

## Addressing Plagiarism through Improved Notetaking

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### **ABSTRACT**

The expanding range of information sources available for student research activities has led to greater awareness of the occurrence of plagiarism in its various forms. The opportunity offered by electronic information sources (in particular the internet) for students to plagiarise and get away with it is of particular concern to teachers. Is the issue of plagiarism as clear cut as it seems and is the same approach adopted by universities to deal with plagiarism the approach that should be taken in secondary schools? Is plagiarism an ethical issue or a learning one?

This action research project looks at the approach taken in the author's school to raise staff awareness of the complex issues surrounding plagiarism and to trial learning strategies to minimize the occurrence of plagiarism. The action research project looked specifically at notetaking skills across the curriculum and how teachers can build the teaching of notetaking into their research assignments.

### Action Research: Addressing Plagiarism through improved note-taking

Action research is a methodology whose flexibility allows learning and responsiveness. Vague beginnings can move towards better understanding and practical improvement through critical analysis of the information, the interpretation of it, the methods used.

(Dick 1999)

### **CONTEXT**

As schools, libraries and homes have connected to the WWW, the range of resources that students can access has grown exponentially. A concern many teachers feel about the ease with which students can access and use information from a multitude of sources is the difficulty teachers have in knowing if work presented by students is truly their own.

Whilst issues of plagiarism are not new, Jamie McKenzie sums up the increased concern of many teachers:

... new technologies have made it all too easy for students to gather the ideas of others and present them as their own. The New Plagiarism may be worse than the old because students now wield an Electronic Shovel which makes it possible to find and save huge chunks of information with little reading, effort or originality.

(McKenzie 1998 [online]).

The 'vague beginnings' for the action research presented in this paper was a plagiarism awareness raising session for staff at the beginning of Term 2 2000. Newspaper headlines such as "Plagiarists, your time is over" (The Age, Sat 29 Jan, 2000) and "Students latch onto a web of deceit (Education Age, Wed 8 March 2000) had recently raised the topic of plagiarism in the daily Melbourne press.

The authentication guidelines provided by the Board of Studies for students studying for the Victorian Certificate of Education (Years 11 & 12) clearly showed an awareness of plagiarism:

It is the students' responsibility to ensure that the teacher has no difficulty in authenticating their work.

Work will be assessed only if the teacher is satisfied that, to the best of his or her knowledge, all unacknowledged work is the student's own..

For all students All resources used must be acknowledged. These will include text and source material and the name(s) and status of any person who provided assistance and the type of assistance received.

(VBOS *Administrative Handbook*).

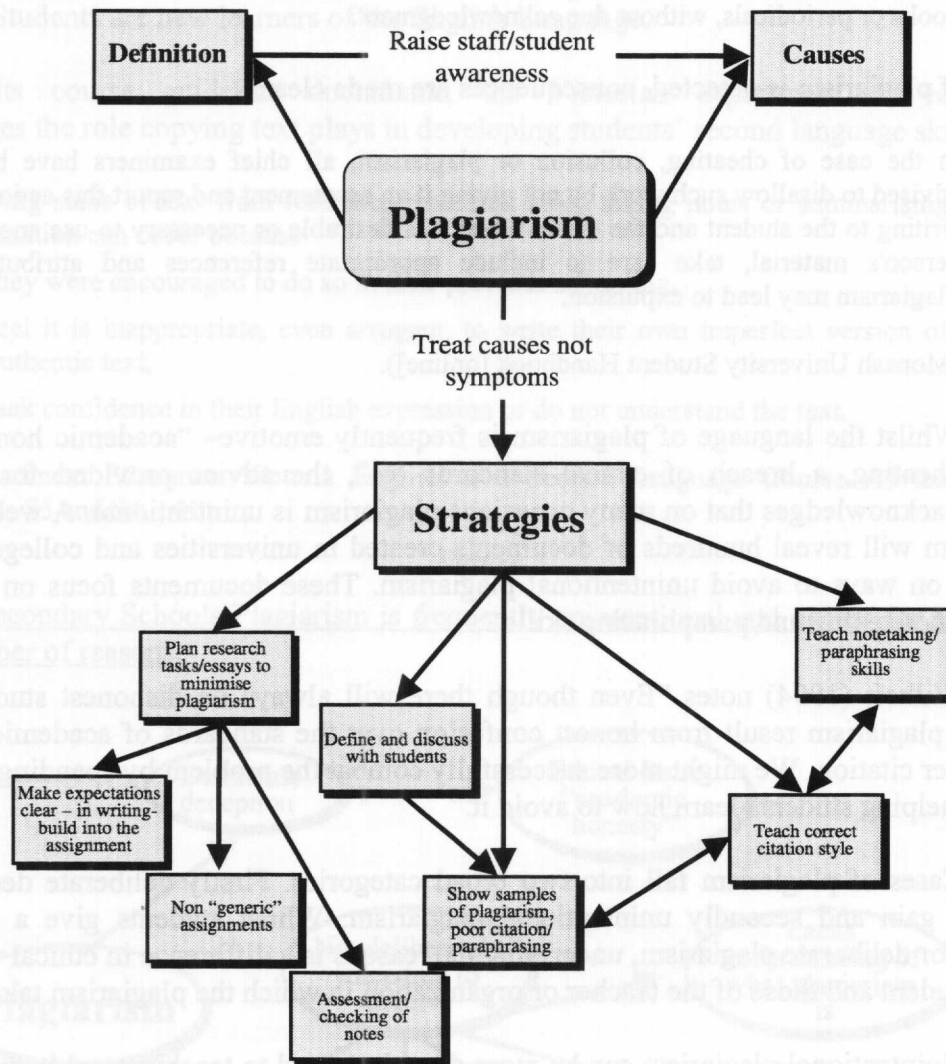
Study skills sessions run for our VCE students had highlighted the need for students to take care in presenting their work for assessment. A case of a student presenting work from the world wide web as her own had reinforced the need to raise the issue of plagiarism.

It was timely to take the issue to a whole staff forum.

The Plagiarism Awareness session for staff provided information on 'Papermill' (cheat) sites and explored sites that offered advice and strategies for dealing with plagiarism. From this session and two follow up sessions at Heads of Department, the complexity of issues relating to plagiarism became apparent. (See Figure 1).

Figure 1

Figure 1: Related elements in an approach to dealing with student plagiarism



Defining Plagiarism

Simply stated plagiarism is using other people’s words or ideas without clearly acknowledging the source of the information.

Plagiarism can take many forms:

- buying an essay/paper from a research service, another student or online sites (papermills);
- Handing in another person’s work with or without the creator’s knowledge;
- Copying an entire source and presenting it as your own;
- Copying sections from a source without proper acknowledgment;
- Paraphrasing material from a source without proper acknowledgment.

Most Tertiary Institutions have plagiarism policies and the consequences for breaches of policy are clearly stated. Monash University, one of Australia's largest universities has clear advice for students with regards to plagiarism:

Plagiarism is regarded as a form of theft and is therefore a serious offence. Plagiarism is the presentation of work which has been copied in whole or in part from another person's work, or from any other source such as the internet, published books or periodicals, without due acknowledgment.

If plagiarism is detected, consequences are made clear:

In the case of cheating, collusion or plagiarism, all chief examiners have been advised to disallow such work by not giving it an assessment and report this action in writing to the student and the dean. When it is desirable or necessary to use another person's material, take care to include appropriate references and attribution. Plagiarism may lead to expulsion.

(Monash University Student Handbook [online]).

Whilst the language of plagiarism is frequently emotive—“academic honesty, theft, crime, cheating, a breach of ethical standards etc”, the advice provided for university students acknowledges that on many occasions plagiarism is unintentional. A web search on plagiarism will reveal hundreds of documents created in universities and colleges advising students on ways to avoid unintentional plagiarism. These documents focus on improving students notetaking and paraphrasing skills.

Wilhoit (1994) notes “Even though there will always be dishonest students, most cases of plagiarism result from honest confusion over the standards of academic discourse and proper citation. We might more successfully combat the problem by spending more time in class helping students learn how to avoid it.”

Cases of plagiarism fall into two broad categories. Firstly deliberate deception for personal gain and secondly unintentional plagiarism. Whilst students give a number of reasons for deliberate plagiarism, underlying the reasons is a difference in ethical values held by the student and those of the teacher or organization in which the plagiarism takes place.

Unintentional plagiarism can be more directly linked to teaching and learning issues. In a study of tertiary students' awareness of plagiarism and internet resources, Gajadhar (1998) believed that there was confusion in the minds of students about what constituted plagiarism. In secondary schools, whilst there are incidents of deliberate deception, more often, plagiarism is a result of lack of understanding and poorly developed skills.

Plagiarism can occur when:

- Students lack an understanding of the meaning of plagiarism. This lack of understanding can be culturally based. In many cultures it is considered appropriate to state exactly the words of experts/elders
- Students are faced with information overload and uncertainty. With so much information to select from students are frequently concerned that they might leave out some important information.

- Students have poor time management skills.
- Students lack knowledge of citation conventions and teacher expectations regarding the use of these. Teacher might not have ever taken the time to talk to students about what they mean when they talk of plagiarism and avoiding it.
- Students have poorly developed note-taking and summarizing skills.
- Students are new learners of the English Language.

In its course guideline documents, the Victorian department of education acknowledges the role copying text plays in developing students' second language skills:

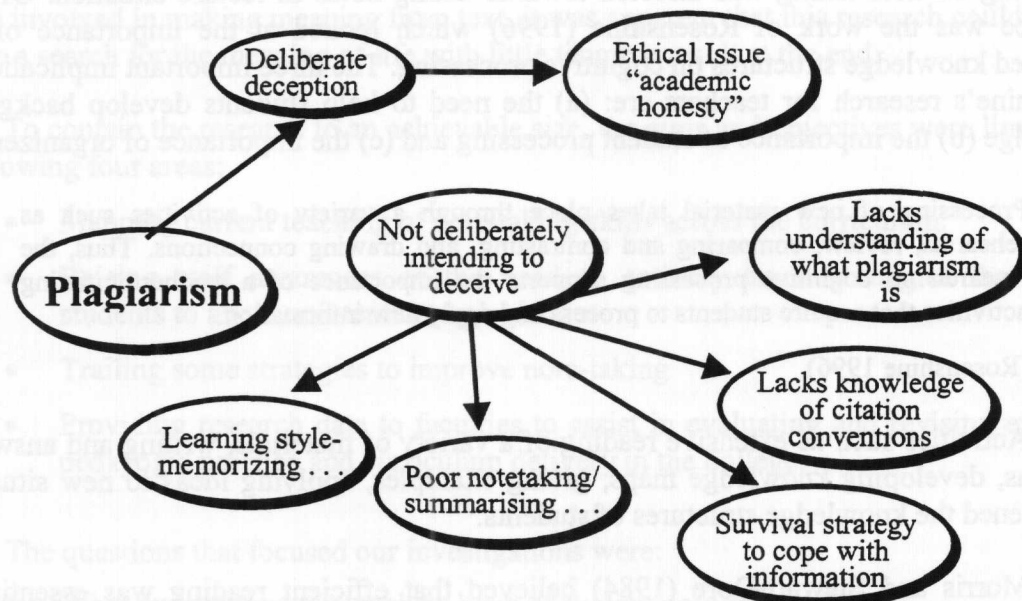
Copying slabs of text from reference materials when taking notes or summarising information can occur because

- they were encouraged to do so in their previous schooling,
- feel it is inappropriate, even arrogant, to write their own imperfect version of authentic text,
- lack confidence in their English expression or do not understand the text.

(Department Education Victoria English as a Second Language Course Advice Stages S3 and S4, p41).

Figure 2

In Secondary Schools Plagiarism is frequently unintentional and occurs for a number of reasons.



### Dealing with plagiarism

To deal with plagiarism we need to understand the many reasons why it occurs and develop strategies that cater for students with diverse learning styles, levels of skill development, cultural and educational backgrounds (see Figure 2). It was generally agreed in discussions at our school that a simple punitive response to plagiarism – a fail or requirement

to resubmit work, did little to address underlying issues or provide on going strategies and support to prevent its occurrence. As Figure 1 showed there were several learning strategies that we identified for teachers:

- Design research activities in such a way that the possibility of plagiarism occurring is minimised.
- Discuss the meaning of plagiarism and the concept of academic honesty with students.
- Make expectations clear. Put these expectations in writing and make the consequences of deliberate plagiarism clear to your students.
- Teach citation skills.
- Emphasise and teach note-taking and summarising skills.

A perennial concern for teachers is the tendency for some students to copy slabs of text from resources as they take notes for research assignments. Whilst teachers need to look at the nature of the assignments they are setting to minimise the possibility of students completing assignments in this way, we also need to consider where and how note-taking skills are being developed in our schools. If we can improve the way students take notes, the possibility of poor notes, ie: notes that consists of copied sections of text without acknowledgment of source, being the cause of unintentional plagiarism should decreased.

In a review of the research on note-taking Beecher (1988), observed that much of the existing research used test performance to verify that note-taking aided recall. He noted that recent research has begun to look at the cognitive processes involved in notetaking. Much of the writing on note-taking was directed towards taking notes in lecture situation. Of more relevance was the work of Rosenshine (1996) which looked at the importance of well connected knowledge structures on cognitive processing. The three important implications of Rosenshine's research for teachers are: (a) the need to help students develop background knowledge (b) the importance of student processing and (c) the importance of organizers

Processing of new material takes place through a variety of activities such as rehearsal, review, comparing and contrasting, and drawing connections. Thus, the research on cognitive processing supports the importance of a teacher initiating activities that require students to process and apply new information.

(Rosenshine 1996).

Activities such as extensive reading of a variety of materials, writing and answering questions, developing knowledge maps, giving examples, applying ideas to new situations strengthened the knowledge structures of students.

Morris and Stewart-Dore (1984) believed that efficient reading was essential for independent learning. Their work focused on reading in content areas and highlighted the thinking involved in reading subject specific content:

If we think about the purposes for which students read content area materials, we will soon realise that a great deal of thinking is involved. We expect students to perform the following tasks: summarise passages or chapters, pick out main ideas and details, building these into an outline, pick out comparison and contrast or cause

and effect examples, learn new vocabulary from context clues, distinguish fact from opinion, follow an argument, seeing the logic involved and relating different points of view to verify the conclusions and decide whether a piece of information is relevant to a topic being researched.

(Morris 1984)

This work of Morris and Stewart – Dore add depth to the generalisations made by McKenzie (1998) in his *Seven Antidotes to Prevent highway Robbery in an Electronic Age*. McKenzie advocates strongly for teachers to design assignments that move students beyond regurgitation of facts and involves them in higher order thinking. Morris and Stewart – Dore provided tested strategies for improving student understanding of text and, in so doing, minimise unintentional plagiarism.

McGregor (1998) observed eleventh grade students as they used reference sources to write research papers. The final papers of two groups of students were compared for instances of plagiarism. Due to the emphasis of the teacher, the second group were aware of the need to cite properly and avoid plagiarism. Teacher intervention on the form and rules of citation appeared to limit the amount of blatant plagiarism but “did not help students learn from the sources or construct their own understanding of their research topics.” (McGregor 1998 [online]) The researchers observed “an apparent connection between strong product orientation and plagiarism.” The research raised questions about the processes of seeking meaning and the part this plays in the likelihood of students’ plagiarising.

#### Aims and objectives of action research

Because of the complexity of the information relating to plagiarism and the cognitive process involved in making meaning from text, it was apparent that this research could easily become a search for the meaning of life with little tangible result at the end.

To contain the research to an achievable size, the aims and objectives were limited to the following four areas:

- Mapping current teaching of note-taking skills across the curriculum.
- Raising staff awareness of the need to actively teach strategies that assist students to avoid unintentional plagiarism
- Trailing some strategies to improve note-taking
- Providing research data to faculties to assist in evaluating and revising existing pedagogic practice and curriculum delivery in the college.

The questions that focused our investigations were:

1. What expectations do teachers have of student note-taking skills?
2. Where and how are note-taking skills developed across the curriculum?
3. How do teachers intervene to improve students’ note-taking skills?
4. How do we assist teachers to see plagiarism as a learning issue and not an ethical transgression?

5. Are staff aware of a connection between poor note-taking skills and unintended plagiarism?
6. What strategies can we develop/use to equip students with the necessary skills and understanding to avoid plagiarism?

### Mapping current teaching of note-taking skills across the curriculum

Staff were asked to identify any topics they taught in which note-taking was an essential element and for each topic so identified they completed the provided checklist. The checklist required information about the source material for note-taking, the instruction provided for note-taking and the assessment of the note-taking that was carried out. An example of the checklist is provided below:

<u>Year Level</u>	<u>Topic</u>	<u>Number of classes</u>	
Topic	Source	Notetaking Instruction	Assessment
	(you can tick more than one)	Verbal instruction /hints for notetaking <input type="checkbox"/>	Notes not assessed <input type="checkbox"/>
	Text Books <input type="checkbox"/>	Verbal Instruction for notetaking conventions eg: abbreviations, symbols, <input type="checkbox"/>	Notes checked but not included in assessment <input type="checkbox"/>
	Library resources <input type="checkbox"/>	Written instruction given for formatting or style of notetaking <input type="checkbox"/>	Notes included as part of the assessment criteria for the topic <input type="checkbox"/>
	CD-Roms <input type="checkbox"/>	Notetaking grid or proforma sheet provided <input type="checkbox"/>	
	Videos/film <input type="checkbox"/>	Graphic organiser provided eg: concept map, venn diagram, comparison chart, PMI chart <input type="checkbox"/>	
	Speakers <input type="checkbox"/>	Teaching summarizing skills <input type="checkbox"/>	
	Internet <input type="checkbox"/>	Teaching skimming & scanning techniques <input type="checkbox"/>	

Responses from teachers of English, Geography, History, Languages other than English (LOTE) and Science were returned. The LOTE teacher made the point that note-taking in her subject area was primarily from texts where note-taking activities are built in. The other subjects are the ones that frequently undertake research based activities in the library. Topics identified as having note-taking as an essential element covered Years 7-12. Whilst not all the topics involved the use of library resources or space, in the main the information coincided with Library bookings over a number of years and with a curriculum map of library based research activities which is currently being developed.

Whilst not all teachers responded the information gained revealed a number of interesting facts:

- In the majority of cases teachers rely on verbal instruction for note-taking. It is only in Senior Years (Yr10 - 12) that instructions for note-taking are given in writing.



- Explicit teaching of summarizing and skimming and scanning techniques occurs in History and English but only in Senior Years (Yr10 - 12).
- History teachers are the ones who most frequently include notes in their assessment. The teachers in other subjects more frequently indicated that they 'checked' notes but did not include them in assessment.
- Science teachers are consistent users of note-taking grids and profomas for student note-taking.
- In Junior Years there was a notable absence of teaching summarising and skimming and scanning and assessment of notes.
- Raising staff awareness of the need to actively teach strategies that assist students to avoid unintentional plagiarism.

The results from the note-taking checklist were fed back to staff through Heads of Department and discussed with the Year 8 geography teachers. The issue of who is responsible for teaching note taking skills in junior years (years7-9) was canvassed. Many staff feel ill equipped within their subject disciplines to teach note-taking. Many staff have never considered the thinking processes they use to develop notes from information sources.

Information about plagiarism was provided for staff through the Library Web Page and the teacher librarian attended faculty meetings with Individual Differences and Geography to discuss issues of plagiarism and note-taking.

During this time several staff members detected instances of plagiarism in students' work and there was much staff room discussion. This led to a position paper about plagiarism being written and discussed at another staff meeting. It was clear from the discussion around the position paper that staff had a better idea of the context and issues surrounding student plagiarism.

Our school has a high proportion of students from non- English speaking backgrounds, and the impact of cultural difference in viewing plagiarism was acknowledged and keenly explored. An excellent article by Pennycock (1996) highlighted the role memorization skills can play in apparent incidences of plagiarism and led to lively discussion of the western concept of text ownership. A spin off from the discussion has been the beginning of a project between History and Individual Differences staff to "translate" key historical documents used in Year 10 History into text that is accessible to English as a Second Language students.

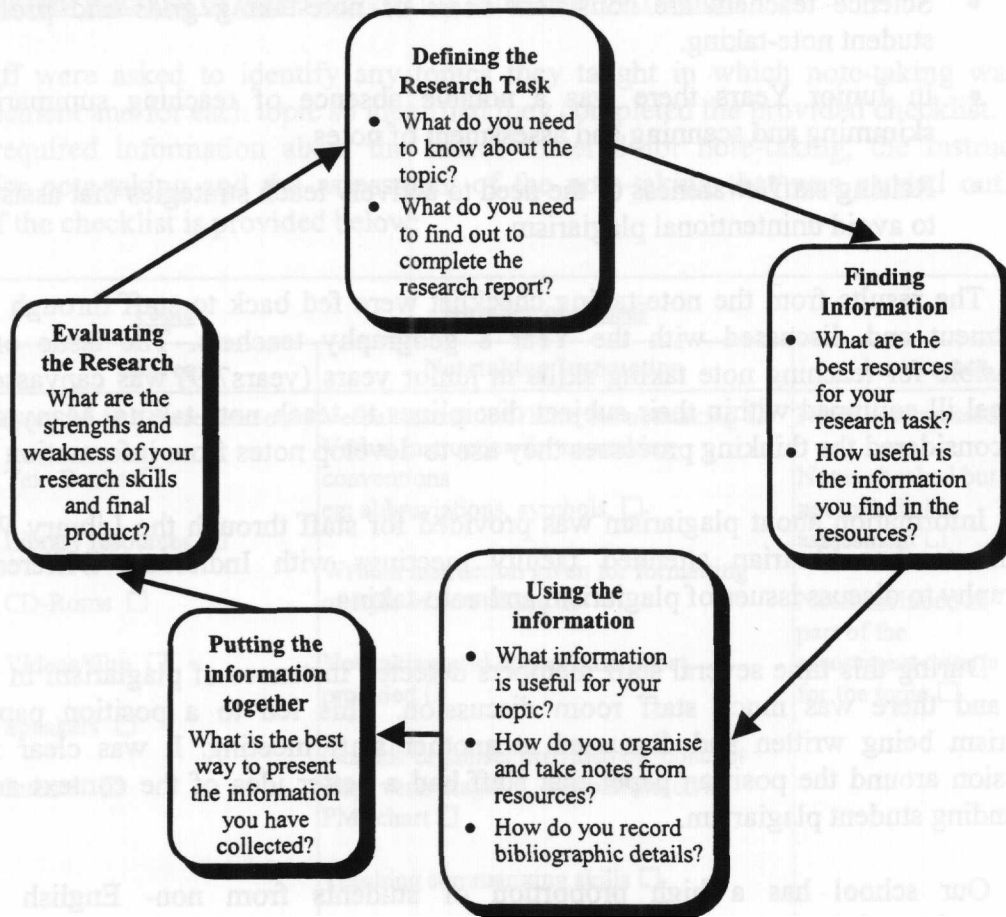
#### Trailing some strategies to improve note-taking

The observation of McGregor (1998) that "students who demonstrated involvement in the processes of seeking meaning, making sense, or learning did not copy from their sources. They synthesized, summarized and paraphrased information", confirmed our decision to trial strategies to improve note taking within a research activity where the focus was equally placed on the process of research as well as the end product. This project was intended to lead to greater understanding of our classroom practice in the belief that we could improve our students' learning by doing so.

Over several years Year 8 Geography students have undertaken an independent research project during Term3. Geography teachers and the teacher-Librarian have collaborated to provide a clear framework in which the research project takes place.

Figure 3

Research Framework.



In the past we have emphasised the first stages of research- defining and finding. Having recently purchased Inspiration software for the library computers, we decided to use this with the Year 8s to help them in these first stages of research and to provide more guidance for students as they began to make notes. We believed the software allowed students to more easily shape and adapt their ideas in the early stages of research. This meant students were active in creating their own meaning of the information they found.

Students worked in the library for 3 lessons developing their topics with Inspiration software. Each student devised 5 research questions from their initial brainstorm to focus their search for information. Questions were revised discarded and created as resources were discovered and understanding of their chosen topics grew. Students were active in their discussions with the teacher and teacher librarian about their research topics.

After 2-3 lessons students returned to the classroom for a lesson on notetaking. A flow diagram was created and discussed with the students and note taking styles and conventions discussed. Two teachers used a note taking proforma/grid. Students were familiar with these from science in Year Seven. The other teacher encouraged students to use

the Cornell style of note-taking where a wide column down the left side of the page is created. This allows students to easily 'make notes about their notes'. Using either format the majority of students organised their notes around the research questions they had framed. The bibliographic details of sources were noted as students made their notes. Abbreviations and conventions were discussed with students. The notes made by students formed part of their assessment.

Students in each class reacted positively to the formats that were provide for them. The teachers allowed the students to adapt the formats in the way that suited students' individual styles. The teachers emphasised that note taking style was a matter of personal preference – what was important was an organised and systematic approach to gathering information.

As part of the research project every student was required to complete an Independent Researcher's Reflection Sheet through which the commented on each stage in their research project. The reflection sheets were submitted with the finished research and along with observation of student behaviour throughout the project formed the basis of this action research project.

From the reflection sheets and our observations of the students, we believe that our interventions to improve the quality of students note-taking had a positive effect. Firstly by requiring a series of research questions we were able to focus students reading and note making. Students scanned resources with particular questions in mind. On one occasion a student was looking troubled. When asked what the problem was, She explained that she didn't know how to use a particular piece of information in her project. She had read it in several books but couldn't really use it because it didn't answer any of her research questions. A discussion about the dilemma of what to include and discard in research followed. The information was discarded when she was able to answer the question does this information add to your research questions in any way?

Discussing with students a technique for skimming and scanning and for summarising information focused the students on the need to extract only information that was relevant for their research questions. Along with the instructions for the project, students were provided with a diagram showing the process of reading for meaning and extracting information from text.

As students took notes in the Library, the teachers moved around the students assisting them with the note-taking as necessary. Students were encouraged to review their notes to see what information they were missing. It was common to see students walking around the library looking for resources with their notes in their hands- using them as a "road map" to what they needed next. Photocopying of information was minimal.

Students reflection sheets were examined for 114 of the 150 students who completed the research project. Comments about the way they planned, recorded and reviewed their notes were uniformly positive The importance of their concept maps and research questions in focusing their research was noticeable.

“I set out my notes better, and took time – it was easy”

“It was easy ‘cause I had a clear system to stick to”

“I liked the way I designed my notetaking sheet and I will definitely use it again”

“Note-taking from books was easier”

“I was extremely organised- I had a code system for keywords and important phrases”

“Evaluating the information before I took notes helped my notes”

“My organised notes helped with the final product”

“I took notes under key questions it was easy to see how much information I had. I would try to use my concept map more –the key questions provided a logical sequence”

“By reviewing all my information – notes, concept map etc I could make sure I had a reasonable amount for the final report”

In assessing the final research reports of the students, teachers believed the work to be the students own. The active involvement of the teacher through the research appeared to be a key ingredient in being able to authenticate the students’ reserach as their own.

Providing research data to faculties to assist in evaluating and revising existing pedagogic practice and curriculum delivery in the college.

The work that has been done to map note-taking will be provided to faculties to help with curriculum planning. The observations we have made of interventions to improve students note taking for research projects will be discussed in staff groups over the next 12 months. The PEEL (Project for Enhancing Effective Learning) at our school is a valuable forum in which work such as this can be discussed and extended into other subject areas.

## CONCLUSIONS

It is difficult to single out teaching note-taking as the way in which we can prevent plagiarism. Our interventions need to cover all the strategies outlined in Figure 1, however the narrow focus we took made it possible for teachers to feel actively involved in constructively addressing plagiarism issues. We have made greater inroads into teaching note-taking and plagiarism awareness than I would have thought possible. The discussion of plagiarism has provided an opportunity to develop a shared understanding amongst staff. It would be reasonable to state that information from mapping note-taking shows that up until the action research, teaching of note-taking was sporadic and incidental. It appears that in junior forms verbal instructions for note-taking were seen to be adequate whilst in senior classes written or specific note-taking expectations were more common – what an interesting paradox.

The work with the Yr 8 Research Project supports the view that students involvement in making meaning from text is an important element in reducing plagiarism in final products. As students take their first steps as independent researchers, support and guidance in junior forms is crucial for students to be confident in making their own notes and trusting their ability to decide what information is useful for their task. This impacts on the likelihood of plagiarism occurring.

The reflections of the teachers involved in this project indicate their increased awareness of the need to develop note-taking skills in junior forms.

It is hoped that the results from this action research project will be ongoing and that over the next 12 - 18 months more teachers will take responsibility for providing students with opportunities to develop effective note-taking strategies in the framework of research activity.

This Action Research Project has provided a catalyst for continued review of the way in which students undertake research activities in our school. It is a means by which we could review our own teaching "for the purpose of improving classroom practice". As noted by Hopkins "occasionally this research may be published and contribute to academic knowledge of education, more often it may test out hypotheses derived from academic research, but usually it involves teachers self consciously and systematically researching their own teaching with the aim of improving it."

(Hopkins, 1987 p111).

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