

# Using formative assessment feedback in pharmacology to encourage engagement

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# Introduction

- Authors indicate the value of formative assessment for student learning and achievement.
- Key intention to improve student performance on **BM2025 Fundamentals of Pharmacology** by promoting engagement with formative feedback.

# Intervention

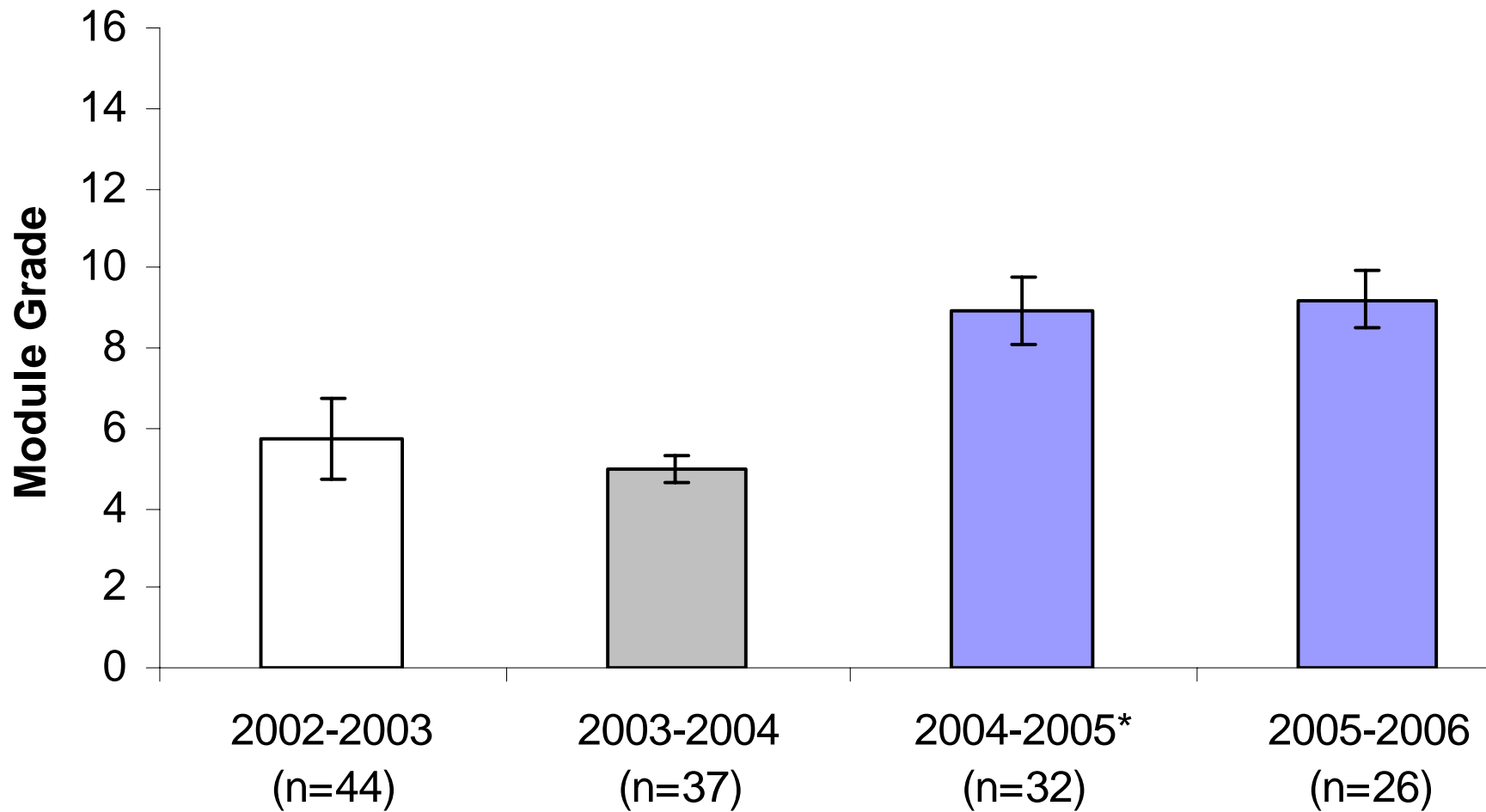
- Lectures mounted on VLE
- Weekly teaching contact comprised:
- Explanation of lecture content
- Dedicated workshop
- Immediate feedback at end of session
- Feedback available on VLE

# Methods

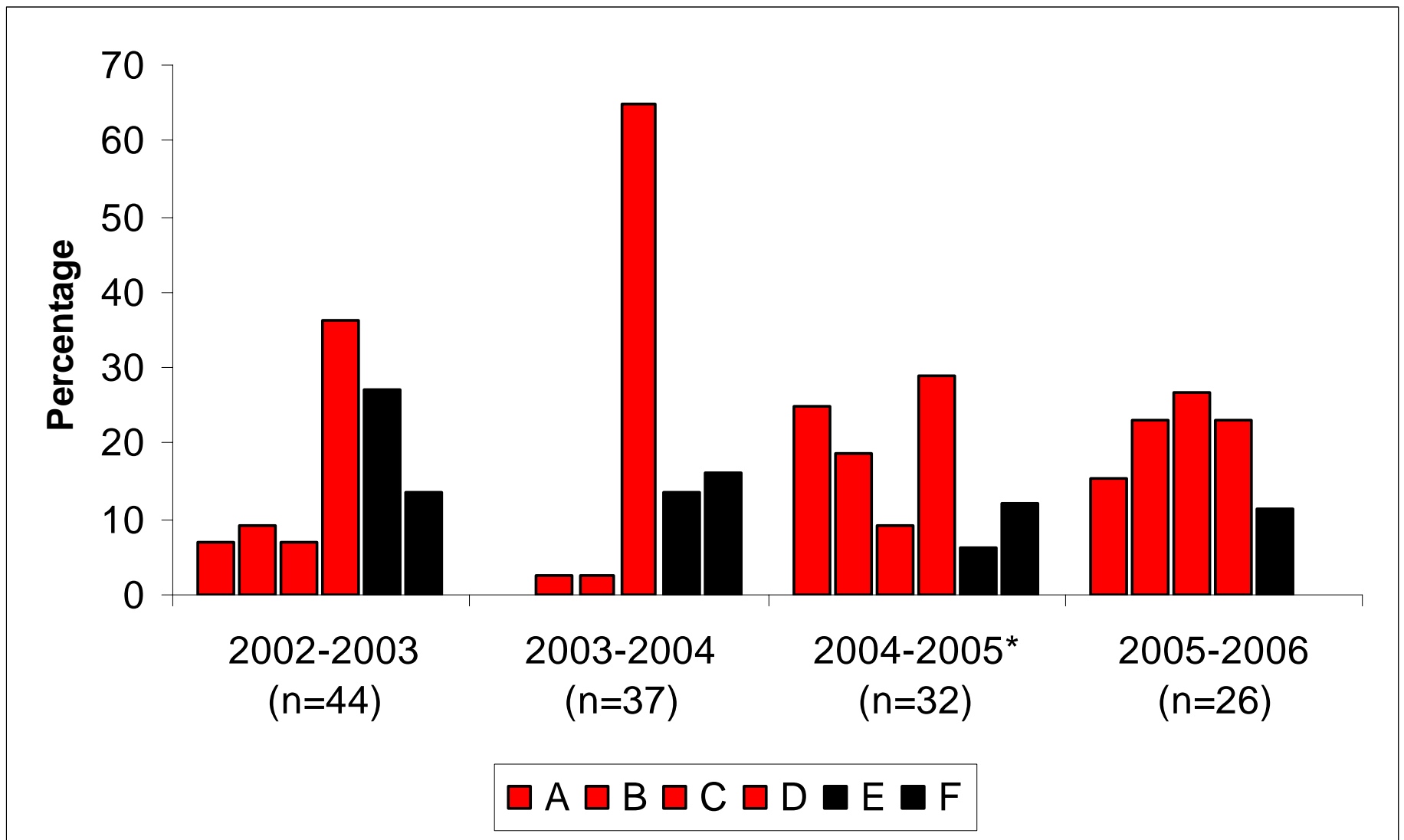
- Approach to study questionnaire
- Assessment Experience questionnaire
- Review of student performance on module

# Table 1 Approaches to study questionnaire

	BM2025	National	
		Social Science	All Subjects
<p><b>Achieving Orientation:</b> Score out of 24 indicates competitiveness, well organised study methods and hope for success.</p>	17.3/17.3	12.7	12.8
<p><b>Reproducing Orientation:</b> Score out of 24 indicates a surface approach to learning. Students who score high on this scale attempt to memorise and reproduce subject matter and have a desire to accumulate knowledge. They tend to keep narrowly to the syllabus as laid down in the course descriptions and not follow up interests on their own.</p>	15.1/16.5	13.7	13.5
<p><b>Meaning Orientation:</b> Score out of 24 indicates a deep approach to learning, an intention to make sense of the subject, an interest in the subject itself and a desire to learn. Students who score high on this scale follow up their own interests even if outside what is assessed.</p>	17.5/16.6	14.2	14.3



**Module results** for BM2025 (all include resit with the exception of 2005-2006 which have yet to take place.)



## Module results by grade

Table 2: Overall performance of students expressed as number and percentage

Year	n	Pass	Fail
2002-2003	44	25 (57%)	19 (43%)
2003-2004	37	17 (46%)	20 (54%)
2004-2005	32	21 (66%)	11 (34%)
2005-2006	26	23 (88%)	3 (12%)



<b>Table 3a Student response to the Assessment experience questionnaire</b>	Module Start	Week 13 after Phase Test 2
<p><b>1 Amount and distribution of study effort</b>            Score out of 30. A high score indicates that students study evenly across weeks and across topics, and feel that they have to in order to do well. A low score indicates that students study effort is allocated narrowly to assessed topics and those weeks where assessment takes place, and feel they can get away with this and still do well.</p>	19.2/19.1	19.1/19.7
<p><b>2 Assignments and learning</b>            Score out of 30. A high score indicates that students see assignment requirements as clear and challenging, requiring understanding. A low score indicates that assessment demands are perceived as unclear and that assignments are seen as unchallenging and as not requiring understanding.</p>	21.9/21.2	24.4/22.15
<p><b>3 Quantity and timing of feedback</b>            Score out of 30. A high score indicates that students perceive that they get plenty of feedback fast enough. A low score indicates that students perceive the feedback to be insufficient to support their learning, and too late to be useful.</p>	19.9/18.1	22.9/22.14

<b>Table 3b Student response to the Assessment experience questionnaire</b>	Module Start	Week 13 after Phase Test 2
<p><b>1 Quality of feedback</b></p> <p>Score out of 35. A high score indicates that students find the feedback understandable and useful, explaining both grades, misunderstandings and how to improve. A low score indicates that the feedback is neither comprehensible nor useful, and only indicates how well the student is doing in relation to others.</p>	21.1/20.4	21.7/21.3
<p><b>2 What you do with the feedback</b></p> <p>Score out of 35. A high score indicates that students use the feedback to guide follow-up learning, to tackle subsequent assignments differently, and to revise. A low score indicates that the feedback has little impact on subsequent studying and learning.</p>	23.5/24.0	23.9/24.1
<p><b>3 The examination and learning</b></p> <p>Score out of 35. A high score indicates that the perceived exam demands had a positive influence on the quality of learning undertaken during the course and during revision and that the exam itself was a learning experience. A low score indicates that the perceived exam demands encouraged memorisation and subsequent forgetting.</p>	22.7/16.1	20.9/22.1

# Student responses

- The course was very enjoyable and has made me consider doing more pharmacology based modules
- It made understanding the course easier rather than just learning to pass
- I think the method of teaching was very good and it did help me a lot. I understood things better than other subjects
- Other modules should use this approach

# Conclusions and feedforward

- Dedicated formative feedback had a positive influence on student performance
- Students recognised the value of formative assessment feedback
- Future study may introduce the use of reflective diaries