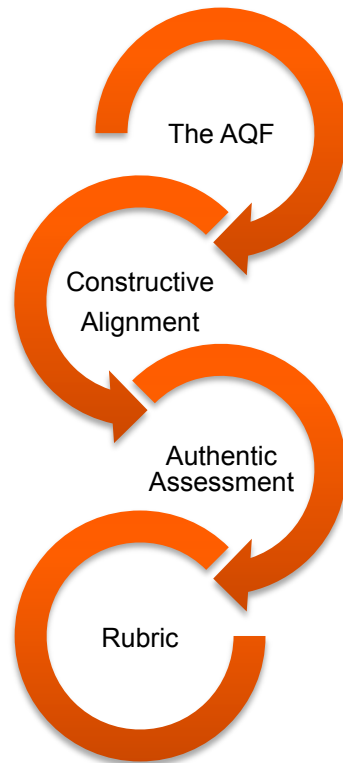# Implementing Assessment and Moderation:
The example of BIO327

Special thanks to Alain Bain and Alison Mathews

Charles Sturt University

Key Considerations

The AQF sequence of
- Knowledge
- Skills
- Application of Knowledge and Skills

Constructive Alignment
- Nested System
- Creates "Echoes" from the Course down

Authentic Assessment
- Task focused
- Real-life rather than contrived

Rubric
- Transparent assessment
- Challenging and exciting

The AQF

Constructive Alignment

Authentic Assessment

Rubric

Considering the AQF

BIO327 Outcomes (before)

- be able to apply appropriate scientific methods to the study of wildlife ecology and the development of management strategies;
- be able to relate the evolution of Australian wildlife to contemporary ecology and management;
- be able to identify the most important ecological principles that relate to wildlife and how these must be considered in applying management;
- be able to explain the dynamics of several Australian wildlife populations and the factors affecting their distribution and abundance;
- be able to describe the importance of habitat management to wildlife;
- be able to explain the theoretical and practical aspects of wildlife control and sustainable use;
- be able to apply the most appropriate wildlife survey techniques for a given taxon under certain conditions, and understand the advantages and disadvantages of the available techniques;
- be able to demonstrate knowledge of the theoretical and practical aspects of threatened species management; and
- be able to apply adaptive management principles to wildlife management problems.
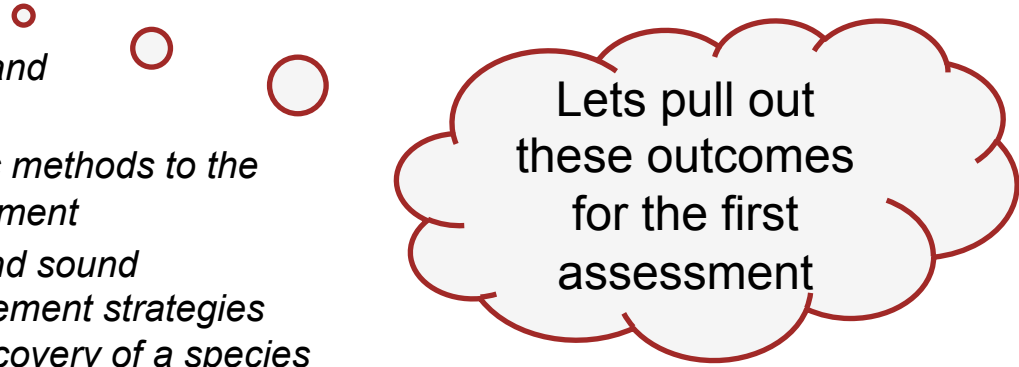
Considering the AQF (BIO327 after)

Knowledge

- have an in-depth understanding of the key concepts and principles of wildlife ecology and management
- have a critical understanding of
  - the factors influencing wildlife distribution and abundance
  - wildlife population dynamics and modelling
  - the theoretical aspects of threatened species management, wildlife control, and sustainable use of wildlife

Skills

- have specialised skills in the design and implementation of wildlife surveys
- be able to apply appropriate scientific methods to the study of wildlife ecology and management

Application

- be able to exercise critical thinking and sound judgement to develop wildlife management strategies for the control, sustainable use, or recovery of a species

Constructive alignment

- have an in-depth understanding of the key concepts and principles of wildlife ecology and management
- have a critical understanding of
  - the factors influencing wildlife distribution and abundance
  - wildlife population dynamics and modelling
  - the theoretical aspects of threatened species management, wildlife control, and sustainable use of wildlife
- *have specialised skills in the design and implementation of wildlife surveys*
- *be able to apply appropriate scientific methods to the study of wildlife ecology and management*
- *be able to exercise critical thinking and sound judgement to develop wildlife management strategies for the control, sustainable use, or recovery of a species*

Lets pull out these outcomes for the first assessment

Constructive Alignment/Authentic Assessment

- From

  You are to develop a management plan for a native Australian wildlife species of your choosing. You will be expected to read and cite studies about the species published in scientific journals as well as other sources

- To:

  You are to prepare a briefing paper on the management status of a native or introduced wildlife species in Australia. This could be a threatened species, a problem (e.g. overabundant) native species, or an introduced pest. Make sure you pick a species for which there is enough information for you to complete each component of the assignment.

Constructive alignment- The "rationale" section in the assignment now outline explains that this task is connected to the first two learning outcomes

Authentic Assessment

Charles Sturt University

A briefing paper provides a summary of facts about a particular issue, and typically includes a suggested course of action. ***Briefing papers may be prepared for ministers, executives, or chairs of boards, and as such, should be written in easily understood language.*** There are a number of sections to the briefing paper. Use the information provided to guide you in developing the paper. The briefing should have the following headings: Issue, Background, Current Position, Recommendations.

Issue
- Provide a single sentence statement of the management issue you have identified for your chosen species (i.e. the topic of this briefing paper).

Background
- In this assignment, you will provide background knowledge on the ecology of the species, and details of its threats (for threatened species) or problems it is causing (for pest species). You will be expected to use and cite references from scientific journals as well as other sources in this section (even though briefing notes do not typically contain references). You should include at least the following information on the ecology of the species: distribution, habitat, diet, competition, and predation. Use relevant subheadings to organise your background information.

Current Position
- In this section, you will include current status and management of the species. Has the species been formally listed on state or national threatened species legislation? What management plans, recovery plans, or threat abatement plans are in place for the species? What progress has been made with respect to the implementation of these plans? Is there any evidence that the species' status (e.g. population size or distribution) has changed since its listing?

Recommendations
- Based on what you know about the ecology of the species, its status, and current management approach, what recommendations would you make to either ensure its ongoing persistence (for threatened species), or control its numbers and impacts (for pest species)? Should the species' status be revised? What are the priorities for management? What research is needed to improve our knowledge of this species? Provide a list of no more than ten recommendations in point form.

References
- Make sure you use the correct procedures for citing references in the text, and use a consistent approach to listing sources in the reference list at the end of this briefing paper. Marks will be allocated based on the breadth and appropriateness of references, as well as the correct citation procedures.

Existing Criterion

What is the difference between "basic", "average" "good" and "excellent"?

Charles Sturt University

The following criteria will form the basis of the marks awarded.

	Fail (0-49%)	Pass (50-64%)	Credit (65%-74%)	Distinction (75%-84%)	High Distinction (85%+)
Knowledge Content (30%)	Student did not understand the topic. Student used their own knowledge rather than basing his/her arguments on scientific literature.	Student demonstrated a basic understanding of the topic, but did not appear to grasp its complexity. Student provided some relevant factual knowledge and/or evidence (i.e. by citing only a few peer reviewed articles), but paper lacked a consistent content quality.	Student demonstrated an average understanding of the topic. Student understood and integrated 6 or more peer-reviewed scientific articles in his/her paper, which included some sections that were particularly good.	Student demonstrated a good understanding of the topic, by providing appropriate coverage of both scientific and management knowledge. Student reviewed the literature (i.e. understood and integrated 10 or more peer-reviewed published articles) to discuss the topic in its full complexity.	Student demonstrated an excellent understanding of the topic, by providing a comprehensive coverage of both scientific and management knowledge. Student thoroughly reviewed the literature (i.e. understood and integrated 15 or more peer-reviewed published articles) to discuss the topic in its full complexity.

Creating Robust Criterion

Key Questions

- What do we want students to be able to do in order to demonstrate they meet the particular outcomes we chose?
  - *We want them to work through "background", "current position" and "recommendation" with logic and insight*
- What does a good response to your assessable component look like?

Creating a Rubric

Before

> HD-Student demonstrated an excellent understanding of the topic, by providing a comprehensive coverage of both scientific and management knowledge. Student thoroughly reviewed the literature (i.e. understood and integrated 15 or more peer-reviewed published articles) to discuss the topic in its full complexity.

Revised

> HD-A high distinction is awarded for a background account that provides a comprehensive explanation of the ecology of the species. The description typically has the following properties:

> It makes highly sophisticated connections between the various environmental/ ecological factors and the species so as to build a rigorous platform for the current position and subsequent recommendations.

> The account is extensively supported with references from the current refereed empirical literature. There is minimal use of secondary sources.

> The literature is synthesized to identify any themes and disparities. Where possible conclusions are drawn in contested areas or where there are differences in the literature.

> Overall, the account is highly sophisticated and yet accessible for a non-scientific audience.

Now Differentiate

- unpack to differentiate other levels of performance
- Learning taxonomies are often useful

High Distinction	Distinction	Credit	Pass	Fail
A high distinction is awarded for a background account that provides a comprehensive explanation of the ecology of the species.	A distinction is awarded for a background account that provides a highly detailed explanation of the ecology of the species.	A credit is awarded for a background account that provides a thorough account of the ecology of the species.	A pass is awarded for a background account that provides an adequate account (for each area) of the ecology of the species.	A fail is awarded for an account that is cursory and/or may be incomplete
The description typically has the following properties:	The description typically has the following properties:	The description typically has the following properties:	The description typically has the following properties:	The description typically has the following properties:
• It makes highly sophisticated connections between the various environmental/ ecological factors and the species so as to build a rigorous platform for the current position and subsequent recommendations. • The account is extensively supported with references from the current refereed empirical literature. There is minimal use of secondary sources. • The literature is synthesized to identify any themes and disparities. Where possible conclusions are drawn in contested areas or where there are differences in the literature. • Overall, the account is highly sophisticated and yet accessible for a non-scientific audience.	• It makes comprehensive connections between the various environmental/ecological factors so as to build a thorough platform for the current position and recommendations • The predominance of sources included in the account are from the current refereed empirical literature. There is some use of secondary sources. • Themes and perspectives in the literature are identified and summarized, creating a complete and accessible picture for a non-scientific audience. • Overall, the account is comprehensive but could be more sophisticated and/or accessible for a non-scientific audience.	• It makes some connections are made between the various environmental/ecological factors to create a defensible platform for the current position and recommendations. • The account is supported with a mix of primary and secondary sources. • Some identification of themes and perspectives although it lacks deeper insight and clarity. • Overall the account provides a mix of descriptive and analytic information for a non-scientific audience	• the various environmental/ecological factors largely discrete (limited integration) and/or parts may be missing. • It covers the bases in support of the current position and recommendations although limits the scope and depth of those components. • The account may be largely supported by a predominance of secondary sources with some examples from the empirical refereed literature. • Overall the account presents a descriptive picture for a non-technical audience	• it fails to build an adequate platform (and/or demonstrate the logic) for the current condition and recommendations. • The base of support may be limited and/or lack an empirical base • Overall the account inadequate for a sophisticated non-technical audience.

Build out the other sections

	High Distinction	Distinction	Credit	Pass	Fail
The Current Position	A high distinction is awarded for a description of the current position that typically has: • provides a clear comprehensive picture of the status and management of the species. • Sophisticated connections are made between the background account and the listings and plans. The dots are joined and big ideas amplified with support. • All changes in status are identified and supported and any inconsistencies in the plans and listings are explained and substantiated. • The current position leverages from the background account and sets up a rigorously supported set of recommendations	A distinction is awarded for a current position that typically has: • a clear and complete picture of the status and management of the species. • Complete connections are made between the background account and the listings and plans. The dots are joined with support. • Changes in status are identified and supported with literature and any inconsistencies in the plans and listings are explained. • The current position reflects the background account and sets up a well-supported set of recommendations.	A credit is awarded for a current position that typically has: • a thorough picture of the status of the species. • Limited or abstract connections are made between the background account and the listings and plans. Changes in status are generally identified and may include the identification of inconsistencies in the plans and listings. • Those inconsistencies are identified and explained but they may be brief or unclear. • The current position reflects the background account and sets up a defensible set of recommendations.	A pass is awarded to a current position that typically has: • an adequate picture of the status of the species. • some references to the background account is in places when describing the listings and plans and/or some changes in status are identified and this may include inconsistencies in the plans and listings. • Those inconsistencies are identified although not explained. • The current position reflects the descriptive nature of the background account and sets up an adequate basis for a set of recommendations.	A fail is awarded to a current position that is incomplete and reflects the weakness in the background account. The change in status and inconsistencies are inadequately accounted for creating a weak term of reference for the recommendations.
Recommendations	A high distinction is awarded for recommendations that are: • specific, attainable actionable and prioritized • connected strongly and logically from the platform provided in the current position and the picture provided about the status and management of the species • justifiable, and insight based on overall evidence provided	A distinction is awarded for recommendations that are: • generally specific, actionable and prioritized • connected strongly to the platform provided in the current position and the picture provided about the status and management of the species • justifiable based on the evidence provided	A Credit is awarded for recommendations that typically are: • specific and actionable • well connected to the platform provided in the current position and to the picture provided about the status and management of the species	A pass is awarded for recommendations that typically are: • generally specific but may be open to questions about interpretation or prioritization • build from the information provided in the current position and the picture provided about the status and management of the species	A fail is awarded to recommendations that are vague, lack logic and/or are not justified. .

Thank you