# Using evidence and avoiding plagiarism e-learning module: Scaffolding academic integrity

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This paper describes the collaborative design, implementation and evaluation of a discipline-based eLearning module (eLM). The eLM was piloted as a mandatory but ungraded assessment task in five subjects across all years of study in the Management and Marketing specialisations, four in the Bachelor of Commerce, and one in the Master of Commerce, at the University of Wollongong. The eLM was developed in the subject's eLearning space within the learning management system, Blackboard Vista and included a streamed lecture which provides a range of instruction and examples of how to use evidence, a link to the University's Harvard Referencing Guidelines and an online quiz. The evaluations indicated that the design of the module and its embedded nature, in terms of both content and location, provided students with explicit instruction on using evidence and referencing that in general most students are required to acquire through a process of osmosis. Explicit instruction and assessment allowed students to be more strategic about their selection and use of evidence and apply these newly acquired skills to other subjects of study.

Keywords: academic integrity, eLearning, management and marketing, plagiarism

## Introduction and context

Concern regarding student plagiarism in university study has been on the rise in the past decade with the rapid development of information technology (Marshall & Garry, 2005) combined with what is perceived to be the increasing disengagement of students from their university study (CHSE, 2002; Vuori et al, 2004). The CHSE (2002) Guidelines on Assessing Learning argue that there are two responses to the issue of plagiarism: the development of educative strategies and the development of strategies for detection and punishment. The authors argue that these are not mutually exclusive, but represent the two angles of action that are required by universities and their staff. Support for such an educational and detection strategy is offered by Carroll and Appleton (2001) and Park (2004). Vuori et al (2004) indicated some concern with the reactive approaches taken by some universities. This reaction, they argue, has seen universities develop ineffective short-term measures at the expense of proactive and comprehensive frameworks with long-term goals.

Short-term measures, including the use of detection and punishment strategies, fail to address the complex factors that lead to instances of plagiarism. For example, academic integrity is largely embedded in students' academic literacy among other factors. There is a strong case for teaching students the purpose of sourcing and using evidence to support arguments, and making explicit the related skills that allow them to do this effectively (CHSE, 2002; Walker, 1998). Carroll (2004) emphasises the need to teach students how to use evidence effectively. Students are often told 'not to plagiarise', have plagiarism described to them, and are given links to referencing conventions, but this does not constitute an educative strategy for most students. As Carroll (2004) states 'Knowing what plagiarism or collusion is, whilst useful, is not the same as knowing how to avoid it'.

An *academic literacies* approach to academic integrity would suggest that on entering university study, students are often embarking on a cultural and (multi)disciplinary journey into new and occasionally competing fields of knowledge, information and genres. Writing in this vein, Lea & Street (1998) argue that problems with student writing can often be explained by the gap between a teacher's (often uncommunicated) expectations and student (mis)interpretations. For this reason, developing strategies for communicating and clarifying expectations is an imperative. Carroll (2004) adds that these skills are

> best learned if they are incorporated into the discipline-based teaching. Students can check their understanding by exercises such as choosing which of three versions of a paraphrased text is acceptable or peer reviewing the citation practice of fellow students. They can have their attention drawn to these matters during early diagnostic exercises or online

quizzes…however you do it, the key is getting students to realise these rules apply to them and their work.

In summary, for students to be able to incorporate evidence appropriately into their writing, it is essential to develop critical reading as well as summarising and paraphrasing skills, which are developmental and often best learnt within the student's specific curriculum using a scaffolded approach (Handa & Power, 2005). Accordingly, the piloted project discussed in this paper provides an educational scaffold for students to acquire the skills of academic integrity as they relate to plagiarism. The following paragraph describes the development of an eLearning module for Management and Marketing students at the University of Wollongong.

## The eLearning module (eLM)

The eLM is the product of a collaborative project between the School of Management and Marketing, Learning Development and the Centre for Educational Development and Interactive Resources (CEDIR). The aim of the project was to provide a flexible and innovative eLearning space which would actively engage students with the content in a meaningful and relevant way. The module extends and consolidates learning resources previously developed for the first-year core Marketing subject, Marketing Principles. The aim of the learning module is to raise students' awareness and improve students' understanding of good citation practice and the importance of using evidence effectively in assignments.

The eLM is a technology-based solution derived from a constructivist approach to learning which emphasises the construction of knowledge and meaningful learning through the provision of engaging activities, supports to scaffold learning, and resources to guide the learner (Herrington & Oliver, 2004). The University's Learning Management System (LMS), Blackboard Vista, was selected as the platform for delivery and the module incorporates an assessment activity with the supports and resources necessary for its successful completion. The module has been integrated into the elearning space for the relevant subjects with access provided via a link on the subject's homepage in the LMS. A welcome page provides an overview of the module, guidelines for completing the activity and contact information for technical support. Students are directed to the UOW Library Harvard Referencing Guide via a web link to support a contextualised presentation in streamed audio and accompanying slide format. To address different learning styles, an additional text version of the presentation is provided with the option to open, print or download a copy. The assessment activity is an online quiz consisting of 20 questions referring to the correct use of evidence, using quotations, paraphrasing, and referencing conventions. Students are instructed to listen to the audio and slide presentation and use the information together with the referencing guide to complete the online quiz. To pass the quiz, they must achieve a 90% success rate. Importantly, it is not a gate-keeping device, and all students are expected to pass within three attempts.

In session 1, 2007, a pilot of the same eLM was implemented as an ungraded, mandatory assessment activity in four subjects across the Bachelor of Commerce, and one subject in the Master of Commerce. Students were oriented to the module through a demonstration inside one of their first lectures. The Learning Developer provided lab time for student support for students who were having difficulty passing or wanted to ask questions. This time with students was also used successfully to identify error patterns in student responses and address the ambiguities in the wording of questions that created confusion for students.

## Evaluation strategy

An evaluation of the learning module was conducted during the pilot phase of our project. There were two aspects of evaluation: the coherence and clarity of the module's design, in particular the quiz questions; and the module's efficacy in developing students' understanding and confidence in using evidence effectively in their assignments. The first angle of evaluation included an error analysis of student responses to the quiz questions as the pilot was being conducted, and a series of individual sessions with students' who experienced difficulties passing the quiz. These two strategies were highly effective in identifying those questions that were ambiguous or poorly worded. Improvements to these questions were made immediately. In terms of the overall design of the module, and moving into its efficacy for student learning development, focus groups were run with both first and third year students (9 first-year and 3 third-year students), followed by an online survey, to generalise some preliminary findings. The survey, placed on the subject, Marketing Principles eLearning space, consisted of six closed-ended questions. The online survey methodology enabled us to generalise some preliminary findings on the success or failure of the activity. The six questions had Likert-scale responses (strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree) to a statement.

## Analysis of the findings

### Making the tacit explicit

Academic integrity is embedded in academic literacy as well as cultural values. Importantly, the design of the module took a holistic approach to the notion of academic integrity by understanding that a students' ability to avoid unintentional plagiarism is not merely a matter of describing 'convention', but rather, revisiting the purpose of sourcing and selecting evidence in academic argumentation, and showing students HOW to create and evaluate a coherent argument. The success of this approach is evident in students' comments:

> I've been referencing all my university life and thought [the learning module] would be easy...15 minutes and I will be done with it. But when I went to do it, I said 'huh, what's this. Nobody told me about this'…you just find out what you don't know. (3rd year student)

For the students, the learning module removed the mystery of citation as an embedded skill inside argumentation. In most cases students are expected to acquire these skills through a process of osmosis. Explicit instruction, however, makes a student more conscious of 'how' they do certain things and allows them to be more strategic in their choices.

> …I was actually surprised how much I didn't know about the Harvard style of referencing or how to properly include citations and how to use evidence. (3rd year student)

The eLM provides developmental instruction about the use of evidence in developing an argument and provides multiple examples of poor, average and good examples, explaining each in some detail. Students gain the skills of recognising good and bad practice and acquire a language to articulate why this is the case.

> Having the examples was really handy… I hate those [learning modules] where they give you the lecture notes …and they tell you what to do but don't show you how to do it...it is just frustrating, so the examples were pretty good. And the differences in the ways you can reference and paraphrase, author and theme orientation for example, was quite new to me – I mean I was using it, bit I didn't know what it was. So it was nice to see the differences. (3rd year student)

### Deep learning and engagement

The module is designed in a way that requires students to engage with and develop a deep understanding of the content in order to pass the quiz. Learning to pass the quiz is not merely a case of acquiring facts or memorising responses, it requires students to develop conceptual understanding of what constitutes good and bad citation practice, and then apply that knowledge to the evaluation of various examples (Saljo, 1979; Bloom, 1956). Although a learning challenge, it should provide a deep and lasting learning experience for students: as one first-year student commented:

> Broadly, I learnt that I have to read slides more carefully; not sort of expect an easy test. I have done plagiarism tests before and they were easy, and didn't require you look at any slides or understand thoroughly… (1st year student)

### Transferable skills

An important evaluation criterion for the efficacy of a discipline-based but 'generalised' learning module such as this is the transferability of the skills that students acquire. It is clear that the learning students acquired through the module can be transferred across assignments and disciplines:

> In my first-year, I didn't know much about this stuff; so, by making it available, I am able to refer it whenever I want to…so, it's like a dictionary and an instructional manual put together. Now, when I want to put sentences together, I look at the resource. (1st year student)
> It helped me in my assignment, where I used the examples to reference and structure my sentences similar to the ones in the resource…the resource is a good tool box. (1st year student)

The online survey elicited responses from 189 first-year students. Table 1 shows these results alongside the percentages for agree, disagree and neither agree nor disagree (NN) responses. For reporting purposes we have aggregated the 'strongly disagree' and 'somewhat disagree' responses into 'disagree', and the 'strongly agree' and 'somewhat agree' into 'agree' responses. At least 50% of the respondents agreed to each survey statement. The internal consistency of the learning module and the quiz (Q.6) had the highest positive response (74%), with the module being easy to use (Q.1) and the perceived development of understanding (Q.2) both rating 61%.

**Table 1: Online survey results**

| Questions | Disagree | Agree | NN |
|---|---|---|---|
| 1. I found the learning module (eLM) easy to use. | 7% | 61% | 32% |
| 2. The eLM has developed my understanding of how to use evidence | 14% | 61% | 25% |
| 3. I feel confident to use evidence and reference correctly… | 21% | 50% | 29% |
| 4. I like the fact that the eLM was integrated into the subject. | 18% | 55% | 27% |
| 5. The eLM increased my knowledge of the techniques I need… | 11% | 57% | 32% |
| 6. The quiz content was relevant to the content in the PPT lecture. | 5% | 74% | 21% |

## Conclusion

This research adds to the growing body of literature that recognises the need for the teaching of explicit academic skills to reduce plagiarism rates. The study also indicates that simply referring students to handbooks on referencing will not solve the problems made by students. Rather, any referencing resource needs to be supplemented either by active teaching or by study material with examples of how to integrate academic sources into an academic context. The results of the evaluation indicate that the design of the module and its embedded nature, in terms of both content and location, provided students with explicit instruction on using evidence and referencing that in general most students are required to acquire through a process of osmosis. Explicit instruction and assessment allowed students to be more strategic about their selection and use of evidence and apply these newly acquired skills to other subjects of study. It is expected that this data will be interrogated with the findings of further evaluations in the second round of implementation. Furthermore, the high percentage of Neutral and Disagree responses for some questions will be investigated.

## Acknowledgements

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