Assisting students to avoid plagiarism
Part 2: The inquiry learning approach

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Abstract
This article discusses the second of two approaches to assist students to avoid plagiarism, an approach generated in a study funded by the Australian Research Council. This approach is labelled the inquiry learning (IL) approach and was influenced by research focused on the development of thinking in students. This article describes the pedagogy underpinning the approach, the organisation of the project undertaken by the students and the evaluation by the research team. Regardless of approach, a key recommendation is that a whole-school culture is needed to address the problem of plagiarism in a comprehensive way.

Introduction
In the third issue of Access in 2009, we described a study known as the Smart Information Use project. This project explored issues concerned with plagiarism and information use amongst secondary school students and involved teacher librarians (TLs), teachers and students in four Australian schools. The two-year study, conducted from early 2006 to early 2008, involved collaboration between staff in the four schools and researchers from Charles Sturt University (CSU) and was funded by a Commonwealth Government Australian Research Council (ARC) Linkage Grant*, with financial as well as in-kind contributions from the participating schools.

As described in the first article, the project took place in three phases: a benchmarking phase (Phase 1), an action research phase for teachers and TLs to trial strategies to assist students to avoid plagiarism, evaluated by the research team (Phase 2) and the development of a resources kit to assist other schools (Phase 3). The first article described and evaluated the first phase of the project, as well as one of the two main approaches trialled by the schools (three out of the four) during Phase 2. This approach was labelled ‘instructional practice’ (IP) by the research team.

This article describes and evaluates the other approach, undertaken by one school during Phase 2 and labelled ‘inquiry learning’ (IL). As previously described, the objective was to encourage a wide variety of approaches to assist students to avoid plagiarism, meaning that staff in each school worked independently to devise their own strategies. Although there are features that are common to both IP and IL approaches, they are sufficiently different to benefit from their own, specific discussion.

A key recommendation from the researchers is that, regardless of approach, schools need to develop a whole-school culture to address the problem of plagiarism in a comprehensive way.
school culture regarding plagiarism, if progress in dealing with this problem is to be made. This is discussed further in the conclusion.

Phase 2: The IL approach
Teacher librarians and teachers at the school using IL were influenced by Kuhlthau’s (2004) approach to inquiry — seeing the entire activity of information seeking, linked to learning and higher order thinking, as a distinct process. Kuhlthau (2004 p. 29) saw learners as engaged in a series of transformative learning experiences, which she identified as the Information Search Process (ISP). She described ‘zones of intervention’ as times when students can benefit from help or advice.

The methodology used in this school was also designed according to related approaches outlined by Todd (2005) in which he identified how ‘zones of intervention’ can be used in information-to-knowledge processes, making clear links between these processes, knowledge outcomes and meaningful inquiry in the school library. He linked this interrelated process with opportunities to help students to understand how disciplinary knowledge is constructed (Todd 2005).

The methodology involved key steps built into the inquiry process, thus enabling students to express their learning and thinking during the inquiry process. The intent was to increase the opportunities for synthesis of the information, by expanding thinking around the information, avoiding the tendency to cut short this process by ‘copy and paste’. The steps included an ICT-rich task or other intermediate forms of data assembly, where the emphasis is on the student making meaning of the information and interpreting it.

Using this underpinning methodology, the teachers and TLs designed a semester of work to explore how students’ thinking and learning could be developed. As a contribution to the ARC project, a key purpose was to encourage students to generate their own ideas as a way of assisting them to avoid plagiarism.

The student assignment
The inquiry was framed around a ‘big question’, in this case, ‘What caused the breakup of the Roman Empire?’ By the end of the unit, the plan was that students would write their own theories and conclusions on the question and support their cases with evidence. Students were encouraged to form personal interpretations and it was stressed to them that teachers were not predisposed to a particular theory. The class was divided into six groups, each group preparing a presentation and handout on a designated topic; for example, the Roman emperors, the Roman economy or Roman religion. Each group was to explore the extent to which their aspect had contributed to the breakup of the Roman Empire. Teachers and TLs devised ‘essential questions’ (Wiggins & McTighe 2005) to focus the research.

Following the research and preparation phase, the group presentations served to further frame synthesis for the individuals in each of the groups, as well as enable the exploration with the class of the implications of the new knowledge for the big question. Critical evaluation of the resources used by the students was incorporated as part of the presentation. Students were required to create a correctly cited reference list and justify the selection.

After the presentations, the students’ knowledge of the six diverse topics was further developed in class by way of a scaffolding exercise. New groups, which included representatives from each of the six research areas, were formed. These groups compared the influence of each of the topics on the breakup of the Roman Empire. They prepared a chart showing the order of influence and justified their discussions to the rest of the class.

The final assessment task required students to address the big question in an individually written piece. This was completed in class under test conditions, during which the student group reports could be used and cited.

Valuing thinking
Inquiry, in this approach, was linked to the development of higher order cognitive processes, informed by the work of Ron Ritchhart and David Perkins in Project Zero (Harvard Graduate School of Education 2009). Ritchhart’s (2002) major work on intellectual character outlined his pedagogical approach to developing a classroom where thinking is identified in relation to the learning tasks and where a culture of thinking is developed (p. 145). He placed emphasis on student attributes, referring to them as thinking dispositions. They included scepticism, openness, curiosity and truth seeking. In Ritchhart’s view, the classroom needs to become a place where thinking and exploration of thinking is made explicit and where a culture of mindfulness is established. In the classroom questions are explored from many perspectives, hypotheses are tested, and assumptions are surfaced for deeper examination. In addition, linking directly with Bloom’s taxonomy of higher order thinking skills (Bloom & Anderson 2001), rubrics were developed to assess students’ work.
Developing ‘real historians’ and authentic student voices

Consistent with the humanities task was the intention for students to be ‘real historians’, where making attribution of the work of published authors was valued and modelled throughout the unit. Moreover, students referenced each other’s original work by referring in their written pieces to the handouts prepared by the various groups. This reflects how things may play out in the real world practice of attribution — historians referring to other historians to either support or refute their interpretations.

As historians, students were encouraged to develop hypotheses. For example, students postulated that the size of the empire meant that the Roman army was spread too thinly and thus unable to maintain control. They tested this by looking for evidence to support this hypothesis.

Teachers aimed to value the students’ own expression, thoughts and opinions as well as the use of evidence to support the thinking. This was done through a culture of thinking developed in the library and classroom, described above, in particular during the presentations and the scaffolding task later in class. This was in keeping with the International Baccalaureate Organization’s concept of ‘intellectual and academic honesty’, where value is placed on students’ creative and intellectual work, including their ideas, thoughts, considerations and the new knowledge they might create. At the same time, students develop as much respect for the original and academic work of others as they do for their own (International Baccalaureate Organization 2006).

Thus, during the project teachers and librarians actively worked to value the processes of learning, thinking and exploring instead of focusing on the creation of a perfectly written assignment. Hence the IL approach, where original student voice and thinking are valued above a well packaged but plagiarised product, is a viable alternative (Kurvink & Turnbull 2009).

Phase 2: Method — The IL approach

As with the method for the IP approach — after teachers and TLs in the school involved had completed their trials of the IL approach, the research team evaluated the strengths and weaknesses, as well as the impact of the approach on assisting students to avoid plagiarism. In this school there were two iterations of the trials, with two different Year 7 classes being involved in two different school terms. Focus groups, involving a majority of the students (24) who had taken part, were conducted by the researchers. In addition, all relevant teachers (three) and TLs (five) were interviewed. Questions focused on students’ engagement with their topics, as well as their abilities to synthesise information, to generate new ideas and to acknowledge sources of information. Analysis, which was influenced by a constructivist, grounded theory approach (Charmaz 2003), involved the identification of themes and categories.

Phase 2: Findings — The IL approach

Here the discussion and evaluation focuses on the impact of the trialled approach upon student learning in terms of their engagement with the topic, as well as their abilities to synthesise information, to generate new ideas and to acknowledge sources of information.

Engagement with the topic

Pilot research, by McGregor and Williamson (2005) and Williamson and McGregor (2006) for the current ARC project, indicated that those who plagiarised most were less engaged with their topics; remembered less about them a month later; demonstrated less interest in processes such as learning, seeking meaning, or understanding; and were less able to recognise plagiarism than those who plagiarised least. Hence the researchers were interested in the extent to which students engaged with their topics.

Whilst the students exhibited a range of levels of engagement with the assignment, those who were most engaged, as gauged from their comments, appreciated the collaborative nature of the learning environment and the integral role each group had to play in contributing to an overall understanding of the topic.

They considered all reports thoughtfully and incorporated them appropriately into their final individual essay, which was used for assessment purposes. One student reflected that:

... not in any other projects have I understood the other topics just as much as we did when we were writing ... a report about it. We had to incorporate everything in it and ... I really got involved with all of the topics.

Most students responded very positively to the assignment and felt encouraged to develop their own voices. They expressed trust, security and confidence in the belief that the teachers valued their original work, that:

... you're really putting in the effort to make sure that you have proof, to make sure that you have all these things to make it a really good kind of argument.
Another student realised that:

well as the processes of building on other people’s ideas

more aware of the interactive nature of their learning, as

the actual design of the assignment, students also became

largely because of the learning processes structured into

attribution of the reports of other groups, presumably

activity was that some students demonstrated spontaneous

by the teaching team. An interesting outcome of this learning

above, modelling of good practice in attribution was done

for progressively recording the details of sources as they used

them; they agreed that this strategy was helpful but admitted

that they did not always use it effectively, having a marked

tendency to forget to fill it in. One student confessed: ‘…we

all kept forgetting to write in our references’.

Discussion and conclusion

How effective was the IL approach in assisting students

to avoid plagiarism? It encouraged them to develop their

own thinking and to generate what was new knowledge,
at least to the students involved. By the time of the second

evaluation round, the research team saw that many

students were able to articulate the kinds of concepts that

underpinned the pedagogy:

They actually trust you to actually orientate yourself, to have

proof against it and that you’re making your own decision and

you’re doing it by yourself. Like you’re kind of, you’re really

putting in the effort to make sure that you have proof, to make

sure that you have all these things to make it a really good,

kind of argument, in a way. (2nd iteration)

Students did not articulate so clearly the link between what

they had achieved and the avoidance of plagiarism. The team

found that virtually all students were aware of plagiarism

prior to the assignment, most understanding it to involve

at least verbatim copying without acknowledgement,
especially via the medium of electronic copy and paste. Not

all students were sure if ideas could be plagiarised. Many

said that they had not received any specific teaching about

strategies for avoiding plagiarising in conjunction with the

assignment. This does not detract from the value of the IL

approach, given that so much was achieved and that the link
to the avoidance of plagiarism can be developed as students

mature during their secondary school years. Indeed the goal

of staff, in their organisation of the class and the style of the

assessment, was to limit or eliminate the opportunity for

plagiarising. They were very successful in this. Memorably,
one student declared that in the project, it was:

… actually quite hard to pursue plagiarism … because …

there wasn’t actually written information about what you

were meant to write about, so there wasn’t anything to copy

or do plagiarism [from].

Synthesis: note-taking and paraphrasing

The teaching of specific note-taking techniques in

conjunction with the assignment was not a teaching priority.

However, virtually all students reported that they had made

notes in dot point form and all said that they had expressed

the information they used in their individual essays in their

own words. Whilst they claimed this to be their standard

practice, they felt, nevertheless, that they had done so to a

greater extent than they had in previous assignments. On the

whole, they considered that they had gained a greater depth

of understanding and were more likely to remember what

they had learned, suggesting that they had processed and

synthesised information more fully than usual. Students felt

that they would be more likely to remember historical issues

learned in this manner than facts and dates. One declared

that:

I think we’ll all remember it and now we’ve got a better

understanding of how things work.

Largely because of the learning processes structured into

the actual design of the assignment, students also became

more aware of the interactive nature of their learning, as

well as the processes of building on other people’s ideas

when working out their own interpretations:

I think I definitely learnt more in this topic because …

when we had to read about other people’s reports … I also

learnt a lot about … their topics as well.

Generation of new ideas

Students were quick to agree that they had been encouraged
to think for themselves and were able to recognise the value

of creative thinking as a potent way of avoiding plagiarism.

One student noted that:

… we had to be more creative about our thinking … and try

and work out what we thought (1st iteration)

Another student realised that:

… the whole assignment was about your opinion, so it wasn’t

about trying to find out the most information (2nd iteration).

In fact, the assignment was generally regarded, by students

and teachers alike, as being very successful in achieving its

main aim of promoting the creation of original thinking,
including that students indeed managed to perform this

high order cognitive task effectively.

Acknowledgement

Quotations, citations and bibliographies: As mentioned

above, modelling of good practice in attribution was done

by the teaching team. An interesting outcome of this learning

activity was that some students demonstrated spontaneous

attribution of the reports of other groups, presumably

because students were aware that they could not pretend

that the ideas they had gained from other groups were their

own. They tended to cite their attribution according to the

colour assigned to the group; for example, ‘as the yellow

group said’ or to the sub-topic of the group they were citing.

Thus, on their own initiative, some students employed one

of the main strategies for avoiding plagiarism. All groups

reported having compiled bibliographies for their group

reports. Students had been provided with a pro forma for

writing a reference list, but few used it. One student

explained that they did not always use it effectively, having

a tendency to forget to fill it in. One student confessed: ‘…we

all kept forgetting to write in our references’.

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As intimated above, for the school using the IL approach, as with the schools where the IP approach was implemented, a key recommendation from the research team is that a whole-school culture needs to be developed if the problem of plagiarism is to be addressed in a comprehensive way. The goal should be to promote a community of practice within which intellectual honesty is valued. Regardless of the approach or strategies employed, if any one recommendation from the project deserves to be highlighted, it is this one.

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