



A Preliminary Evaluation of a New Life Science Module for Year One Nursing and Midwifery Students

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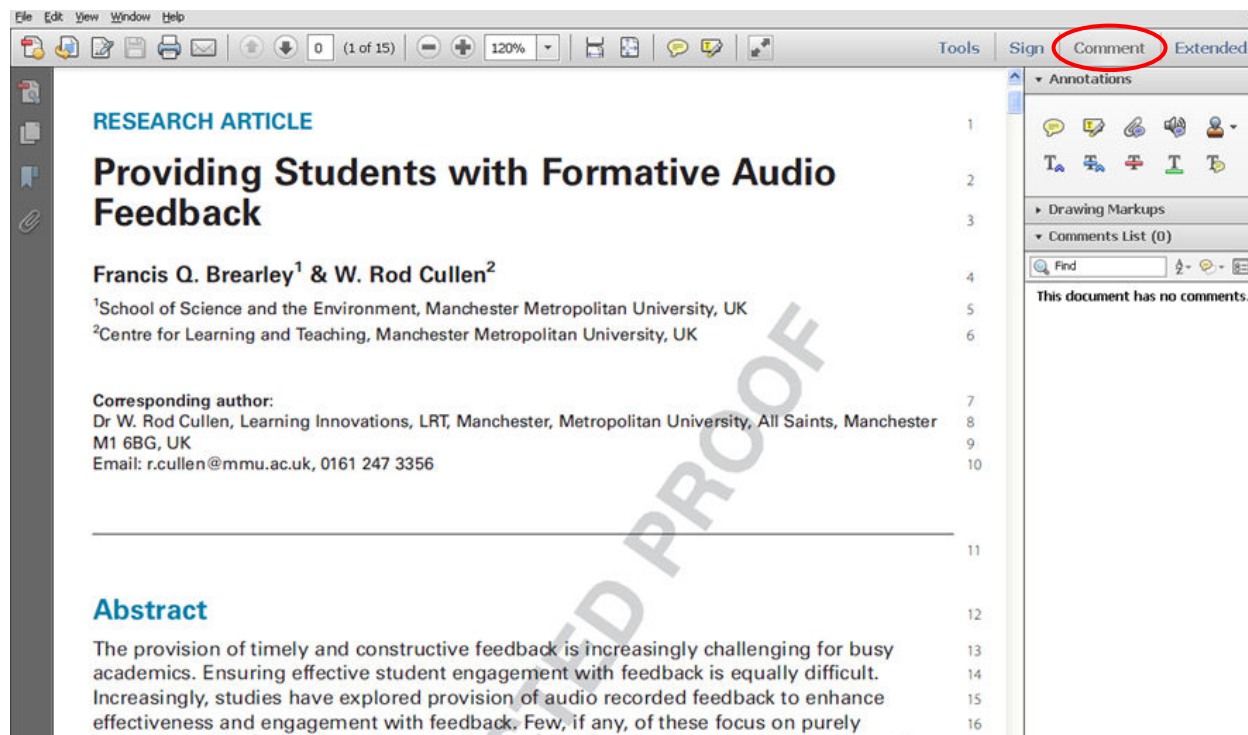
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Strikes a red line through text that is to be deleted.

1. Select the text to mark for deletion.
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...back, and that feedback that immediately / limited value to the ongoing learning process. :clude the need to offer positive, constructive mments which justify the given mark.

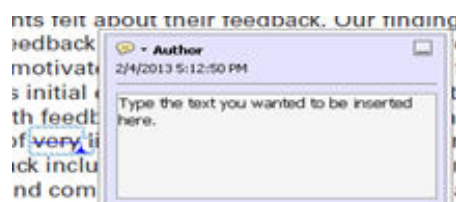
...motivation, ~~emotional response~~, feedback

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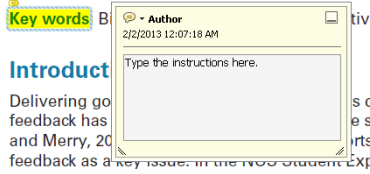


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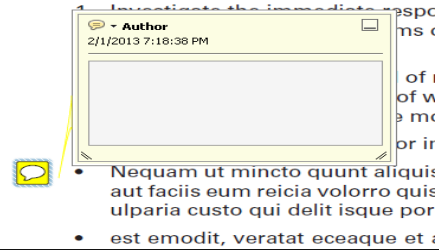


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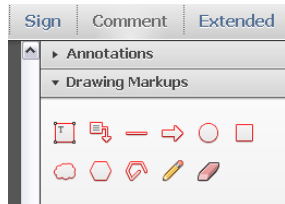
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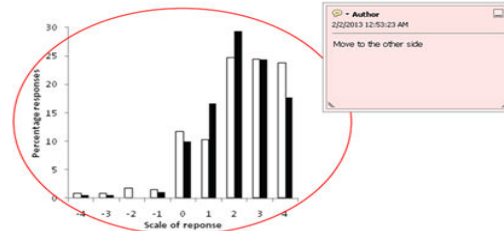
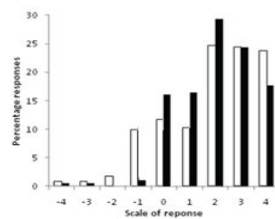


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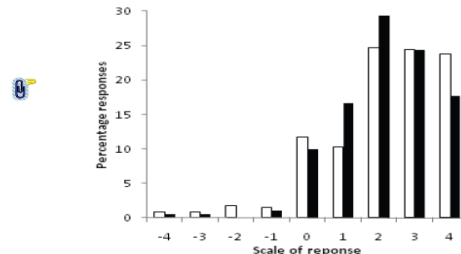
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1 SHORT COMMUNICATION

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3 A Preliminary Evaluation of a New Life 4 Science Module for Year One Nursing 5 and Midwifery Students

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Abstract 17

This report outlines the rationale for the design and implementation of a new life sciences module for year one nursing and midwifery students. It describes our experience to date in running the new module and presents some preliminary results which describe an improved student performance compared to our previous year one bioscience module. 18
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Keywords: science background, integration of life science, clinical application 27
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Life sciences for nursing and midwifery students 29
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Nursing and midwifery students often struggle to engage with life science (bioscience, health science) modules because they lack confidence in their ability to study science (McKee 2002). Evidence-based research suggests the future for life science education in nursing and midwifery courses involves integrating its teaching with clinical skills and social sciences (McVicar *et al.* 2010), while making students more responsible for their learning. We have developed an innovative and challenging life sciences course for year one nursing and midwifery students that encompass the diverse science and academic backgrounds among our students. The course encourages active learning and nurtures transferable skills such as teamwork and critical analysis – all essential for tomorrow’s healthcare professionals (Middleton-Green & Ashelford 2013). 31
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In our new first year module, Human Life Sciences for Health Care, we adopted a ‘back-to-basics’ 49
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51 teaching approach assuming no prior scientific
 52 knowledge to encompass the diverse range of
 53 science backgrounds existing within our annual
 54 intake of approximately 450 students (across all
 55 nursing fields). The module focuses on homeostasis
 56 and adaptation mechanisms to maintain homeostasis
 57 with the emphasis on wellness and wellbeing
 58 along with health promotion and health education
 59 (Rogers & Sterling 2012). Rather than supply
 60 students with a full set of notes, a lecture outline
 61 is made available in advance of each class. This
 62 enables students to read ahead around each
 63 class topic and the prior reading equips them
 64 for answering trigger questions during the lecture.
 65 To supplement the lecture outline students are
 66 encouraged to take notes in class; this also helps
 67 them to develop good note-taking skills, which
 68 benefits them when preparing for examinations.
 69 After lectures, a session overview is uploaded on
 70 to the university's virtual learning environment
 71 (VLE). This provides students with a summary of
 72 the main points from the session and 'fills in' the
 73 lecture outline provided in advance. Interestingly,
 74 students reported that this format encouraged
 75 them to review their own notes and supplement
 76 any points they may have missed. In addition
 77 to lectures, students must attend two tutorial
 78 sessions per week. In advance of tutorials, they
 79 are expected to prepare answers to a number of
 80 directed-learning questions that are supplied a
 81 week before the tutorials. The directed-learning
 82 exercises are a form of enquiry-based learning
 83 and aim to support students in their learning
 84 (Landers 2000). For example, students may be
 85 given a clinical scenario, which helps them
 86 integrate the life science theory with its practical
 87 application. One scenario described a 28-year-old
 88 patient who has recently been diagnosed with
 89 type 2 diabetes. Students were asked to construct
 90 a patient information leaflet to advise on lifestyle
 91 adjustments for younger adults living with the
 92 condition and to explain why these adjustments
 93 would help reduce the symptoms of the illness
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by referring to ~~their~~ anatomy and physiology 94
 theory. When researching the answers to this type 95
 of exercise students are directed to the school's 96
 Clinical Skills resources available to them on the 97
 university's VLE. 98

Throughout the module we encourage integration 99
 of life science theory with other modules, including 100
 nursing practice —where students develop their 101
 practical skills— and social science modules, using 102
 relevant clinical examples for students at this stage 103
 in the course. As part of the module, we also 104
 encourage students to reflect on their own health 105
 and its importance for their professional practice. 106

The preliminary evaluation of this new approach 107
 was presented at the Health and Social Care 2013 108
 Annual Conference. After two academic years, our 109
 new approach has received a lot of positive 110
 feedback from students. During the module the 111
 majority of students actively engage with the 112
 content and participate enthusiastically in lectures 113
 and tutorials. When results were compared against 114
 students' science background we found a significant 115
 proportion of students who achieved over 80% in 116
 the end-of-module assessment claimed they had 117
 not studied science beyond GCSE/O-level (and for 118
 some that had been a long time) yet they 119
 performed exceptionally well in the module. This 120
 indicates that the module content is taught at an 121
 appropriate level and students who invest time and 122
 effort by actively engaging with the subject through 123
 their study can achieve excellent results, even with 124
 a limited science background. 125

Student feedback suggests they enjoy the module 126
 and appreciate its importance to their clinical 127
 practice and everyday lives. We believe we are 128
 achieving our aim of teaching relevant, essential life 129
 science theory that nurses/midwives need and use 130
 in practice to enable them to competently assess, 131
 treat and educate patients and make our graduates 132
 confident, well-rounded and safe practitioners. 133

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