Mark the ones you like. Repeat until you are satisfied you have a good list from which to choose a couple for your essay. Go to your Marked List. Select the fields you want downloaded. Export your list to Endnotes or email it to yourself. *(TIP: if Web of Science is new to you, use the Technical Help link on the top blue bar on the course webpage. There are also instructions for getting Endnotes.)*

STEP 4. Prepare a draft list of references, with bullet points about topics you would like to address in your essay. Use the elearning assignment tool to upload this document for coaching tips by your instructor. *(TIP: The document with comments will be returned to you so you can edit it and resubmit it when ready. If you want feedback on a draft of the essay, you may submit and have it returned with comments multiple times prior to submitting the final draft of the essay.)*

STEP 5. Decide on what are the 3-4 take-home messages that you want to communicate in your essay. Use the hourglass structure (see below) to organize your ideas. The first paragraph should refer to the umbrella question, using the keywords. It should list 3-4 objectives, each related to one of the take-home messages. Each of the following paragraphs should address one of the take-home messages. The final closing paragraph should restate the take-home messages in a manner that shows how they clarify the keyword concept or question posed in the introductory paragraph. Write a draft essay. ***(TIP: to avoid plagiarism, always put words that someone else has written in quotation marks and cite the source. This applies to words from (1) websites, (2) copyrighted publications and (3) personal communications.)***

STEP 6. Use the grading form linked to the essay assignment to score your essay. Identify the strengths and weaknesses. Edit your draft by addressing the weaknesses. *(TIP: If you are unfamiliar with editing, or your preferred learning style includes social interaction, try picking a study partner and take turns reviewing and offering suggestions for each other. One good way to do this is to use the “share and collaborate” tools on your gmail account while you are talking on the phone or SKYPE.)*

STEP 7. Upload the file (.rtf, .doc, .docx, .pdf) and submit your essay by the date on the assignment tool. Your instructor will complete the grading form and offer coaching tips as appropriate on the document. The annotated document with coaching tips will be returned to you as an attachment when the essay has been graded.

STEP 8. Use the [publish] option on the assignment tool to share your graded essay with others in the class. This is an option that you may choose. Your instructor may encourage you to share your essay with others so all may benefit from excellent examples. *(TIP: Read the essays that others publish, so you get a better idea of how your writing skills compare with others and how you might improve.)*

OTHER OPTIONS

Based on your interests, you may select supplements from the following list of options, or propose an option that better fits your learning style.

OPTION A: Field Trip (see below) *(TIP: If you are a “hands-on” learner, you may use this experience as a field note supplement for one or more essays)*

OPTION B: Field Notes from your own workplace or experience (see below) *(TIP: good if you want to reflect on how to make sense of what you have already experienced, i.e. how well it relates, or doesn't, to the scientific concepts)*

OPTION C: Choose a video that you might use to teach a class, if you are an educator. A list of relevant videos in school libraries is available upon request, or you may find clips by searching on the web. See other sources listed on the [Technical Help] link on the top menu bar of the course website.

HOURGLASS STRUCTURE FOR ESSAYS

One key to effective communication is to use an hourglass structure (Stock 1985). This structure may be applied to speeches, essays, publications, class projects, theses and dissertations. The purpose of this essay is to illustrate how the hourglass structure (Figure 1) may be applied by (1) starting with the broad question (this paragraph), (2) follow with reference to specifics (paragraphs 2-4) and (3) conclude with the broad (last paragraph).

Figure 1. The hourglass structure starts broad, narrows to specifics, then closes with broad perspectives

INTRODUCTION TO A BROAD UMBRELLA QUESTION
APPLICATION TO A SET OF EXAMPLES
STATEMENT OF CONTENT OR PURPOSE
SPECIFIC EXAMPLE # 1
SPECIFIC EXAMPLE #2
SPECIFIC EXAMPLE # 3
STATEMENT SUMMARIZING SPECIFICS
IMPLICATIONS FOR THE SET OF EXAMPLES
IMPLICATIONS FOR THE BROAD UMBRELLA QUESTION

The introduction sets the conceptual framework for the essay, and states the subject matter. By outlining the points that the author wants the reader to 'take home' from the essay, the reader knows what to expect next. This style is typical of scholarly writing, in contrast to journalistic writing in which the reader is led from point to point without an overview (Axelrod and Cooper 1987). The purpose of journalistic writing is to entertain and inform. The purpose of scholarly writing is to communicate a message.

Paragraphs in the middle of the essay are used to elaborate the specifics of major points introduced in the opening paragraph. Each paragraph should have a topic sentence that summarizes one point. Examples that illustrate the major point of the paragraph are described within each paragraph. For example, Guyer (1990; Science 247:7) used this approach in the concise one-paragraph summaries of Science articles, which appear

in the column "This Week in Science". The most effective letters to the editor of Science also use a similar format (see Science 247, 14-16). It is very important to directly cite the author and date of articles that provide more details about the concepts and examples used in the paragraph. The writer who can pick articles that are widely read in the scientific community (keystone work) will be more effective at communicating ideas than an author who picks obscure articles.

The conclusion explains how the major points of the essay addressed the broader question raised in the introductory paragraph. Using the analogy of an hourglass, the introduction and conclusion are broad, whereas the middle paragraphs are more narrowly focused. Another way to think of it is as a sandwich with layers of meat, cheese and lettuce between two slices of bread. The bread holds it all together. For example, a dissertation prepared in a graduate program might consist of five chapters (Turabian 1982). The introductory chapter explains what will follow in the next three chapters, and why it is important. The concluding chapter summarizes and integrates the middle chapters, illustrating how they address the broader question introduced in the introductory chapter. This is also an appropriate way to structure the concluding section of a paper submitted for publication (Menasche 1984).

In conclusion, the hourglass structure is essentially the same as the universal Toastmaster's axiom for making effective speeches: "Tell them what you are going to say; tell them; tell them what you said." analogy for this hourglass structure is a sandwich: the meat, cheese and tomato (examples) are enclosed in two pieces of bread (concepts). Whether we think of this "broad-specific-broad" structure as a sandwich or an hourglass, it is an effective form of scholarly communication.

Literature Cited:

Axelrod, R.B. and Cooper, C.R. 1987. Reading Critically, Writing Well: A Reader and Guide. St. Martin's Press: New York. 655pp.

Menasche, L. 1984. Writing a Research Paper. University of Pittsburgh Press: Pittsburgh, Pa. 128pp.

Stock, M. 1985. A Practical Guide to Graduate Research. McGraw-Hill: New York. 168pp.

Turabian, K.L. 1982. A Manual for Writers of Term Papers, Theses and Dissertations. University of Chicago Press: Chicago. 300pp.

GRADING FORM

	Criteria (1-2 pages; hourglass)			
Performance Indicator	below expectation	needs improvement	meets expectation	Score
Content	0	1	2	
a. concepts	0	0	0	0
b. examples	0	0	0	0
c. inquiry skills	0	0	0	0
d. science source	0	0	0	0
Style	0	0.5	1	
e. Cohesion	0	0	0	0
f. coherence	0	0	0	0
g. format	0	0	0	0
h. correct English	0	0	0	0
	Total			0

- a. Uses keywords from assigned course material; appropriate and accurate definitions
- b. Explains appropriate evidence from experience and/or scientific sources (Essay 1); uses sources identified in Essay 1 or personal PS message (Essays 2-5); illustrates the concepts
- c. Applies critical thinking skills (puts folk psychology in quotes); clearly identifies hypotheses and evidence needed to test hypotheses; no plagiarism (uses quotation marks around other's words and cites the source)
- d. In the paragraphs, cites the author and date of publication for all references listed at the end of the essay; uses at least one scientific sources (peer reviewed journals, i.e. see Web of Science; scholarly books i.e. in TAMU library, including textbook; uses non-scientific sources to supplement, not replace scientific sources (websites, personal communications, unpublished manuscripts, class notes)
- e. Uses the hourglass format to structure the paragraphs and logical flow of ideas (broad introduction outlines purpose & objectives for each paragraph; specific details regarding concepts and examples; broad summary "take home message" addresses answers to each objective)
- f. Writes in a manner that "makes sense"; at least matches the scholarly style of the textbook
- g. Lists and cites references using the format in the textbook (e.g. Dugatkin 2009); uses page numbers to locate information in books (Krebs & Davies 1993:100)
- h. Meets standards of copy editing of grammar, spelling, punctuation, word choice (i.e. the TAMU Thesis Clerk)

FIELD TRIP (optional, tba)

The optional weekend field trip for this course is to [Fossil Rim Wildlife Center](#). This non-profit organization is active in a variety of "research and captive breeding programs to rescue species from the brink of extinction". We will participate in on-going studies of big herd management by conducting road transect surveys for sable and addax, recording behavioral activities and group size relative to the distribution of resources (food, shelter, water) in the landscape. You may use this experience as a field note supplement for Assignment 2-5 (send a PS message to ask for an extension on the due date), or just participate to get to know other course members.

Where?

Meet at the Front Gate of the Fossil Rim Wildlife Center

Fossil Rim Wildlife Center is located 55 miles southwest of Fort Worth and 75 miles southwest of Dallas, near Glen Rose. The GPS address is 2299 County Road 2008, Glen Rose, Texas, 76043.



Modest accommodations will be arranged on-site. If you prefer more comfort, alternative lodging is available at motels in Glen Rose, or the Fossil Rim Safari Camp and Lodge.

When?

Participants will vote for their choice of several weekends. The group may be split. Each weekend the itinerary will be as follows

Saturday	Sunday
<ul style="list-style-type: none"> • 1:00 – 2:00 p.m. Check in at the front gate (call 979-220-4115) • 2:00- 3:00 p.m. Intro to pastures and species • 3:00-6:00 p.m. Evening survey • 6:00-10 p.m. Dinner, data review, socializing 	<ul style="list-style-type: none"> • 6:00-7:00 a.m. Early bird breakfast • 7:00-10:00 a.m. Morning survey • 11:00-12:00 Debriefing and departure

Who?

This supplemental experience is designed for course members who are seeking more direct experience observing animals in natural settings. Factors to consider in choosing this option include:

- personal transportation to Fossil Rim; on-site will be in an open-air van
- personal time-management considerations
- benefits: your choice if you want to get all your supplemental experience in one weekend; housing and food provided
- costs: it takes an entire weekend; you arrange for travel to Fossil Rim
- your previous experience- if you are new at this game, it is a guided option

How?

If you want to participate in this optional field trip, communicate with the course leader ASAP. Details to be arranged include:

- transportation options (meet us there; share rides)
- meal options (kitchen facilities, overlook cafe)
- notify instructor of special needs or requests
- bring layers of clothing as the weather may be unpredictable
- ask if bedding will be provided



Why?

The personal interaction among course participants is important for members who learning better in a social context. This is a chance to get to know each other and to explore/articulate personal goals for the course. Compared to watching a video, it is more direct experience. We will be watching for the "teachable moments" that illustrate concepts in the course. Participants will discover relevant examples to which they can relate.

Field Notes

Are you taking this course from a remote field site? Do you already have extensive experience working in the field? Are you experiencing time and resource constraints while taking this course? Can you visit any locations where you could observe animals during this course?

If you answered yes to any of the questions above, you may want to consider your own field experience as an appropriate supplement for the weekly assignments. Not all course members are as fortunate as you to have direct personal experience. They will have to rely on videos, course field trips, and published readings. You have an opportunity for nature to be your teacher.

You may draw upon one or more of the following sources as supplements for assignments:

- field notes from current or previous experiences
- memory notes
- direct observations
- interviews with someone who has direct experience
- authentic video footage uploaded to a website such as [Bird Cinema](#) or a real time WebCam

To help you explore how you might apply your direct experience to the assignments in this course, leading questions are listed below for each of the assignment topics.

- Comparative Method: Let's say you have studied least terns and were able to also observe other shorebirds during down-times while looking for terns. You may draw on this experience to compare the similarities and differences among the species you observed. You could relate what you know about the clumping of food resources to the size of groups, competition, habitat selection and mating habits of the species you compare.
- Habitat Selection: Perhaps you have studied deer and know something about their spacing mechanisms, foraging habits and anti-predator behaviors. Does your experience ring true with the theories you read about in the textbook? What is missing in the experience of the British authors who wrote the text? How would you upgrade the theories to match the realities you have experienced?
- Competition: Ever notice the hummingbirds zooming at each other around a feeder? How about fish chasing each other from a clumped food source? Have you watched mocking birds, lizards, betas or guppies display at each other across a boundary? Can you identify tactics of escalation and de-escalation in the species you have watched?
- Reproduction: Do you have some data stashed away on nesting behavior, which you would like to try analyzing for a publication? How would you formulate your questions, based on the perspectives of behavioral ecology? Do you have any opportunities to watch mate choice or sexual rivalry among a species at your study site? How about parental behavior? How would you use the ideas in this section to design a study at your field site?
- Cooperation: Although it would be rare to witness actual cooperation during field studies, there are plenty of opportunities to observe communication between animals. You could identify the types of messages in different sensory channels, conveyed by the species you have studied. Perhaps you have noticed something about the "shape" of the signal and the type of information conveyed. Have you noticed about different species in your study site use different channels of communication, avoiding eavesdropping by predators? Are the stereotyped signals you observed in your species more likely exchanged between strangers, in contrast to subtle signs that are sufficient for communication among familiar members of a consistent group?