Plagiarism detection software, its use by universities, and student attitudes to cheating: a report for the University of Sydney Teaching and Learning Committee.

1 Introduction

1.1 At the meeting of the University Teaching and Learning Committee which was held on 13 February 2003, members discussed recent media reports about an on-line software tool which can be used to detect plagiarism in student assignments, and a recent study undertaken by Monash and Swinburne universities on student attitudes to cheating. It was agreed that research should be conducted into currently available plagiarism detection software, including cost of the product, strengths and weaknesses, and the presence of any evaluations on the effectiveness of the product. In addition the research was to cover the experiences of other universities, and the attitudes of the University’s students to cheating.

1.2 This report was commissioned by the Chair of the Teaching and Learning Committee, Prof Judyth Sachs, as a result of the meeting. It is divided into three main sections:

1. Plagiarism detection software – what is available, evaluations
2. University experiences – Australia and the United Kingdom
3. Knowledge, compliance and implementation of the Academic Honesty (Plagiarism) in Coursework policy across the University of Sydney.

1.3 The final section of the report is a list of resources used in the compilation of this report.

2 Methodology

2.1 An internet search was undertaken to locate any information on the use and evaluation of plagiarism detection software by higher education institutions in Australia and overseas. Most information came from sources within the United States and the United Kingdom. A number of evaluation sites were found, together with a number of useful resource lists/sites. Links from these resource sites were followed to locate additional information.

2.2 Databases and electronic journals located through the University of Sydney Library website and catalogue were also searched, producing some useful up-to-date information, particularly from local newspapers, education and IT journals.

2.3 The websites of all Australian universities were searched, where there was a search facility, to locate any policy decisions and information relating to the use of plagiarism software, in particular the Turnitin.com service.

2.4 To locate information on the final object of the report – University of Sydney students’ attitudes to cheating, records of meeting from Academic Board Phase One review visits and Faculty websites were searched for the current state of play within the university regarding plagiarism and academic honesty.

3 Plagiarism detection sites and software

3.1 Categories of plagiarism detection sites and software

3.1.1 There are a number of plagiarism detection software systems, or detection tools, currently available. Research into services listed in the literature indicates that the number of available tools is decreasing
rather than increasing. Services such as FindSame, HowOriginal and Paperbin, listed in early evaluations of available detection tools, are no longer operating. In an article for the American Historical Association, the author reported that John Barrie, the founder of the major player in the market, Turnitin.com, has stated that the company intended to “have it all wrapped up... There will be no room for anyone else, not even a Microsoft, to provide a similar type of service because we will have the database.” (Masur (2002)) Plagiarism detection software can be classified into four main categories - online or remotely located search tools and services, stand-alone desktop software, web search engines and other web resources, and subscription databases. (VAIL (2002))

3.1.2 Online or remotely located search tools and services

These function as advanced search engines to detect material that has been taken from the Internet. Words and phrases from student assignments are matched to similar text in public web pages, paper mills¹, etc. Each paper is scanned against the services database, which may include previous papers from individual academic institutions using the service, as well as documents publicly available on the Internet, or through paper mills. A report noting similarities to text in the services database is returned to the institution, where final analysis and determination of whether plagiarism has occurred is required.

Services within this category include:

- EduTie.com  http://www.edutie.com
- PlagiServe.com  http://www.plagiserve.com
- Glatt Plagiarism Self-Detection program (GPSD)  http://www.plagiarism.com

3.1.3 Stand-alone desktop software

These assist in detecting collusion in student coursework, particularly where similar or identical assignments are set each year and students submit past students’ work as their own. The software is used to identify linguistic similarities between assignments. Software is currently available for detecting similarities in both textual work and computer codes.

Australian universities are developing their own software programs for plagiarism detection, mainly for use in computer programming. The University of Sydney School of Information Technologies has developed Sherlock which finds similarities between textual documents. It uses digital signatures to find similar pieces of text. Sherlock works on text files such as essays, computer source code files, and other assignments in digital form.² The Computer Science and Software Engineering Department at Monash University has developed its own software plagiarism detection tools – PLAGUE³ and DAMOCLES⁴ – which are now being made available internally to other faculties. The University of Melbourne is preparing to test plagiarism detection software which was developed by software engineering students (Thorp (2003))

Other services within this category include:

- CopyCatch Gold  http://www.copycatch.freeserve.co.uk

¹ Paper mills are services which sell papers/ essays to students on any topic.
³ http://www.csse.monash.edu/projects/plague/software.shtml
⁴ http://viper.csse.monash.edu.au/~damocles/
3.1.4 Web search engines and other web resources

Internet search engines such as Google, AltaVista, and Yahoo can be used as an alternate method to detect suspected plagiarism without the need to download software or register for a detection service. In addition, internet directories, online bookstores (for book reviews), indexes of paper mills, and online databases of scholarly databases may also be searched. More information on searching these sources can be found in the University of Maryland University College guide to detection tools and methods (VAIL (2002)).

Examples include:

- AltaVista: Search engine [http://www.altavista.com](http://www.altavista.com)
- Google: Search engine [http://www.google.com](http://www.google.com)
- Amazon: Online bookstore [http://www.amazon.com](http://www.amazon.com)
- Find articles: Full text magazine and journal articles [http://www.findarticles.com](http://www.findarticles.com)

3.1.5 Finally, subscription databases of scholarly and popular literature which include abstracts or full texts of articles may be searched, particularly if assignments relate to the location of such material. The University of Sydney Library accesses a wide range of databases and electronic journals.

3.1.6 A full list of plagiarism detection tools and software is found at Appendix Three.

3.2 Overall evaluations

3.2.1 There have been a number of plagiarism detection software evaluations and comparative reports carried out by organisations and academic institutions in Australia, the United Kingdom and the United States. They include information on the methods used to detect plagiarism by each service, the cost (mostly in $US), features, strengths, and weaknesses. Some evaluations provide comparisons between tools.

3.2.2 Australia

*Plagiarism detection software: How effective is it?* (Devlin (2002)) is the only Australian comparison currently available. It provides information on each of the main services - features and techniques, pros and cons, and costs in Australian dollars. A comparative table of plagiarism software features is also included (see Appendix One).

3.2.3 United Kingdom

In July 2001 the Joint Information Systems Committee (JISC), an independent advisory body that supports further and higher education institutions in the United Kingdom, in the use of information and communications technology, held a workshop on the electronic detection of plagiarism. (JISC (2001)) One of the papers presented at this workshop was a report on detection technology carried out by the CAA Centre at the University of Luton (CAA (2001)). Five of the top commercial products available for plagiarism detection were evaluated against a set of criteria from user and...
technical perspectives, and given a rating accordingly. Ratings were excellent, good, acceptable, poor and unsatisfactory. One product that the CAA Centre evaluated, Findsame, is no longer available. The report adds the caution that since the evaluations were carried out in 2001, developments and changes to the products may have occurred since that time. A copy of these tables is at Appendix Two.

3.2.4 United States

A number of universities and colleges in the United States provide evaluations of plagiarism detection tools and software for their academic staff, either through library resource lists and seminars, or as faculty guides. Some provide additional information, such as ways of preventing and deterring plagiarism, and others provide a list of the main services with information on method of use, cost and comments on usefulness. The best site for up-to-date information about plagiarism is the Electronic Plagiarism Seminar held by the library at Le Moyne College, Syracuse, NY. (Pearson (2003)) This comprehensive site is referred to by many other resource lists on plagiarism.

The aforementioned VAIL Faculty and Administrators Guide: Detection Tools and Methods, provides an evaluation of all online and stand-alone desktop tools and software, and includes the JISC ratings where available. Evaluations are detailed and cover items such as availability of a trial version, pricing, submission and results formats, scope of search, turnaround time, summary of reviews, comments, identified limitations and special features.

Renoir Gaither, University of Michigan and Gillis and Rockwell-Kincannon, Western Oregon University, provide a comparison of method, cost, availability of trial versions, and comments on the main services. Their reports are not as comprehensive as the VAIL guide.

3.3 Plagiarism detection services- features and evaluations

3.3.1 Turnitin.com (formerly Plagiarism.org) http://www.turnitin.com

Turnitin.com uses digital fingerprinting to match submitted papers against internet resources and them against an in-house database of previously submitted papers. The website provides online tutorials in the use of the service for both lecturers and students, with a free trial period of one month. According to Satterwhite and Gerein, Turnitin.com has the highest rate of detection amongst subscription detection tools. Papers can be submitted individually by either student or lecturer. All papers are archived for future checking – a feature which is particularly useful if copying of previous students’ papers is suspected.

Reports are provided within 24-48 hours and show similarities of the submitted text to other sources. However, reports need to be checked carefully as the software does not distinguish between correctly cited material and material that is plagiarised. Andy Dehnart (1999) submitted his own thesis through Turnitin.com, only to receive a report that the program considered the text to be plagiarised – it had detected a previously downloaded copy of the same thesis and reported that it had found a matching phrase, 8367 words long, and concluded that the document was plagiarised. The author was concerned that, if the examiner had submitted the thesis, and taken the report without checking the results fully, he could have failed his doctorate. He warns that ‘as educators begin to rely more on technology, hopefully they’ll realise that – at least for now – nothing can completely replace the watchful eye of human beings.’ Similar warnings about the use of Turnitin.com and similar services appear throughout the literature.
A free one-month trial of the software is available. Costs vary according to the commitment of the institution. Pricing information is not available through the website except by request for a quote. Groark, Obinger and Choa (2001) report that the company has developed a four-tier pricing structure based on institution requirements – ranging from subscriptions for individual instructors which provide for 100 originality reports for $US100 to large institutions receiving an unlimited number of originality reports for $US4000.

Aggressive marketing by its founder, James Barrie, has made Turnitin.com the foremost plagiarism detection service in the world. It is the preferred service in a large number of American high schools and universities, was chosen by the JISC as the detection tool for its centralised plagiarism detection service (see Section 5). CAVAL, in conjunction with ALDIS Associates, is marketing Turnitin.com to Australian universities. (See Section 4.1).

Plagiarism.org now serves as a resource site about online plagiarism. It provides information on prevention, detection and deterrence for both staff and students.

3.3.2 Plagiserve.com http://www.plagiserve.com
EduTie.com http://www.edutie.com

Plagiserve.com and EduTie.com were developed in the Ukraine by the same people and provide a similar service – there are links to EduTie.com from the Plagiserve.com site.

Plagiserve.com is a free service which searches the internet for duplicates of submitted papers, analyses them, and provides evidence of plagiarism to the lecturer. It has an extensive database of 90,000 papers, essays and CliffNotes study guides, and papers from all known paper mills. Reports are generated in 12 hours. The service is only available through its website, and papers must be submitted in one batch.

EduTie.com is a subscription service which has a three tier pricing structure - by individual license ($US150 for 200 manuscripts), departmental license ($US800 for unlimited manuscripts) or institutional license ($US1,400 for unlimited manuscripts). (VAIL (2000)) Submitted papers are tracked against online paper mills and a database of reportedly 250,000 academic papers. Special features include the ability to be integrated into online course delivery systems, customisation to institutional websites, and ability for administrators to monitor usage.

Concern has recently been expressed in the United States about a possible conflict of interest since the owners of the above companies also own a number of paper mills Bloomfield (2002), (Pearson (2003) and Young (2002)).

3.3.3 Glatt Plagiarism Screening Program (GPSP)
Glatt Plagiarism Self-Detection Program (GPSD)

Both the above services are hosted through http://www.plagiarism.com (not to be confused with www.plagiarism.org (see 3.3.1)).

The Screening Program (GPSP) evaluates a student’s knowledge of their own writing by producing a test whereby every fifth word of a student’s paper is eliminated and replaced with blanks which the student has to replace. Accuracy and speed in replacing the blanks is evaluated against a proprietary database, and a probability score returned immediately. Devlin (2002) states that the program costs approximately $580 AUD to purchase the software, with an additional financial commitment for a subscription to the Plagiarism Screening Service to provide the scoring for submitted tests. Useful for detecting plagiarism where the original source cannot be located through other sources such as
internet search engines and other plagiarism detection services, its limitations lie in not being able to identify the source of the suspect text and the requirement for students to sit a test.

Similar to the Screening Program, the Self-Detection Program (GPSD) is free if used online, or a Windows 95/98/NT version can be purchased for $US65. The Program has been designed to help students become more aware of their own writing styles, and they are required to submit their own papers. A disclaimer, or warning to students using the GPSD states:

*The Glatt Plagiarism Self-Detection Test provides a rough estimate that plagiarism has or has not occurred. Based on the percentage of correct answers, the test results are intended to be used to help you become aware of text which you may have inadvertently plagiarized.*

*Although it bears many similarities to the Glatt Plagiarism Screening Program which may be in effect at your school, it is NOT the same test. In particular, results on the Plagiarism Self-Detection Test are significantly less reliable and less valid. As a result, it is possible to pass (i.e. not be considered guilty of plagiarism) on the Plagiarism Self-Detection Test and fail (be considered guilty of plagiarism) on the Plagiarism Screening Test. Given the two tests, results from the Plagiarism Screening Program are far more accurate.*

3.3.4 CopyCatch Gold [http://www.copycatch.freeserve.co.uk](http://www.copycatch.freeserve.co.uk)

*(not to be confused with [www.copycatch.com](http://www.copycatch.com), listed in some evaluations and no longer available)*

CopyCatch Gold is stand-alone desktop software which can be either installed on a single PC or on a network. It detects collusion between students by checking similarities between words and phrases within work submitted by one group of students. The program allows the lecturer to set due dates for assignments, after which no papers can be submitted. Results, which are password controlled, are available after this due date. The Plagiarism Detection Software Group at the University of East London reported to their colleagues on the viability of the software in September 2002. Their report provided a detailed analysis of the functionality and usefulness of the software, based on tests with groups of students within the university. Cost to Australian institutions is approximately $700 for the software. One of the special features of CopyCatch is that it assists students in their writing development, by allowing them to see where they are repeating text from other sources and from their own previous assignments. The JISC gave CopyCatch Gold five stars for detection, clarity, value, user-friendliness, speed and reliability – the only product to do so. Its weakness is the inability to detect material downloaded from the web.


Eve2 is a windows based system, installed on individual workstations. It is not easily installed on servers. Papers are submitted by cutting and pasting plain text, Microsoft Word, or Word Perfect documents into a text box. The program then searches internet resources for matching text. Reports are provided within a few minutes, highlighting suspect text, and indicating the percentage of the paper that is plagiarised. Eve2 is available through individual or site licences. Downloads are free for 15 days, with the cost of an individual licence being $US19.99. Each user must purchase an individual licence. The software must only be used by the lecturer who owns the licence: it cannot be used by a lecturer from another class to check their students’ assignments. Identified limitations include the inability to trace documents that are not in html format, inability to trace collusion between students, the inability to search subscription websites.

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3.3.6 **WordCheck Keyword DP**  [http://www.wordchecksystems.com/wordcheck-dp.html](http://www.wordchecksystems.com/wordcheck-dp.html)

WordCheck Keyword DP is a software program which identifies key word use, and matches documents based on word use and frequency patterns. Reports showing key word profiles and word frequency lists are generated. Limitations of the program include the time-consuming manual checking of each document and the inability of the program to detect plagiarism from internet sources. Culwin and Lancaster (2001) consider that this system is more suitable for linguistic analysis of similar texts, or for comparison of two suspected similar texts. According to Devlin (2002) the academic price, in Australian dollars, for the Profiler Basic version is $115, and the Prof version $345. Profile capacity is able to be added from $380 for 2000 profiles to $2540 for 10000 profiles.

Wordcheck Keyword RA ([http://www.wordchecksystems.com/wordcheck-ra.html](http://www.wordchecksystems.com/wordcheck-ra.html)) works on the same principles as Keyword DP, but is aimed at academic research rather than undergraduate assignments.

### 3.4 Legal issues and implications

Foster (2002) mentions the issue of students’ copyrights being violated by plagiarism detection services, with specific mention of Turnitin.com, where all papers submitted are copied in their entirety to the services database. Copying may be done without the student’s permission or consent, raising the issue of possible invasion of privacy. Some universities in the United States have not subscribed to the service because of this potential problem, and advise Faculty members of the importance of notifying students that their works will be submitted to and retained by Turnitin.com. De Los Santos (2002) refutes these allegations, saying that students are asked for permission before their papers can be viewed by anyone other than themselves and their tutor. The author of the Bedford/ St Martins technical notes, expresses concern over the human ethics issue of using students’ works without permission, stating as an example the necessity of requesting permission to use students’ works in books.

JISC reports (Duggan (2003)) that since it is against European law for UK institutions to submit student data outside Europe, the database is housed in England, building up a database of student essays for future comparison. It might also be advisable to check Australian law regarding submission of student data outside the country.

Although this issue has not been raised in correspondence in Australian newspapers and journals, the University solicitors should be consulted as to copyright and intellectual property issues relating to the use of web based plagiarism detection tools, such as Turnitin.com, before any decision is made as to the use within the University of Sydney of such tools. The only mention of legal implications found was in a report about the Electronic Plagiarism seminar, conducted by CAVAL in October 2001, to members of the Edith Cowan University Learning and Development Services and other senior academic staff, which indicated that one of the strengths of Turnitin.com was that there appeared to ‘be strong legal support for both the use of detection software and retention of electronic copies’ (Millar (2002)).

### 3.5 Area and discipline usage

Plagiarism detection tools and software appear to be used across all disciplines in the humanities, social sciences, health sciences, science and technology. Articles on the use of the tools appear in journals relating to business studies, engineering, ancient history, medicine, biology, education, computer sciences, information technology, social work etc. CAVAL tested Turnitin.com against a
wide range of subject areas before making the decision to market the program to Australian universities.

3.6 Cost-benefit analysis

I was unable to locate any cost-benefit analysis of the use of plagiarism detection software. Fiona Duggan, JISC Plagiarism Detection Service Manager stated that their unique funding allowed them to be motivated by things other than cost savings. Their motivation in providing a centralised service was not to save money but to provide a useful tool for university staff in combating plagiarism.

3.7 Pros and cons in implementing the use of plagiarism detection tools within the University

3.7.1 Advantages

The use of plagiarism detection tools will signal to the students that plagiarism is taken seriously across the whole university. The likelihood that their assignments will be submitted to plagiarism detection services should deter students from committing blatant plagiarism and/or downloading of material from the web or the use of paper mills. There will need to be a continued effort by the university to provide students with more information about plagiarism – what it is, why it is not ethical, how to avoid it – as well as the penalties occurred when used. Evidence from Academic Board reviews (Phase One) indicates that not all staff and students are aware of either the Academic Board policy on Academic Honesty in Coursework, or of the implications for committing plagiarism. Some faculties provide information on the policy and on academic dishonesty/plagiarism on either their website or in student handbooks. (See Section 6).

Adelaide University is of the opinion that the use of plagiarism detection tools will ‘foster more originality in student work, increased sharing of ideas, and better critical thinking skills’. (McGowan (2002)).

3.7.2 Disadvantages

All the tools mentioned in the report require submissions to be in electronic format. Millar (2002) states that although approximately 25% of all student assignments within a university are submitted electronically, up to 99% are prepared electronically, so it is not unreasonable to expect students to submit their assignments electronically.

Whatever tool is chosen by use either by individual lecturer, department, Faculty, or the university, manual checking of the results is necessary to ascertain whether correctly cited material has been marked by the service as plagiarised text. This will add to the already high workload of academic staff, particularly in subjects with large class sizes.

A literature search of medical education journals indicates that a common problem amongst medical and allied health science students is the invention of people for case studies – eg inventing a baby for a childcare study. No plagiarism detection tool is going to detect academic dishonesty of this kind.
4 Australian universities and plagiarism detection software

4.1 CAVAL Collaborative Solutions

Following a project by the Victorian Vice-Chancellors Committee to discover the extent of plagiarism at six Victorian universities (CAVAL (2002)), during which Turnitin.com was trialled, CAVAL Collaborative Solutions established a consortium to install the software across collaborating institutions. Universities who did not join the foundation group are required to take a subscription through ALDIS Associates, who are the agent for Turnitin.com in Australia. (Maslen (2003). The subscription price is available through CAVAL.

4.2 Go8 universities

4.2.1 Australian National University

Annie Bartlett, Head of the Academic Skills and Learning Centre, states that the ANU does not have a university wide policy/implementation of plagiarism software. Faculties use a range of software – Turnitin.com, Google etc, with general success but occasional misses. The issue is currently being debated on the Unilearn network, a discussion network of academic skills advisors. (email dated 6 March 2003 to R.Symons).

4.2.2 Adelaide University

Adelaide University uses various methods to detect plagiarism. It will be trialling the use of detection software in each faculty during 2003. (Maslen (2003)). At a seminar on plagiarism held in October 2002, the use of Turnitin.com by CAVAL was mentioned. (McGowan (2002))

4.2.3 University of Melbourne

The University of Melbourne provides information about software solutions for detecting plagiarism through its website. Lecturers are advised to either use their own inhouse developed software or services such as Turnitin.com. It has stated its intent to use Turnitin.com to scan student assignments during 2003 (Maslen (2003) and Beaumont (2003)). It also intends to test software created by its final year software engineering students (Thorp (2003)).

4.2.4 Monash University

Monash University has developed, and is testing its own plagiarism detection software – PLAGUE and DAMOCLES. Links are provided through the PLAGUE Special Interest Group Plagiarism site to detection resources and services. Discussions took place in the Committee of Associate Deans Teaching on 21 November 2002 regarding the use of Turnitin.com. According to press reports, the university intends using Turnitin.com, and joining the CAVAL consortium. (Maslen (2003) and Beaumont (2003))

4.2.5 University of New South Wales

No information was available through the public website on the use of plagiarism detection software by the University of New South Wales. In an article about the purchase of Turnitin.com by UTS, Contractor (2003) states that along with Macquarie University, the University of New South Wales was one of two NSW universities that were considering the use of detection software to combat cheating amongst students.
4.2.6 **University of Queensland**

The University of Queensland Library provides information on avoiding, stopping and detecting plagiarism, with links to a number of plagiarism detection software and tools.

4.2.7 **University of Western Australia**

Web usage statistics from the University of Western Australia show that Turnitin.com was placed 37 on the list of the top sites visited by the university personnel during January 2003, with 284 hits.

4.3 **Other Australian universities**

4.3.1 A number of other Australian universities are considering testing plagiarism detection software programs such as Turnitin.com. These include Edith Cowan University, James Cook University, and the University of Tasmania.

4.3.2 Some of the universities that provide links to plagiarism detection software sites include Swinburne University, Griffith University, and Macquarie University.

4.3.3 Curtin University of Technology is developing and trialling plagiarism detection software systems, including Turnitin.com and Glatt Plagiarism Services. The Library provides links to a range of sites and services.

4.3.4 Web usage statistics for La Trobe University indicate that Turnitin.com had the eight highest number of hits in an unspecified period (information accessed 10 March 2003).

4.3.5 Murdoch University Academic Council Working Party to Review the Assessment Code reported the use of a plagiarism detection software by the School of Commerce, but did not indicate which service was used.

4.3.6 The University of Technology, Sydney recently voted to purchase a licence for Turnitin.com to allow academics to check suspect assignments university-wide. (Contractor (2003)).

5 **Joint Information Systems Committee (JISC) Plagiarism Advisory Service**

5.1 Funded by the Joint Information Systems Committee (JISC) and based at Northumbria University, the Plagiarism Advisory Service provides advice and guidance to institutions, academics and students on all aspects of plagiarism detection and prevention. A centrally provided detection service, using Turnitin.com is also available to publicly funded higher and further education institutions in the UK. Upon registering to use the service, institutions are provided with a password and information package about the service (Duggan (2003)). A number of institutions tested a wide range of plagiarism detection services before the final choice being made, with papers being presented at a workshop held in July 2001. JISC has access to ‘top-sliced funds for higher education’ for use in projects which support further and higher education in the use of information and communications technology whereas Australian universities are required to take out individual subscriptions or join consortiums such as CAVAL (Maslen (2003)).

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6 [http://online.northumbria.ac.uk/faculties/art/information_studies/Imri/Jiscpas/site/jiscpas.asp](http://online.northumbria.ac.uk/faculties/art/information_studies/Imri/Jiscpas/site/jiscpas.asp)
6 Knowledge, compliance, implementation of Academic Board policy on Academic Honesty (Plagiarism)

6.1 Information in this section of the report has been compiled from two main sources:

- Academic Board Faculty reviews of teaching, learning and research training (Phase One) 2001-2002 – records of meeting and final reports – responses to questions relating to the Academic Board policy on Academic Honesty (Plagiarism) in Coursework; and
- Faculty websites

6.2 Most faculties in the University provide links or information about the Academic Board policy Academic Honesty (Plagiarism) in coursework through Faculty handbooks, unit of study outlines and handbooks, and/or Faculty websites. The Faculty of Architecture and the Faculty of Economics and Business provide substantial information on plagiarism through the undergraduate students section of the website. Architecture have plagiarism as a menu item on the undergraduate home page, and Economics and Business include it in the Student Manual. Dentistry students receive copies of the policy as part of a professional ethics information package which includes ethics information from the NSW Dental Board.

6.3 In the ten faculties where the policy was specifically mentioned at Academic Board review visits the Review Teams found that talking about academic honesty, and the penalties for plagiarism, during the first lecture was a common means of disseminating information about the policy to undergraduate students. Staff received information through discussions, staff meetings, and emails, although some indicated a lack of knowledge about the policy.

6.4 Feedback from faculties during the review process indicated concern about detecting plagiarism in group work assignments, take home exams and research essays. Some staff expressed the opinion that in these cases there was no way of identifying academic dishonesty. Large class sizes present particular difficulties in detecting cheating, with cases reported to Academic Board Review Teams of students sitting each others exams and changing names on papers. RMIT has solved the former problem by requiring students to have photo-identity cards and proof of attendance at examinations (Maslen (2003)).

7 Conclusions

There are a wide range of plagiarism detection tools and software available to universities and other academic institutions. Of these Turnitin.com appears to be the most widely used, and has been chosen by JISC in the UK for its centrally provided plagiarism detection service, and by CAVAL Collaborative Solutions as the program to market to all Australian universities.

Although plagiarism detection tools provide an excellent service in detecting matching text between documents, care needs to be taken in their use. A noted fault of the online services, such as Turnitin.com, is the inability to distinguish correctly cited text from plagiarised text, necessitating human intervention before a paper is declared plagiarised. This may pose a problem, or a barrier, to implementing such a service university-wide, especially in faculties where large class sizes are seen as a reason for not checking students’ work carefully for plagiarism.

The very fact that students are notified of the intent to use plagiarism detection tools to check assignments acts as a deterrent. However, information on the definition of plagiarism and how to avoid it should be made available to all students. The Faculty of Architecture and the Faculty of Economics and Business websites are good examples of how this might be achieved.
Knowledge of the Academic Board policy *Academic Honesty (Plagiarism) in Coursework* needs to be disseminated more widely to both staff and students, and constantly mentioned throughout a student’s academic career. In particular the penalties for cheating should be reinforced.

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## Comparison of Plagiarism Software Features

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<th>Glatt (GPSP)</th>
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<th>PlagiServe</th>
<th>Word Check DP</th>
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This table is from *Plagiarism detection software: How effective is it?* (Devlin 2002) page 6
The following tables provide a summary of the evaluation by the CAA Centre at the University of Luton of plagiarism detection products. This evaluation was carried out on behalf of the JISC. The tables are on page one of the report *Detection Technology* presented at the JISC plagiarism detection workshop (CAA 2001). Evaluations for Findsame.com, which are included in the report, have been omitted from the following tables as it is no longer available.

Key to ratings: Excellent ***** Good **** Acceptable *** Poor ** Unsatisfactory *

Table 1: Overall results from user perspective

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<th>Products</th>
<th>Function</th>
<th>Detection/ Performance</th>
<th>Clarity of reports</th>
<th>Value for money for single user</th>
<th>Overall feel/ user friendliness</th>
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<td>Collusion</td>
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Table 2: Overall results from technical review

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<th>Products</th>
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<th>Suitability for mass distribution</th>
<th>Pricing per institution</th>
<th>Stability of vendor</th>
<th>Speed of response</th>
<th>Technical support</th>
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</table>
**Appendix Three**

**List of available plagiarism detection tools and software**

*NB: this is only a selection of available plagiarism detection tools and software. More are being developed daily, and some of the following may have become defunct since I compiled this list. It is a fluctuating market. The list is in alphabetical order.*

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