

Writing in education



Authors from the Directorate of Radiography at the University of Salford, suggest how to encourage writing for publication as part of formative professional education. By Professor Peter Hogg, Editor in Chief, Radiography, Dr H Brian Bentley, Honorary Fellow and Former Editor in Chief, Radiography, Julia Parrott, Lecturer and Dr Stuart Mackay, Professorial Fellow, BSc Diagnostic Radiography.

Introduction

For many years, we have recognised that the generation of new knowledge, and its dissemination, is a fundamental requirement of professionalism. A profession generates and maintains its own knowledge base. Notwithstanding this, many within our profession have felt that they have a lack of ability and confidence in writing for a public forum even though they have practical experience of doing research and writing it up for degrees and higher degrees.

In many respects this is understandable, as our former Diploma courses (such as the Diploma of the College of Radiographers) and the majority

of our degrees/higher degrees have not provided much practical advice and support in writing for journals and professional magazines. Both course types, however, have met their outcome requirements in relation to passing assignments and examinations and, of course, preparing the student to be able to do the job safely and confidently and with a degree of accuracy that is acceptable for clinical practice.

In recent years, we know that some degrees/higher degrees have introduced lectures that inform students about publishing and the values of doing so. Alongside this, particularly for undergraduate

work, assignments and, more recently, year III 'projects' have been changed in format to look more like articles/papers that could be suitable for submission to journals or professional magazines. In this article, we examine how these changes can be refined further to facilitate students to understand and use the processes associated with submitting an article to a journal (or professional magazine) as well as producing an article that might be worthy of publication.

We will share our experiences associated with a writer support seminar within our BSc Diagnostic Radiography curriculum and also support that we offer some students after they have graduated. Appendix I illustrates a version of the seminar we use within our BSc Diagnostic Radiography curriculum; Appendix II is an example of a version of an assignment that we have previously set our students.

We recognised early on that for writer support to be effective, our (BSc) course philosophy needed to be proactive, to develop the abilities required for writing in public forums. For encouraging writing for publication as part of formative professional education, it is critical that writing and writer support are seen as central to the core course philosophy – and not simply a bolt on.

A classic example of a 'bolt on' is where traditional assessments are set and a lecture or two about publishing is included in the curriculum. Where it is a core course philosophy, the student is exposed to learning that encourages public writing skill development and the confidence and knowledge to take that writing through the submission and peer review processes. We feel it is critical that at least one 'element' of formal course assessment must have its format consistent with that of a journal

Appendix I: Writer Support Seminar

Facilitators: Typically we have two, both of whom are experienced in academic writing, both of whom have a reasonable understanding of the 'behind the scenes' peer review process associated with a journal.

Required Resources: Four flip charts and pens; one lecture room (ideally with a further three breakout rooms); articles to be read by students loaded into a virtual learning environment (such as blackboard/Web-CT) in advance of the seminar.

Programme of events

Week prior to the seminar: Students will be supplied with an article that has been published in a journal. Typically we put a 'PDF' version of it within the virtual learning environment to ease student access. Students MUST read this prior to attending the seminar.

The seminar:

9-9.05 Introduction

An overview of what the student can expect during the seminar.

9.05-10 Group activity – 'Why should I publish work?'

Students are split into groups of 10-12. During this activity, using the flip charts, students are expected to list reasons why they should publish. This is followed by a feedback session in which all students participate. The facilitators work through student opinions and also encourage the students to justify their responses.

10-10.15 Powerpoint talk 1

A set of slides, delivered by a facilitator, explaining the values of publishing – to the patient, to the professional, to the profession.

10.15-11 Group activity – 'an analysis of instructions to authors'

Students are placed back into their groups and requested to write their ideas down ready for feedback. Four or five examples of *Instructions to Authors* are given to each student – we tend to use examples from well-established and also lesser-known journals. The students are asked to compare and contrast the examples and make notes about similarities and differences. In the feedback session, the facilitator takes student opinion and highlights the similarities and differences.

11-11.30 Break

11.30-12 Powerpoint talk 2

This covers several issues in a pragmatic and simplistic fashion, including:

- ◆ Types of journal item, including their typical layout (eg Letter to Editor, Original Article, Review Article, etc);
- ◆ Common points that are included in many *Instructions to Authors*;
- ◆ How to submit an article to a journal;
- ◆ The peer review process, including feedback and article revision.

12-1 Working lunch

In their groups, during lunch, students are asked to read their article again. On reading it this time, we issue the student with marking criteria (Appendix II) and request that they make comments under each criteria and also assign a mark (where possible). NB: Appendix II is our version of *Instructions to Authors*, taken from several examples from various journals. Again, students are requested to write their thoughts onto the flip charts.

1-1.40 Feedback

Students are encouraged to feed back their opinions on their article. The facilitator gives a two minute synopsis of each article so that all the students have some understanding of what is being critiqued.

1.40-2 Closing remarks and the assignment

This section commences with a facilitator sharing experiences of writing for a public forum. Various things are considered, including: having a paper knocked back for revision; how it feels when your first paper is published; how it feels when somebody writes to the journal and criticises your work. The second part involves giving the student their assignment and explaining it. An example of an assignment (including marking criteria) can be seen in Appendix II.

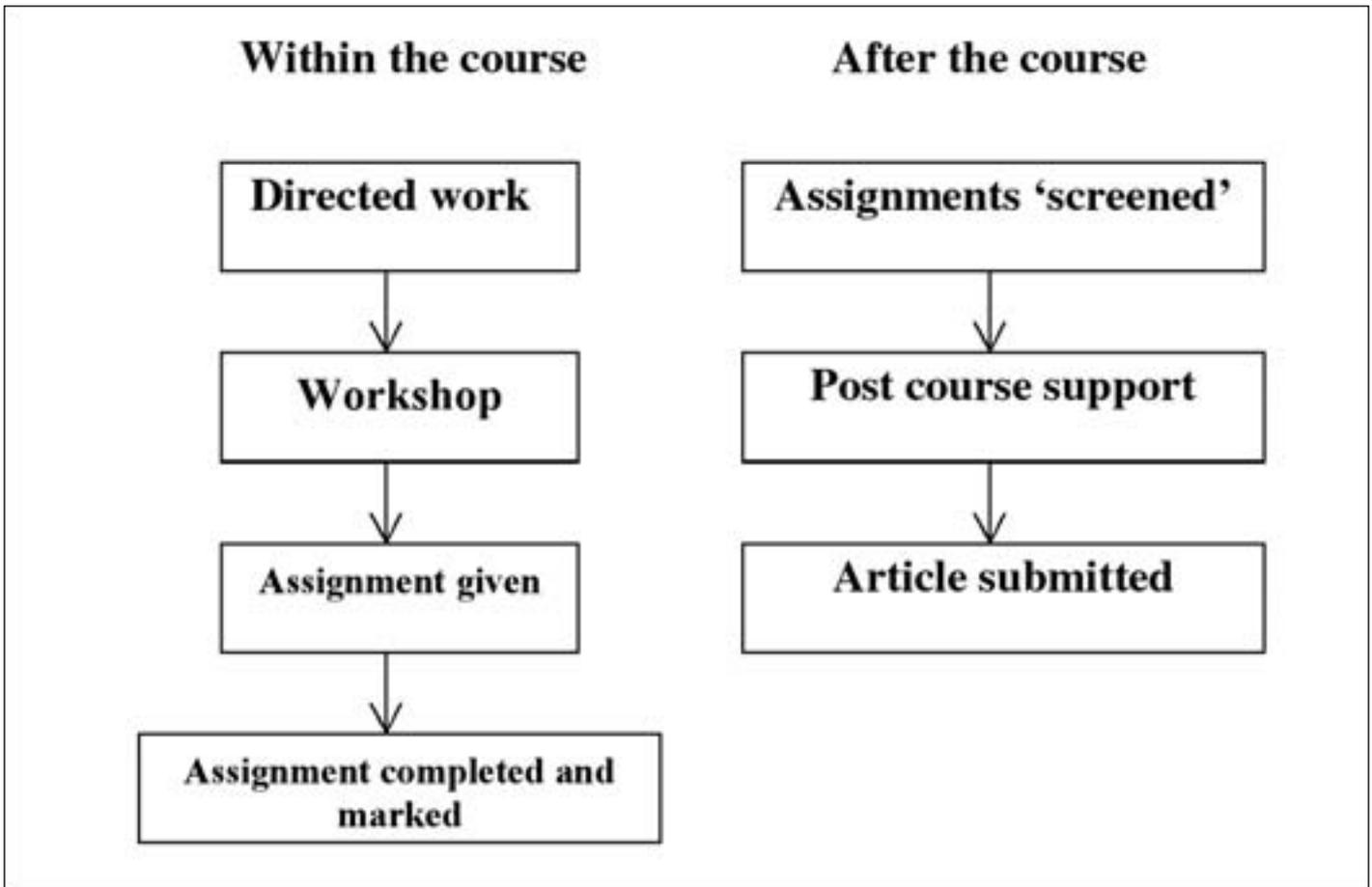


Figure 1: Syntax of writer support during and after the course.

Radiology training academy joins forces with Siemens

To address the national shortage of radiologists, three pilot schemes have been developed by the Department of Health to provide a wider range of educational initiatives. The schemes encompass the Leeds Teaching Academy, as well as academies in Plymouth and Norfolk, and will provide comprehensive training for 60 trainee radiologists a year.

Three Acuson Antares ultrasound systems have been bought for the academy. Dr Philip O'Connor, consultant radiologist at Leeds General, explained: "Price, image quality, user interface, system performance, and the educational relationship between provider and the academy were important factors. Siemens was chosen because of its overall package and experience of previous education collaborations."



Pictured with one of the new Acuson Antares systems are (from left): Sharon McGough, administrative officer; radiology specialist registrars Anu Balan, Dilip Oswal and Khalid Nawaz, and Lesley Challenor, academy manager (seated).

paper or professional magazine article. Once this is achieved you may wish to consider trying the following.

Writer support and the writer support seminar

Figure 1 illustrates our writer support structure for students and past students. It comprises two components – within the course and after the course, and for the purposes of explanation we shall use these as subheadings under which we can explain our approach.

NB: For primary research it might be advisable for the student to have completed data collection prior to commencing the writer support process. For a review article, we have found that the student need not have identified a topic or literature prior to starting the writer support process.

Within the course: Appendix II gives an example of an assignment for a review article –

clearly this would need adapting for primary research. Note that marks are assigned for complying with the process (*Instructions to Authors*) and marks are also allocated for the academic merit of the article itself. At some stage, the student would have the assignment explained to them and be given the chance to ask questions about it. We have found that doing this at the end of the seminar is a good time because by then the student has had a considerable amount of background information. As such, they have some understanding about the assignment requirements and much more informed questions can be asked.

Directed work is given one week before the seminar, meaning that the student reads an article that has been published in a peer reviewed journal. Given that the seminar is based around group work, we assign students into a group at

the same time. All students within the same group receive the same article to read. Ideally, each group should have between 10 and 12 students allocated to it.

Seminar resources include flip charts and pens, powerpoint projector and computer and enough pamphlets^{1,2} for all students. An outline of the workshop is illustrated in Appendix I. After an introduction to the day, we commence with group work, the purpose of which is to allow the students to identify why publishing is a valuable exercise with which to engage. Generally, there are no right or wrong answers to this activity and one can predict some of the reasons that will be raised.

This group activity is followed by a feedback session to all the students. During this session, it is valuable to note the commonalities and differences. We encourage the students not simply to list their reasons but also we probe them to explain more fully their responses. Following this is a talk by one of the facilitators. The talk is short, and reinforces the reasons why people would wish to publish – to the patient; to the professional; to the profession.

The second group activity is an analysis of several *Instructions to Authors*, taken from four or five peer reviewed journals. This activity involves the students, within their groups, identifying the similarities and differences between the *Instructions to Authors*. The subsequent feedback is relatively short as the issues can be outlined fairly quickly and concisely. This is followed by the second talk. This is more lengthy than the first, and it goes into some detail about the process of submission, peer review, article revision and re-submission.

The final group activity is to critique the articles against the (formal) assessment criteria (Appendix II). Following this,

Appendix II

You are required to write a review article about medical imaging. Your review article will have the following characteristics.

- ◆ It will be a critical analysis of your chosen area.
- ◆ Word count 2000 +/- 10%, not including references, title or legends/figure headings/captions
- ◆ Letter of submission, indicating transfer of copy right 5%
- ◆ A concise title that reflects the chosen area 3%
- ◆ Appropriate key words. Such key words should be derived from Mesh Headings where appropriate 2%
- ◆ An abstract of between 200-250 words. This will reflect, concisely, the review article itself 5%
- ◆ An introduction that sets the scene, ideally this would not be longer than 200 words. This scene setting will include relevant background information, citing suitable literature. It will also argue a clear rationale for why this subject was chosen; based on evidence and not personal opinion 5%
- ◆ The main body of the review will be an analytical debate that will be informed by evidence. This could be structured under subheadings if required. This will be the main part of the work and as such the key themes will be identified and developed 65%
- ◆ There will be a summary which seeks to convey, briefly, the main issues raised in the discussion 5%
- ◆ Compliance with Instructions to Authors 5%
- ◆ References 5%

Instructions to Authors

- ◆ A maximum of six key words (minimum of two) should be supplied, complying with MESH <http://www.nlm.nih.gov/mesh/MBrowser.html>
- ◆ Style: Scientific (generic) names of drugs should be used when first cited, followed by (in parentheses) the trade (proprietary) name and the manufacturer of the product. In subsequent mention in the article, the generic name should be used. Stedman's Medical Dictionary and Merriam Webster's Collegiate Dictionary (10th edition) should be used as standard references. Style should be patterned after the American Medical Association Manual of Style (9th edition).
- ◆ Units should be metric and all abbreviations should follow the international system <http://www1.bipm.org/en/si/>
- ◆ A title page should accompany each copy of the manuscript, indicating the first and last names of all authors, academic degrees, institutional and departmental affiliations, current address of authors, a complete address, telephone and fax numbers, and e-mail address for the author responsible for correspondence.
- ◆ Conflict of interest/author disclaimer: Any actual, potential, or apparent conflicts of interest must be stated on the cover page. All sources of financial support for the study presented or any author relationships with manufacturers of any products mentioned in the article must be stated.
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- ◆ A figure legend must be submitted for each figure. Each legend should clearly describe the appearance/relevance of the figure, without unnecessary duplication of article text, and must identify each image of the figure (figure 1A, 1B, etc.) as well as any arrows or other markers included in the image.
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students feedback their opinions. We have found this activity can be quite lively, as there may be divergence of opinion about the quality of an article – between the students themselves and also between facilitator and the students. We encourage lively debate and we particularly encourage students to argue against the facilitator (on an informed basis of course). We ask each group to assign a mark to their article, using the assessment criteria indicated in Appendix II. Immediately after this, if not already done, we formally explain the assignment.

During completion of the assignment/article we provide support to the student. This includes process support (compliance with the fine detail of *Instructions to Authors*) and also general support about the content of the article. It might be worth noting that the majority of student support is given through Blackboard – a web-based virtual

learning environment. The assignment/article is then formally handed in on the agreed date and marked.

After the course: This is where it gets tricky because at this point, one could argue, from a teaching and learning point of view that the academic's responsibility has ended. However, if one considers a broader view of an academic's role (including research and its dissemination) then potentially there is more to do.

We screen the assignments into two piles. One pile we consider not to be worthy of publication and the other may be suitable for submission to a journal or professional magazine. This is a hard judgement call and many factors come to play in the decision. Fundamentally, we are looking for work that may 'convert' into real journal/professional magazine articles, and with this in mind we consider professional magazines/

journals that may value the work.

Having identified potential articles, we write to the past students and invite them to the university to discuss their work with a view to offering advice so that it might be developed into something suitable for submission to a journal/professional magazine. This is a time-consuming activity, as it involves reading by a member of academic staff, and preparing concrete suggestions on what needs to be done to the work. If the work/potential article improves to a point where it is suitable for submission, the academic staff member will give advice and it is the past student's task to formally submit the work to the journal or professional magazine. Should the work be accepted subject to revision, then it can be that further input is required by the academic staff member.

As yet, we have little student/

past student formal opinion about the support we offer. However, comments have been made to us of a very encouraging nature. It is our intention to carry out a full assessment but, as you might realise, it is a long-term process and as such it will be quite some time before comments will be available. We would be keen to hear student/past student/tutor comments about any mechanism you have put in place at your university – please write to Rachel Deeson at *Synergy*, email: racheld@synergymagazine.co.uk

References

1. Newell R (revised for Radiography by H B Bentley), Writing academic papers: a guide for Radiography authors, Elsevier 2003.
2. Hints and tips on how to write an academic paper for publication – your indispensable guide from Radiography, Elsevier 2005.

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