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Word processors in secondary English : A survey and discussion of usage in West Australian high schools

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**WORD PROCESSORS IN SECONDARY ENGLISH: A SURVEY
AND DISCUSSION OF USAGE IN WEST AUSTRALIAN HIGH
SCHOOLS**

BY

Stuart D. Hakeney B.A.

A Thesis Submitted in Partial Fulfilment of the
Requirements for the Award of

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USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

ABSTRACT

The word processor would seem to have many positive applications to student writing in the English classroom. Writers working in the field (Chandler, 1987; Jenkins, 1989; Snyder, 1994) all agree that whether the technology is used as an editing aid to help poor hand writers and weak spellers get through the "grind" of writing, or as a dynamic tool which can be used as a new and exciting way of making meaning, its usefulness in subject English should not be overlooked. However, initial inquiries undertaken as part of this study, suggested that word processing technology had been largely ignored in West Australian government high schools.

The aim of this Honours Thesis was to investigate the theoretical and practical issues that surround the use of word processors in secondary English classrooms. The goals of the research were: to establish a theoretically based rationale for the use of word processors in subject English; to assess the level of usage of the technology in West Australian secondary schools; and to consider the educational and social implications of this use or non-use.

These research objectives have been met in two ways: through a critical discussion of the relevant literature on the subject, and through a survey of actual usage. The critical discussion draws upon current theoretical knowledge in the areas of writing pedagogy, literacy practices, and the discipline of English, to develop a rationale for the use of word processors. The survey of usage has provided information from 55 secondary schools (160 received questionnaires) throughout the state, with detailed observation and interviews carried out in two government and two non-government schools. This approach was employed to allow the large body of literature on word processors in English to be considered in the West Australian context.

In summary, the study confirmed that word processor usage in West Australian English classrooms is minimal. The study also confirmed that there are systematic differences in the experiences of state and private schools in their use of word processors in English.

The thesis provides those interested parties working in the area with a much needed overview of the extent to which word processors are being exploited in English in West Australian high schools.

DECLARATION

I certify that this thesis does not incorporate without my acknowledgement any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature: .

Date: 4/12/95

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CHAPTER ONE

INTRODUCTION

Background to the Study

Much has been written over the last decade about the effects of word processing on students' writing. Overall, the literature supports the word processor as a valuable aid to English students, as they continue to "slog" with pen and paper in what is now regarded as "The Information Age".

For most teachers, the word processor is to writing what the remote control is to watching television: it simply makes the process *physically* easier. Major and Stapleton (1985, p. 46) remind teachers that "the processes of writing - rehearsing, brainstorming, drafting, conferencing, revising, publishing - are the focus of what students do and that the computers are used simply as an aide in moving through these processes."

More recently, however, word processors have been considered as "providing the means by which thoughts, ideas and concepts can be

formed, shaped and developed in ways never possible with pen and paper" (Snyder, cited in Wild, 1994, p. 169). This perspective challenges early theories about writing which envisage a linear progression through distinct stages, such as the Process model offered by Walshe (1979), in which writers move through the stages of Prewriting, Drafting and Rewriting. Rather, the model proposed by Murray (cited in Education Department of South Australia, 1986, p. 12), with its emphasis on the writing process being a recursive one, would seem to Snyder the obvious reason why writing and the word processor go hand in hand. Whilst not referring to Murray's work specifically, Snyder implies his model when she suggests "writing theory and research informed us that the stages of the writing process are not discrete and that writers move in and out of them in complex, recursive patterns" (cited in Wild, 1994, p. 170).

If we do accept, then, that such models better explain the complex process of writing, and that the word processor might be a "way in" for students to exploit that process, how has Subject English responded to this new challenge? After all, as Snyder recognises, "computers may be

used to support different pedagogies and social practices; they can be used for change or to retain the way things have always been" (cited in Wild, 1994, p. 166). She goes on to highlight that it is the responsibility of the educational stakeholders - classroom teachers, curriculum planners, school administrators and educational policy makers to decide just how, if at all, the word processor is used in the English setting.

Given that such powerful theoretical and practical reasons for introducing word processors into subject English have been written about for over ten years now, we would expect to see the technology mentioned in the latest curriculum documents. The English Student Outcome Statements (Education Department of Western Australia, 1994), released as a working edition in 1994, should indicate whether or not writing with a word processor is a skill we think young West Australians should acquire as they move through levels one to eight.

A brief analysis of the document suggests word processing is being paid little more than "lip service". At level one, under outcome 1.4., the

student should "produce written symbols with the intention of conveying an idea or message" (p. 3), with the example given of using word processors to produce written messages. A reference to the word processor at such an early stage of the Outcome Statements might cause one to anticipate an increasing acknowledgement of the technology through the other seven levels. However, it is referred to only one more time in the Outcome Statements and Pointers, when at level six under the outcome "Revises own writing for meaning and effectiveness" (p. 36), the final pointer suggests using "strategies to improve sequence and coherence in writing (cut and paste paragraphs either manually or on a word processor)."

In the Work Samples contained in the Outcome statements, the word processor is mentioned twice, referring to "readability" (p. 56) and "Needs of readers" (p. 57). Nowhere is the word processor mentioned as actually contributing to or affecting the meaning making process. One must inevitably ask the question then: if teachers are using this document as a guideline to student outcomes (and thus their own accountability in an already too stressful job) will they invest the time

and effort needed to introduce the word processor into students' writing when it is not a "legal" requirement? It must be acknowledged that in a devolved system of education (which is reflected in the very concept of "outcome statements" as opposed to teaching strategies), it will ultimately be the decision of individual schools, English departments and teachers (and perhaps parents) who decide whether the word processor will be synonymous with writing. The Education Department may not consider itself a "speaker" in the debate!

With these considerations in mind, this study explores the level of use of word processors in Subject English in West Australian high schools. It also provides information about the experiences of teachers and students in both state and private word processing English classrooms.

Purpose of the Study

The purpose of this study has been to describe the extent to which word processors are currently being used in subject English in West Australian high schools (government and independent), and how their use relates to current notions of literacy and the role of subject English. It also documents teacher and student attitudes to the use of word processors in English, and investigates the problems associated with their implementation. Finally, the study attempts to describe how "successful" word processing English departments have overcome these problems, with reference to some of the positive results reported by teachers in relation to their word processing English lessons.

The study considered a range of questions such as: what implications does the technology have for our beliefs about language acquisition, literacy, writing and indeed English education? what material factors affect the efficient use of word processors in English? and finally (by interviewing teachers and students using and not using word processors in English), why, why not and how are word processors being used in English classrooms today?

It was not the aim of this project to undertake an intensive study of writing theory and pedagogy, but to develop a broader picture of overall degrees and patterns of word processor usage - though some reference is made to theories of writing and practices of instruction in developing a framework for discussing the role of word processors in the English classroom.

I hope that this theoretical discussion and field study will give teachers an opportunity to consider the issues related to the use of word processors in English at a time when, increasingly, they are the ones making the decisions about *how* students achieve educational outcomes.

Significance of the Study

Because Western Australian government school policy in English is only now starting to recognise the clear advantages of word processing for students' writing, it has been the teacher who has had to make the decisions about whether or not the technology should be used. Given that the literature recommending the use of word processing in English (Chandler, 1983; Crump, 1988; Dennett, 1987; Jenkins, 1989; Snyder, 1987) may not be easily accessible to English teachers, as well as the fact that school department budgets are already stretched to extremes, we are not likely to see a great increase in the number of government school English departments incorporating word processing into the writing component of their English programs for some time.

However, other educational bodies responsible for English policy - both in Western Australia and in other states - appear to be exploiting the potential that word processing offers their student writers. Initial inquiries undertaken as part of this study suggested that independent schools were embracing word processors in English, and the Education Department of South Australia stated in their handbook on writing

almost a decade ago, that "English teachers must take time to discover the usefulness of the computer for themselves and their students in the writing process" (1986, p. 37).

It is proposed, then, by this author, that the English departments of West Australian government schools might be in danger of being left behind by other educational bodies in relation to word processing and English. The consequences of this "gap" are obvious, considering the emphasis government and industry employers are now placing on the need for a computer-literate workforce.

This study wished to determine, initially, to what extent there was a gap between different educational institutions in their attitudes to using word processors in English. Once this was established, it wanted to explore the reasons for this gap and search for more detailed information about the issues relating to the use of word processors in English by interviewing teachers and students in four metropolitan high schools.

As there is an absence of research information relating to levels of usage of word processors in West Australian high schools, the significance of this thesis is that it attempts to fill this information gap. This should allow the stakeholders of English education in West Australian schools to make informed decisions about whether changes need to be made to current attitudes and policy - both centrally and at the school-based level.

Questions about how classroom practice is affected by the introduction of word processors into English, and which teaching strategies best accommodate the technology, may be taken up by further studies working in this area. It is the intention of this study simply to highlight the importance of the literature supporting the use of word processors in English, and to describe how West Australian high schools, generally, have embraced its recommendations. Such factors are stated in the following research questions which the study aims to answer.

Research Questions

1. What is the level of use of word processors in English in West Australian high schools?
2. In general, how are word processors being used in English lessons?
3. Are there systematic differences in the level of use of word processing technology in state and private school systems? If so, what factors seem to account for this?
4. What are the attitudes of teachers and students to the use of word processors in English?
5. What practical problems impact upon the use of word processors in English lessons?
6. What have "successful" schools done to overcome the practical problems of using word processors in English?
7. What results have "successful" schools obtained in relation to the use of word processors in English?

Theoretical Framework

This study utilises a theoretical framework that accommodates a range of influences on the successful implementation of word processing in Subject English.

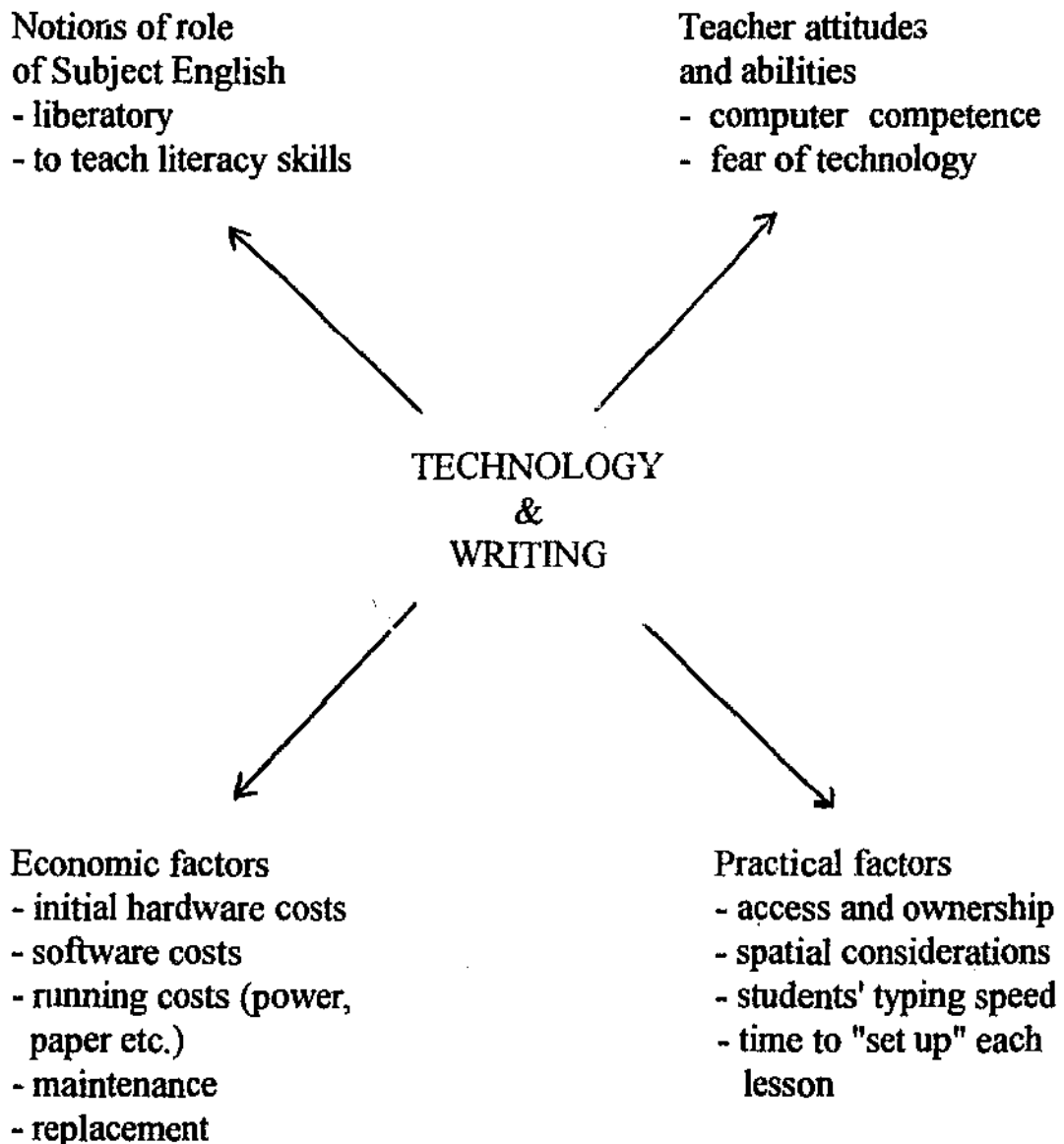


Fig.1: Theoretical Framework

The theoretical framework highlights four interacting influences on the use of word processors in English. Such pedagogical, attitudinal and practical factors need to be taken into consideration when evaluating the level of use of the technology in English:

1. Notions of the role and function of subject English.

Before word processing can take its place as an important writing skill which our students should possess, teachers have to agree that one of the functions of subject English is to keep abreast of the most contemporary notions of what literacy means today. The word processor is a challenge to the traditional "pen and paper" mode of writing, and we need to acknowledge its place as one of the most recent and important literacy skills.

2. The attitudes and abilities of English teachers.

Teacher attitudes and abilities will also determine the extent to which word processors are included in the writing components of English programs. Many teachers may not get past the "mental block" that computers cause, and their fear of the technology will

often cause them to avoid it where possible. As such, there may not be the same "push" for computers in the English department as there might be for new texts and other materials traditionally sought by teachers when discussing school budgets.

3. Economic factors.

Fig. 1 also recognises the obvious financial constraints which affect the implementation of word processors into English programs. It is no surprise that initial investigations as part of this study suggested that wealthy independent schools appeared to find it much easier to make use of the technology due to larger budgets. Whilst most high schools would have a computer laboratory which all subject teachers can gain access to for their students, subject English, being a core subject, may require its own computer classroom. The financial outlay to set up such a facility would stretch most English department budgets.

4. Practical factors.

The theoretical framework also takes account of the many practical problems which affect the implementation of word processing in subject English. Issues of access and ownership for English departments are crucial in determining how easily word processing writing programs can be set up. In addition, spatial considerations (the physical layout of the room) and the time needed to mobilise a class for a word processing writing lesson, are important practical factors to take account of.

CHAPTER TWO

LITERATURE REVIEW

This literature review canvasses arguments about the use of word processing technology in subject English. It refers to the key figures working in the area of word processing and writing literacy, and goes on to discuss the practical problems associated with the implementation of word processors into English classrooms. Reference is also made to a recent Australian study which attempted to describe general patterns of computer usage in secondary English.

Word Processors and Writing Literacy

As computers and word processing software have developed over the past decade, so too have people's perceptions about how the technology impacts upon notions of writing literacy. Snyder implies this development when she writes:

To many teachers, word processors are still instruments through which writing may be stored, slightly amended and printed; to others, word processing provides the means by which thoughts, ideas and concepts can be formed, shaped and developed in ways never before possible with pen and paper.

(1994, p. 169)

Indeed, contemporary notions of writing literacy appear to acknowledge that such processes as drafting and editing need to be reappraised in the light of the new technology. However, whether word processors are used as "fancy typewriters" to produce neat final copies of students' work, or throughout all stages of the writing process, all writers would appear to agree that there are sound educational and social reasons for their inclusion in English programs.

This discussion will not enter into debates about writing theory and pedagogy, but does make the assumption that a commitment to "process" writing is now part of the pedagogy. As such, the writer will refer to such processes as "prewriting", "drafting", "revising" and "editing" in the knowledge that all English teachers would consider

these as fundamental parts of the composing act. Whilst arguments about how the process of writing might best be conceived of are relevant to the implementation of word processing in subject English, it is the purpose of this discussion to establish the fact that however students acquire writing literacy competency in 1995, they should be given the opportunity to do so on word processors.

At the most basic level, the reason word processors have a place in contemporary notions of literacy is because they are becoming the standard writing technology in Western societies. It has to be acknowledged that social practices and technologies play a large part in shaping literacy, and the word processor is a prime example of how this is occurring today. If we agree that one of the functions of subject English is to transmit a particular set of literacy skills to students, and being a competent user of word processors is one such skill, then we have a social responsibility to incorporate the technology into our English programs.

It may be argued by some English teachers and writers that in fact word processing is not a skill that should be taught in their subject, and that it is nothing more than an electronic "gimmick" which will eventually be forgotten. Admittedly, the majority of writing done in English classrooms today is still carried out with pen and paper, and due to obvious financial and practical constraints this will continue to be the case for some time. However, the latest "position statement" made by *The Australian Association for the Teaching of English* openly acknowledges the importance of word processors when it states that students should have "access to computers for drafting, editing and publishing" (1995, p. 4). Later in the document, when expanding on this idea of computers for writing, the document lists "the resources needed to promote development in literacy, language and communication skills" (p. 5). Included in the list are "computer software and hardware with access to digital information systems" (p. 5). Without question, the word processor is very much on the agenda for professional English teachers wishing to keep abreast of the changes that are occurring in their subject.

Whilst all of the literature discussing the use of word processing in English does see real advantages to it, just *how* the new technology will be used is not always agreed on. Williams (1987, p. 30) warns us that "computers should not be used if cheaper and more effective methods are available". He goes on to argue that the computer is a means of achieving curriculum goals, but should not be the driving force behind the curriculum itself.

Williams, then, sees the word processor as a tool which helps students achieve more quickly what would normally be done with pen and paper. At the pre-writing phase, Williams sees the computer as being a great motivator, whilst at the drafting and redrafting stages, he highlights the fact that correcting errors is quick and simple. Williams also suggests that "because students are concentrating only on errors in the redraft/editing stages, their own consciousness of making mistakes is being raised as they move the cursor to the point of error and correct the mistake" (p. 34). Advantages to using the word processor at the post writing stage, according to Williams, include the way "children are highly stimulated by the sophisticated images on the screen" (p. 35)

and the visually stimulating printed product which is so important for the audience.

With the advent of "window" applications now exploited by most word processing programs, the implications for planning and drafting work mean that Williams' observations merely scratch the surface of the usefulness of the technology. Given access to such resources, students could have several documents open at the same time - each one containing a store of quotes or information relevant to their running draft copies. Because of the "neatness" of such programs, students would perhaps be more inclined to conceive of the writing process as a recursive one, being prepared to go back and collect information, adding it to a resource file, rather than being focused only on the writing of the latest draft.

Williams' reservations about the use of word processors in English stem mainly from his concern that it could be the novelty of the computer which improves writing - not the electronic process of writing itself (p. 35). However, personal computers are much more

mainstream now than when Williams was writing in 1987. Given that a large proportion of students' assignments are done on word processors at home, it could be argued that computers are no longer "novelty items" in the eyes of students. In fact, pen and paper, to many students, may seem awkward and cumbersome after composing on a word processor. It might be that schools are, in effect "behind the times" in terms of what students perceive to be the dominant medium for achieving writing literacy.

Arguments such as this draw attention to how writing literacy is perceived in this information age. Jenkins (1989) asserts that, as in Homer's time when a shift was occurring from oral to literate ways of making meaning (from sounds to words on a page), we are now seeing a shift from 'literate' to 'viderate' ways of making meaning in the way young people make sense of the world around them (p. 72). This is in response to the huge influence the visual media now have on children since the introduction of televisions, videos and computers into many homes. One only has to watch any one of the majority of contemporary music videos on television to appreciate the fact that

young performers today rely as much on the rapid barrage of symbolic visual images to transmit their messages as they do on the song lyrics themselves. We have to acknowledge that this voracious appetite for high-speed information is a product of our move towards more sophisticated methods of communication.

Jenkins argues that it is the video tube, with all its possibilities of freeze-framing, rewinding, fast-forwarding and frame-by-frame searching that is causing people to change their meaning-making practices. The word processing monitor, with feature such as blocking, moving, deleting, inserting and window splitting can be likened to video images on a television screen, in that it challenges how we perceive of and think about notions of time, space and relationships between ideas. According to Jenkins, if we are to process this new kind of information with speed and efficiency, we need to be "viderate" rather than literate.

Jenkins' theory of how the word processing screen changes the way we make meaning appears to suggest that the technology itself is causing

social change. However, the issues might be somewhat more complex than Jenkins implies. It is surely the social practices of a given community which bring about changes and developments in technology. People's meaning-making practices might well be changing (as they always will), but this is probably due to a whole range of factors related to how we are evolving as human beings. The video tube is a product of our appetite for "electronic information". It is an example of the way in which we are able to absorb information in the late twentieth century. However, it is not "causing" a change in meaning-making practices.

In putting forward an argument for the use of computers generally in English education (particularly with the new interest that hypertext approaches to reading texts are creating) Snyder (1994, p. 169) warns that literacy teachers "cannot afford a Luddite evasion of a technology which is integral to students' literacy development and futures." It is not enough then, for Snyder, to simply acknowledge the computer as a useful "aid" in classrooms. She challenges teachers to reflect on what

they perceive literacy to be today, and whether those perceptions are still "valid" in a world now driven by information technology.

Creely (1994, p. 57) also picks up on this idea of a new age of literacy by proposing that the word processor does not necessarily replace traditional notions of literacy, but rather provides an alternative. He writes that "the grammar of the screen, for example, should be treated as a different literacy and students instructed in this literacy alongside the literacy of the printed page." This rather "non confrontational" view of the place of word processors in writing instruction might be somewhat more attractive to those who see the technology as a threat not only to subject English, but also to their place within it.

I would argue that unless debates surrounding the technology's use are linked to notions of writing or reading literacy (and are therefore considered "important" discussions) the word processor will achieve the status equal to that of its "distant relative" the overhead projector - and as such will remain in the depths of English department

storerooms, gathering cobwebs because it is not worth the effort to "set up and plug in".

Snyder (1987, p. 7) puts forward a strong argument for the usefulness of word processors in relation to writing literacy by suggesting that the technology is entirely compatible with the recursive nature of the writing process. She argues that "if we view composing as the writer's search for meaning by shifting back and forth in the text before reaching a final form, then the computer seems to be the ideal tool to aid this process."

Whilst writing may be discussed by referring to "stages" of the writing process, this idea of "recursiveness" takes account of the fact that often writing does not occur as a linear progression. Rather, we move from one process to the other and back again in accordance with the direction our thought processes take and how our texts are shaped.

Snyder (1994, p. 170) also points out that "notions of the draft and drafting change when texts are computer-generated." She questions

whether a draft is what is last saved on the screen, or whether the hard copy at the end of the day is the draft. Snyder also asks whether students need to produce a series of draft copies throughout the production process, or whether such "rules" are not relevant when working "in the context of fluid, continuously altering, computer-mediated writing" (p. 170). Of course, such questions open up the possibilities for teachers to use the technology in whatever ways are appropriate for students, classes and particular pieces of work. In some cases, the teacher might require a hard copy of writing to be handed in so that she can check student progress. In other cases, perhaps with upper school students working on long-term projects, she might simply wish to take home a student's floppy disk to give formative feedback.

Word processors offer useful and time-saving ways for teachers to give feedback to students. If some communication between teachers and students were to be carried out via floppy disk, teachers might wish to store a range of extended "models" of writing on their own computer hard-drives, and copy appropriate ones onto the students' floppy disks as necessary. For example, models of descriptive writing (which

students normally gain by reading published authors) might be given to them as "raw" text on the floppy disk, allowing them to compare such models with their own work. Such ideas might allow teachers to make better use of their marking time, which is often described as "limited" in a subject which (ideally) involves so much writing.

It should be stressed of course that these ideas about the value of word processors in writing literacy are somewhat speculative since the technology is still in its infancy as far as subject English is concerned, and there has been little research done in the area. However, ideas such as these highlight the fact there is a need to explore what the potential value of the word processor might be in relation to classroom practice, and what changes teachers may have to make to best accommodate the technology into their subject.

Dowling (1994, p. 146) also raises the issue of how the linearity of writing with pen and paper changes with electronic writing by suggesting that "with the advent of word processing, the balance between process and product in the act of writing changed, allowing

the written word itself to participate fully and flexibly in the recursive process of text creation."

Such comments remind us that writing with a computer cannot be *only* a "glossier" way of handwriting. It must be the teacher's decision to use the technology in such a way. Indeed this idea of "teacher involvement" is an important part of how the technology will influence what literacy skills are taught in the future. As Tuman (1994, p. 24) argues, "the appeal of technology . . . in educating students without teachers is as vacuous and as seductive as is the latest gadget or pill that promises to let us lose weight without dieting or exercise." Tuman's remarks remind those who perceive the technology as a replacement for teacher instruction, that not only will teachers be the ones responsible for how the technology is used in relation to writing, but also that they will need to be as active as ever to make sure students are using word processors to their potential.

Questions of how the technology is compatible with writing are not only tied up with how the word processor relates to the thinking and

writing process, but also with how the computer relates to subject English. Creely (1994, p. 50) predicts that teachers will want to ask such questions as "Is the role of the secondary English teacher to be involved in computer literacy?" Arguments such as these stem from what we think the nature and function of subject English is. Chandler (1987, p. 17) is concerned about word processors "being part of the transformation of schools, which are becoming *child processors*", and Grice (1987) makes a universal plea that "computers should be used in ways that are humanising rather than isolating" (p. 42). Such fears conceive of the word processor as a dangerous enemy not to be trusted, rather than as an exciting new tool which might open up the possibilities for students' writing.

The relationship between English and technology, then, is for many teachers an uncomfortable one. The successful implementation of word processing in subject English challenges many of the traditional ideas about what English is aiming to do. However, if English teachers maintain that literacy is very much part of "their" domain, and if in 1995 one important literacy skill is being able to use a word processor

effectively, then by default the technology *will* find its place in the English setting.

Literature on Usage

Due to the fact that word processors are only now being recognised by the majority of English teachers as valuable writing tools for their students, there is an absence of research material available on overall patterns of usage. Word processing is still regarded as a "novel" way for students to compose in schools. Naturally, as computers continue to reduce in price and schools purchase more hardware, we are likely to see more word processing English classrooms in high schools, and therefore more of an interest taken by researchers into how the technology is finding its place within subject English.

However, a recent national survey of the use of computers in relation to subject English by Peel and Hargreaves (summarised in Durrant and Hargreaves, 1994) reveals some of the practical problems experienced by teachers in attempting to use word processors in their classrooms. It also reveals how, on a national level, the technology is mainly being

exploited by English teachers. Whilst Durrant and Hargreaves make the introductory point that "few English teachers have raised their sights above the horizon of word processing", the way in which the survey targeted English teachers might cause us to doubt whether in fact the majority of teachers have seriously considered the use of word processors in English at all.

The survey was distributed with an English in Australia mail-out. Hence respondents were more than likely to be those that either had an interest in the area, or had some "useful" data to feed back to the researchers. Whilst impressive statistics highlight the fact that 64% of respondents came from state high schools and 36% from the private system, and a balance of 60/40 was achieved in relation to metropolitan and country schools respectively; no figures are provided on the number of schools or teachers who did respond. Furthermore, the article does not tell us what proportion of respondents came from the various states. On these grounds, whilst the survey certainly raises the issues surrounding the use of computers in subject English (and is

therefore a useful piece of research to review) just how accurate a picture it paints of the national scene is somewhat doubtful.

Many of the survey questions in Peel and Hargreaves' study dealt with teacher attitudes to, and experiences with, computers - not just word processors. For example 64% of respondents stated they felt anxious or uncertain about coping with computer malfunctions. This highlights one area of computer use in English that will have to be addressed if word processing is to become an integral part of writing programs. In-service courses on both computers (at a basic level) and more importantly software applications (by far the most common of "computer" problems) will be needed to allow teachers to use the technology in their programs with confidence - technical difficulties can be both time consuming and frustrating.

The survey revealed that 93% of respondents agreed computers are useful tools in English, with 99% agreeing that all students should learn to use a word processor. Whilst these figures do not "add up" mathematically (unless "using a word processor" is not specifically

related to English), it is clear that word processing is the dominant computer use by all respondents in this survey.

One of the problems writers highlight in relation to teachers' access to word processors for English lessons (Dennett, 1987; Meiers, 1987) is that in most schools mathematics, science and computer departments are the rightful "owners" of computers and the makers of decisions relating to their use in secondary schools. Peel and Hargreaves' survey backs up this claim seven years later by exposing that 48% of the respondents still considered this to be the case in their schools, whilst 63% indicated that there was only some or no access to computers for English teachers.

One of the most impressive statistics presented in the article is the statistic revealing that 84% of respondents used computers for word processing in their English teaching. As Durrant acknowledges, however, in writing the editorial for the English in Australia (1995) in which the results from this survey appear, "the sample was not large enough to make any unequivocal claims about the use of computers in

Australian secondary English classrooms" (p. 3). As such, all that can be generalised from the statistic is that of those teachers who do appear to be using computers in their English lessons, the majority of them are using the technology for word processing. We still cannot estimate to any degree the percentage of English teachers using word processors in English.

It appears that computers, whilst used in some way by most of the respondents in the survey, are not dominating class time. Of the total time spent in English, 91% of respondents stated that students would spend less than 20% working with computers. Of course given that access to computers for most English classes would involve teachers booking rooms or terminals, it is hardly surprising that at this time "computers in English" are, for the most part, still a "novel" experience for students. I would argue that because of financial constraints, most government school English departments would still be limited to taking students into other department to allow them reasonable access to terminals.

Peel and Hargreaves' survey findings, then, whilst not providing information which allows us to generalise as to the overall use of computers in English, does reveal the domination word processing software has in the technology's use. However, much more needs to be done to determine exactly *how* and to what extent word processors are being used by English teachers. Such questions as whether or not word processors are used throughout the entire production process, or as mere typewriters to produce "neat" copies of final drafts are the intention of this proposed WA study, and will provide a response to Durrant and Hargreaves' assertion that indeed generally, teachers' sights have reached the horizon of word processing.

Some of the more common practical problems associated with the implementation of computers into English are well summarised by Dennett (1987, p. 63) when she links many of these problems to the fact that most departments do not have policy in place with regards to the technology. Dennett discusses the obvious need to secure access and ownership of computers for English departments, and to ensure that teachers are competent in the use of computers. She also highlights

the need to make sure students are given the opportunity to practise their keyboarding skills to give them confidence at the computer, and to avoid "bottlenecks" in the system through slow typists.

Another possible problem area for the effective use of computers in English is that of hardware and software purchase. Dennett (p. 68) suggests that if teachers are to embrace computers into their classrooms, they should be given the opportunity to buy the hardware and software which best serves the needs of their students in writing classes.

Conclusion

Clearly then, word processing is an issue in subject English. Most writers working in the field agree that whilst the technology offers many advantages to the writing classroom, teachers need to reflect on how they conceive of writing literacy in such an environment, if students are to use word processor to their full potential. With such issues at the forefront of discussions concerning the technology's use in English, many of the perceived practical and financial problems might be overcome.

CHAPTER THREE

METHODOLOGY

Design

This study can best be described as a general survey and field study in the light of certain assumptions about technology and the teaching of writing. Its aim was simply to describe the general state of things in relation to word processors in English in Western Australia, and to discuss how the attitudes and experiences of teachers and students reflect what the literature reveals about the topic.

The design of the study is represented in figure 2. below:

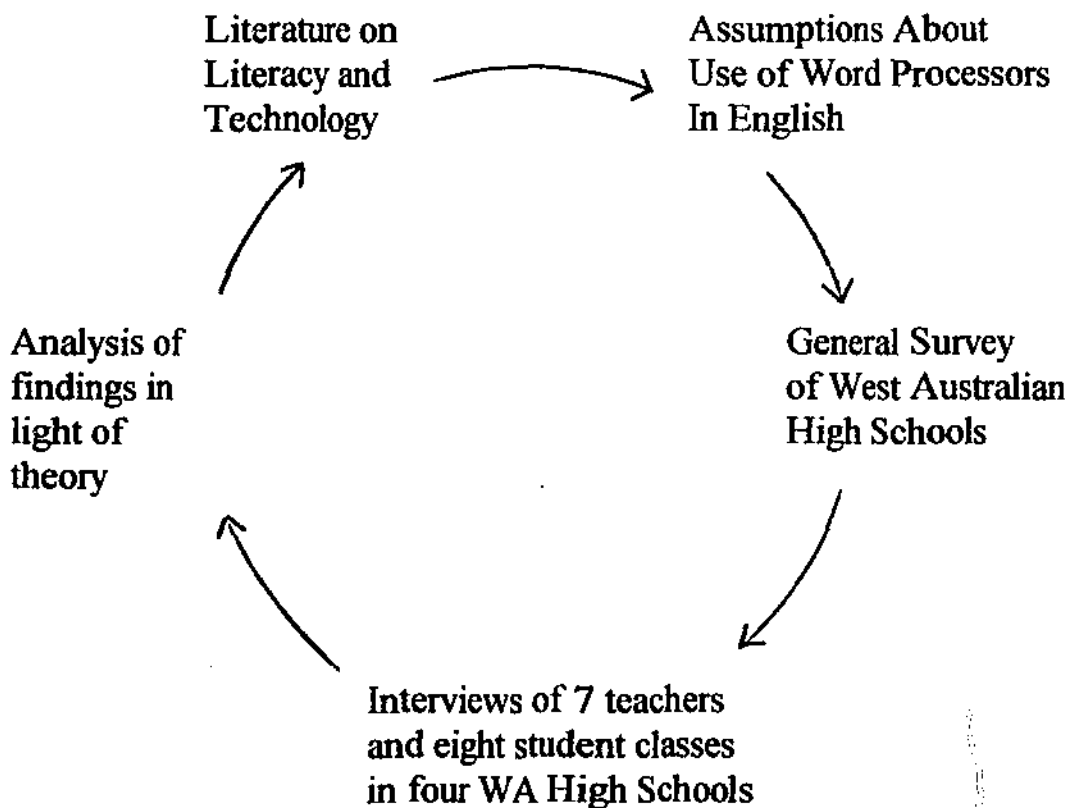


Fig.2: Design of Study

As the illustration shows, the information-gathering part of the design is split up into two distinct yet related sections. The initial survey, which took the form of a questionnaire sent to 160 West Australian secondary-English departments, was used to paint the "big picture" of word processing in English as it stands now. Whilst the survey was not a prerequisite for the actual field study, which involved interviewing a total of seven teachers and collecting written responses from students in four schools, it did help to shape and direct the study as the information came in from the English departments selected to receive questionnaires.

Whilst the initial plan was to interview eight teachers in relation to their word-processing-in-English experiences, only seven teachers were used in the study. Because one school withdrew from the study at late notice, an alternative school had to be located quickly to keep to the set timeline. Unfortunately, although the head of department at the new school supplied two teachers for the research, only one of them proved to be in a position to provide any worthwhile data.

Analysis and Discussion

The analysis section of the design hoped to not only compare theory with practice, but also to add to the theory and reveal any gaps which suggest further research is necessary.

Although the general survey and field study used techniques of surveying, questionnaires and interviews, the types of information sought by the researcher were in effect only "surface data". They did not require sophisticated techniques of interpretation aimed at drawing out "hidden" agendas. Analysis of this data was performed using simple counting techniques and tabulations of percentages. The categories drawn out of the interview notes were, to a large extent, predetermined by the questionnaires.

In the same way, the information generated by the state-wide survey fell neatly into pre-set categories because of the nature of the "tick the box" survey. Again, it should be stressed that the purpose of the field study and survey was to gain a general picture of the experiences and attitudes of English departments, teachers and students with respect to

this relatively “unresearched” area of English education in Western Australia.

The tables presented in the Results section of the thesis are accompanied by a brief discussion, in order to make clear what the tables represent and how the researcher interpreted the results. This analysis is expanded upon later in the discussion section of the thesis, where the author comments on the significance of the findings in light of the recommendations made by the large body of literature on word processing in English. This gives the author the opportunity to determine whether the theory included in the literature review is being acted upon in the real world of the English classroom.

The Sample

The schools chosen for the survey were selected on the basis of student populations. All those schools with a population in yrs 8 - 12 of 100 students or above were targeted. The sample chosen for the survey (see Appendix 1) was made up of 81 senior high schools, 2 community

colleges, 2 senior campuses, 2 senior colleges, 2 high schools and 14 district high schools.

In addition to these schools, 57 non-government schools were targeted to receive the questionnaire. They included 31 Catholic colleges and 26 Anglican or independent schools. A full list of all schools selected for the survey appears as Appendix 1 of this document.

The field study part of the research took place in two government and two non-government metropolitan secondary schools. The criteria on which the selection of schools was based was simply how best they were likely to provide answers to the research questions listed earlier in this proposal.

Instruments

The initial survey (see Appendix 2) which was sent to 160 schools throughout Western Australia was designed to gain a general overview of the way in which word processors are being used by English teachers. It was designed so that it could be completed by the head of department during a staff meeting when all teachers had the

opportunity to describe how - if at all, they were using word processors in English.

Two main instruments were used for the field study: an interview question sheet for teachers (see Appendix 3) and a separate written question sheet for students (see Appendix 4).

Whilst the instruments created for the field study appear to be restrictive in the information they seek, this was done to provide a framework or structure on which to build the information vital to the successful completion of the field study. Where appropriate, interviewees were encouraged to discuss other areas relevant to the research questions which were not stated specifically in the interview schedules.

Procedure

The procedure for completing the initial survey section of the research was as follows:

1. Once the proposal was approved, 160 questionnaires were sent out to schools chosen throughout WA to take part in the research.

2. As the questionnaires began to arrive back, the researcher started to tabulate the responses to the questions so that a general picture of the level of use of word processors in English could be observed. The analysis of this data is explained in more detail in the "Data Analysis" section of this thesis.

3. Once a substantial number of questionnaires were returned, the information was recorded for analysis and schools which might prove useful for further research were highlighted. As it happens, one of these schools was used in the study to take the place of a school which could not take part in the teacher interviews.

The field study section of the research took place during the first half of the third school term, 1995.

The field study was completed as follows:

1. During the latter half of the second school term, 1995, the schools required for the research were contacted and invited to take part in the project. Meetings with heads of departments and teachers were held at the beginning of the third term to clarify how the research

would be carried out. Also, precisely which students and teachers were to be interviewed was ascertained during this period.

2. In consultation with the English departments taking part in the field study, convenient times to interview teachers and students were arranged. For each school, a timetable was made up to indicate when the researcher would enter the school and carry out the research.
3. The interviews of teachers were carried out first in each school. A quiet, private room was sought out to hold the interviews, where the teachers' responses to the question sheet were recorded on audio tape. During this time, any further alterations to the timetable for interviewing students were clarified.
4. In most cases, the researcher returned to the school within a week to interview the students. Students sat at their desks in their regular classrooms and were handed out the written questionnaires. Following a brief introduction, the researcher read out each

question, one at a time, allowing the students three to four minutes to respond. If students had any queries about the questionnaire, they asked questions and the answers were clarified to all students. For reasons of research validity, the teachers were at no time present during student interviews.

At the conclusion of the field study, all information gathered in the research was read and analysed in order to address the research questions stated earlier in the proposal.

Limitations

The researcher was aware of the following limitations which impacted upon the study:

1. There was no guarantee that all schools would respond to the initial survey, so it may not be appropriate to generalise the findings. The cover letter attached to all questionnaires tried to convince teachers that it was in their own interests to contribute to the study which in turn aimed to give them useful feedback.

Unfortunately, the research was carried out amidst industrial unrest within the government school system. That 55 of the 160 questionnaires were returned completed, could well be due to a “work to rule” order imposed by the teachers’ union for much of the year. Indeed, some respondents stated this explicitly when returning the questionnaires.

2. Many schools which may well be using word processors in English (especially country schools and very small schools) were not included in the initial survey. Hence there is the possibility that some useful information is being ignored. However, it was decided that 160 schools should still uncover a number of schools using word processors in English. Also, if it became clear that, for example, the smaller schools were doing most of the work with word processors (in fact this was not the case), then the next researcher working in this area would have had some valuable knowledge to begin another study.

3. During the field study, teacher interviewees may not have wished to divulge information which criticises other teachers, senior staff or departments. However, this did not appear to be a problem during the interviews.

4. Student interviewees may also have felt anxious about criticising teachers and senior staff for fear of consequences later on. This would have resulted in rather "empty" interviews which do not give an honest account of their experiences with word processors in English. All of the ethical considerations to do with anonymity of subjects and confidentiality of material were therefore outlined in the proposal prior to the research taking place. Such ethical issues were also discussed with the students prior to them filling in questionnaires.

5. Because only four schools were used in the field study, generalisations about teachers' and students' attitudes to word processing cannot be made. However, it should be pointed out that this is not the intention of this part of the research. The field study is

merely attempting to describe how *some* schools are embracing the technology, and what the experiences of a few teachers and students using word processors have been.

CHAPTER FOUR

RESULTS

SURVEY QUESTIONNAIRES

A total of 160 questionnaires were sent out to government and independent secondary schools to survey the overall patterns of usage of word processors in West Australian high school English departments. At the time this text was published, 34 questionnaires had been returned by government schools and 20 by independent schools. One respondent did not wish to be identified as from a state or private school. As such, it is difficult to claim that the results included in this chapter are representative of all West Australian high schools.

However, because word processor usage by English departments in most schools is at best limited, it is likely that those schools which did not return their questionnaires had little or nothing to contribute in terms of their experiences with word processors in English. The following tables, then, probably exaggerate the degree to which word processors are used in English departments in Western Australia. This need not alter the

validity of the research, however, because the tables still highlight limited word processor usage in subject English.

Degree of Usage

Because there is an absence of research material on word processor usage in West Australian English classrooms, it seemed appropriate to investigate overall degrees of usage of the technology. The questionnaire (see Appendix 2) firstly asked how many teachers were in the English department being surveyed, and secondly, how many of those teachers used word processors as part of their English programs in some way. This enabled the researcher to calculate a percentage of the English teachers who were using word processors in a given English department.

Responses to these first two questions (summarised in Table 1) suggest that nearly half (42%) of the independent and government schools that responded to the survey have English departments where less than one fifth of the teachers are using word processors in English programs. Surprisingly, 23% of government school respondents said they had English departments where between 80% and all teachers were using word processors for student writing.

The "All Teachers" row often does not work out as an average of the independent and government school rows because of the disproportionate balance in responses (20 independent and 34 government). Also, one particular school did not wish to identify itself as either government or independent. This school could be recorded in the "All Schools" row, but not in either of the other two.

TABLE 1 - PERCENTAGE OF TEACHERS IN ENGLISH DEPARTMENTS INCORPORATING WORD PROCESSORS INTO THEIR ENGLISH PROGRAMS

| | 0 - 20% | 21 - 40% | 41 - 60% | 60 - 80% | 80 - 100% |
|---------------------|---------|----------|----------|----------|-----------|
| Government | 39% | 19% | 19% | 0% | 23% |
| Independent | 48% | 16% | 21% | 5% | 10% |
| All Teachers | 42% | 18% | 20% | 2% | 18% |

Word Processors and the Writing Process

Question three in the survey asked teachers how they used word processors for student writing. This question was included to determine whether the word processor was used primarily as an electronic typewriter, or as tool for manipulating text at all stages of the writing process. The responses to this question allow teachers to decide if subject English, overall, is making the best use of word processors.

Table 2 shows that, generally, teachers either use word processors for the entire writing process, exploiting the technology to its full potential, or they hardly use them at all. There does appear to be an inclination on the part of teachers to use word processors as “fancy typewriters”, allowing students to produce neat copies of their final drafts. Responses also highlight the fact that a larger proportion of independent school teachers seem to be using word processors throughout the writing process. The possible reasons for this will be discussed in Chapter 5 - Discussion of Findings.

TABLE 2- DEGREE OF WORD PROCESSOR USE AS PART OF THE WRITING PROCESS

| Degree of Usage | Government Schools | Independent Schools | All Schools |
|--|---------------------------|----------------------------|--------------------|
| No word processor use at all | 35% | 37% | 35% |
| Typing neat copy without editing tools | 3% | 0% | 2% |
| Typing neat copy with editing tools | 7% | 16% | 10% |
| From re-draft stage without editing tools | 3% | 0% | 2% |
| From re-draft stage with editing tools | 7% | 0% | 4% |
| From draft stage without editing tools | 7% | 0% | 4% |
| From draft stage with editing tools | 19% | 10% | 17% |
| From pre-writing stage without editing tools | 0% | 0% | 0% |
| From pre-writing stage with editing tools | 19% | 37% | 26% |

Teaching of Word Processing Skills

Related to this idea of how word processors are used as part of the writing process, is the issue of what skills are taught to students. If teachers wish their students to use word processors at the drafting stages of writing, then it would be appropriate to teach them how to cut, paste, copy and delete text. Question 4 in the survey, therefore, asked teachers to indicate which skills they taught as part of word processing writing programs.

The information set out in Table 3 shows that, as the word processing skills become more complex (lower down the table), the percentage of schools who responded "Taught by all teachers" decreases. Indeed, over half of all schools reported that none of the word processing skills were taught by teachers in their English departments. Issues of whose responsibility it is to teach such skills will be dealt with in a later chapter.

The responses tabulated below also highlight the fact that independent schools are more likely to have English departments in which all "word processing teachers" teach specific word processing skills

TABLE 3 - PERCENTAGE OF SCHOOLS WHO TEACH VARIOUS WORD PROCESSING SKILLS AS PART OF ENGLISH PROGRAMS

| <i>Turning on the computer</i> | <i>Not taught by teachers</i> | <i>Taught by some teachers</i> | <i>Taught by most teachers</i> | <i>Taught by all teachers</i> |
|---------------------------------------|-------------------------------|--------------------------------|--------------------------------|-------------------------------|
| Government | 52% | 10% | 3% | 35% |
| Independent | 58% | 11% | 5% | 26% |
| All Schools | 53% | 10% | 6% | 31% |
| <i>Saving Documents</i> | | | | |
| Government | 48% | 10% | 10% | 32% |
| Independent | 53% | 5% | 5% | 37% |
| All Schools | 50% | 8% | 8% | 34% |
| <i>Printing Documents</i> | | | | |
| Government | 58% | 6% | 10% | 26% |
| Independent | 53% | 5% | 5% | 37% |
| All Schools | 55% | 6% | 10% | 29% |
| <i>Editing skills (cut/paste/del)</i> | | | | |
| Government | 61% | 10% | 10% | 19% |
| Independent | 47% | 21% | 0% | 32% |
| All Schools | 55% | 14% | 8% | 23% |
| <i>Use of spell-check facility</i> | | | | |
| Government | 61% | 16% | 10% | 13% |
| Independent | 53% | 15% | 0% | 32% |
| All Schools | 57% | 16% | 8% | 19% |
| <i>Italics/bolding/underlining</i> | | | | |
| Government | 58% | 16% | 10% | 16% |
| Independent | 47% | 15% | 5% | 33% |
| All Schools | 53% | 16% | 10% | 21% |
| <i>Page set up and tab skills</i> | | | | |
| Government | 68% | 26% | 0% | 6% |
| Independent | 47% | 21% | 5% | 27% |
| All Schools | 59% | 25% | 2% | 14% |
| <i>Advanced skills (macro/tables)</i> | | | | |
| Government | 85% | 11% | 4% | 0% |
| Independent | 69% | 26% | 0% | 5% |
| All Schools | 78% | 16% | 2% | 2% |

Access to Word Processors

Question 5 in the survey aimed to find out how English departments in West Australian high schools gain access to computers for word processing lessons. Although word processing is now considered an issue in subject English, it is no secret that the majority of computer terminals in schools are housed in business and technology departments, thus making access difficult in terms of timetabling and physical distance from the English department.

The information gained from the survey (summarised in Table 4) confirms that the most common kind of access West Australian high school English departments receive to word processing facilities is in other subject departments. As the "Discussion" chapter of this thesis reveals later on, however, English teachers in schools which have implemented "whole-school" approaches to computers in education are happy with the access they receive in other departments.

As one would expect, independent schools are more likely to have expensive lap tops used by English students - whether student-owned or

owned by the school. Access such as this is more than likely to be found in the exclusive private schools, however, and is directly related to the finances available to parents and schools.

An interesting statistic to note from Table 4 is that 20% of government school respondents stated that they had access to a computer laboratory in the English department itself. Whilst this might be a rather limited facility (perhaps one or two terminals next to the office) it shows an awareness of the relationship between subject English and word processing. However, almost a quarter of all schools reported no access to word processing facilities. This may be a result of financial constraints, and teachers' limited experience and knowledge of the potential of word processing in English lessons. Such issues will be discussed in Chapter 5.

TABLE 4 - PERCENTAGES OF HOW ENGLISH DEPARTMENTS GAIN ACCESS TO WORD PROCESSORS FOR THEIR ENGLISH LESSONS

| <i>Access</i> | <i>Government</i> | <i>Independent</i> | <i>All Schools</i> |
|--------------------------------------|-------------------|--------------------|--------------------|
| No Access | 21% | 23% | 22% |
| Computer Lab in English Department | 20% | 4% | 12% |
| Computer Lab in Other Department | 42% | 46% | 44% |
| Student-owned Lap Tops used in Class | 3% | 8% | 6% |
| School-owned Lap Tops used in Class | 11% | 19% | 14% |
| N/A | 3% | 0% | 2% |

Preferred Modes of Word Processor Access

At present many English teachers appear to be “making do” with the access they receive to word processors for their English lessons. Question 6 in the survey gave teachers an opportunity to express what their preferred mode of access would be.

According to the responses in the survey, English teachers would prefer to have autonomy over the hardware and space they are given for word processing in subject English. Table 5 records that almost half of government school respondents said that they would like to have a word processing laboratory set up in the English department permanently. There are many obvious reasons for this, not least of which is that teachers do not want to have to transport an entire class to another part of the school to gain access to word processors. Also, as will be discussed later, if teachers and students are to become familiar with hardware and software for the purposes of constructive writing lessons, they need to have regular and quick access.

Another popular choice illustrated in Table 5 was that of students bringing their own lap tops into the classroom for English. This is reflective of what is already happening in some West Australian high schools. It involves a “whole school” approach to the use of notebook computers in all subjects. Again, financial constraints will prevent such access for the majority of schools.

TABLE 5 - PERCENTAGES OF PREFERRED MODES OF ACCESS TO WORD PROCESSORS IN ENGLISH

| <i>Preferred Mode of Access</i> | <i>Government Schools</i> | <i>Independent Schools</i> | <i>All Schools</i> |
|--------------------------------------|---------------------------|----------------------------|--------------------|
| Computer Lab in English Department | 48% | 40% | 43% |
| Computer Lab in Other Department | 3% | 15% | 9% |
| Student-owned Lap Tops used in Class | 33% | 25% | 29% |
| School-owned Lap Tops used in Class | 9% | 10% | 9% |
| Other type of access | 9% | 10% | 10% |

Computer to Student Ratios

Because of the large numbers of students in most English classes, it seemed appropriate to investigate the quality of access students were receiving to word processors. One of the frustrating features of the word processing lesson is when students have to wait for a turn on the computer. Such delays might be responsible for a lack of learning on the

part of students as well as the possibility of causing behaviour management problems.

Table 6 illustrates the similarities between government and independent schools in the area of computer to student ratios in English word processing lessons. A preferred one to one ratio is more common in independent schools, but only by six per cent. The fact that 19% of all schools reported that four or more English students have to share a terminal is indicative of the limited number of computers available to English departments.

As previous tables already presented in this chapter highlight, almost 30% of respondents stated this question was not applicable due to an absence of word processor usage by their English students.

TABLE 6 - PERCENTAGE OF RATIOS OF COMPUTERS TO STUDENTS IN ENGLISH LESSONS

| <i>Ratio of computers to students</i> | <i>Government Schools</i> | <i>Independent Schools</i> | <i>All Schools</i> |
|---------------------------------------|---------------------------|----------------------------|--------------------|
| 1 : 1 | 24% | 30% | 27% |
| 1 : 2 | 18% | 20% | 19% |
| 1 : 3 | 8% | 5% | 6% |
| 1 : 4+ | 18% | 20% | 19% |
| N/A | 32% | 25% | 29% |

Teachers' Description of Current Access

In order to gain an impression of how satisfied English teachers are with the access they receive to word processors for their writing lessons, Question 8 asked teachers to indicate the quality of access they received.

Table 7 illustrates that the majority of teachers in West Australian high school English departments are unsatisfied with the access they receive to computers for word processing English lessons. Almost 70% of government school respondents said that their word processor access was either non-existent or unsatisfactory. This compares to 60% of independent schools - a lesser proportion yet still an alarming statistic.

The N/A statistics highlight those respondents who did not tick a box for this question. Some respondents, for example, did not think word processing was an issue in their English departments. It is of interest that the only respondents who could describe their word processor access as excellent (a mere 2% of all respondents) came from independent schools - again highlighting issues of financial constraints clearly impinging upon the ability of government schools to provide suitable access.

TABLE 7 - PERCENTAGES OF HOW SCHOOLS DESCRIBE THE ACCESS THEY RECEIVE FOR WORD PROCESSING ENGLISH LESSONS

| <i>Description of Access</i> | <i>Government Schools</i> | <i>Independent Schools</i> | <i>All Schools</i> |
|------------------------------|---------------------------|----------------------------|--------------------|
| Non-existent | 29% | 15% | 23% |
| Unsatisfactory | 38% | 45% | 41% |
| Satisfactory | 18% | 20% | 19% |
| Very Good | 9% | 5% | 7% |
| Excellent | 0% | 5% | 2% |
| N/A | 6% | 10% | 8% |

Constraints to Word Processor Usage

One of the most important tasks of this study was to explore the practical problems associated with setting up word processing English lessons. By identifying those constraints which most hinder the successful implementation of word processing in English, teachers might be in a better position to pool their ideas in an attempt to overcome such inhibiting factors.

Table 8 summarises the responses to Question 9 in the survey, which asked English staff to prioritise the constraints that might prevent them from employing word processors in their English writing lessons. Clearly the greatest limitations on English departments in all schools are those caused by a lack of access, and financially based constraints. This was the case in approximately half of all independent schools, whilst in

government schools closer to 80% of respondents claimed access and finances were their greatest constraints.

Interestingly, a lack of time, space and teachers' limited word processing experience also figured as significant hindrances to word processing in English. Approximately 70% of all respondents said that these three factors imposed either significant or some constraints on the use of word processors. As will be discussed later, there needs to be much thought put into timetabling and the setting up of word processing classrooms if students are to gain the optimum benefit from the technology.

The least popular of all responses were those relating to student behaviour and the belief that English might be better taught without the use of word processors. This suggests that English teachers, generally, see no reason why word processing technology should conflict greatly with their ideas about teaching English. However, some hesitation seems to be apparent on the part of independent schools - 35% of whom expressed that some constraints are caused by the belief that English is best taught without word processors. Only 5% of government schools agreed, whilst 36% of government schools stated that some constraints were caused by

classroom management concerns. These responses may well represent those teachers who have experienced the huge temptation the computer mouse presents to the average student.

TABLE 8 - PERCENTAGES OF CONSTRAINTS WHICH MOST HINDER THE USE OF WORD PROCESSORS IN ENGLISH LESSONS

| <i>Type of Constraint</i> | <i>Significant Constraints</i> | <i>Some Constraints</i> | <i>No Constraints</i> |
|---|--------------------------------|-------------------------|-----------------------|
| <i>Lack of access to word processors</i> | | | |
| Government | 79% | 18% | 3% |
| Independent | 58% | 32% | 10% |
| All Schools | 71% | 23% | 6% |
| <i>Too time-consuming</i> | | | |
| Government | 30% | 40% | 30% |
| Independent | 40% | 30% | 30% |
| All Schools | 35% | 39% | 26% |
| <i>Lack of school and department funds</i> | | | |
| Government | 82% | 3% | 15% |
| Independent | 50% | 30% | 20% |
| All Schools | 70% | 13% | 17% |
| <i>Lack of space</i> | | | |
| Government | 42% | 37% | 21% |
| Independent | 30% | 35% | 35% |
| All Schools | 37% | 37% | 26% |
| <i>Student Behaviour Concerns</i> | | | |
| Government | 3% | 36% | 60% |
| Independent | 0% | 20% | 80% |
| All Schools | 2% | 29% | 69% |
| <i>Teachers' limited experience with wps</i> | | | |
| Government | 30% | 48% | 22% |
| Independent | 45% | 15% | 40% |
| All Schools | 35% | 37% | 28% |

CONTINUATION OF TABLE 8

| <i>Belief that English is best taught without wps</i> | <i>Significant Constraints</i> | <i>Some Constraints</i> | <i>No Constraints</i> |
|--|---------------------------------------|--------------------------------|------------------------------|
| Government | 3% | 18% | 79% |
| Independent | 5% | 35% | 60% |
| All Schools | 4% | 24% | 72% |

Teacher Attitudes to Word Processor Use

Whilst it is important to establish a theoretically based rationale for the use of word processors in English, it is equally important to find out if indeed teachers support the technology's use in the subject. The final question in the survey, therefore, asked teachers whether they would incorporate word processors into their English programs if certain constraints were removed.

It was decided not to tabulate individual responses to this question by government and independent schools due to the unanimous "Yes" response by 94% of schools. It is clear, then, that given the right conditions, the majority of English teachers would like to incorporate word processing into their English programs.

TABLE 9 - PERCENTAGE OF TEACHERS WHO WOULD INCORPORATE WORD PROCESSORS INTO THEIR ENGLISH PROGRAMS IF CONSTRAINTS WERE REMOVED

| <i>Yes</i> | <i>No</i> | <i>Don't Know</i> |
|-------------------|------------------|--------------------------|
| 94% | 2% | 4% |

STUDENT INTERVIEWS

The following tables show the results obtained by interviewing 181 students in two government and two non-government schools. Each student answered ten questions on a written questionnaire, with the researcher first clarifying each question orally. The interview sheet appears as Appendix 4 in this document. In general, the tables below distinguish between government schools, independent schools and total schools.

Place Where Students Learned to Use Word Processors

The study investigated where students first learned to use word processors in order to evaluate the role schools currently play in teaching writing on word processors. With the increase in the number of computers in the home, it might be that word processors are taking over as the dominant writing tool.

Table 10 shows that the majority of respondents learned to use a word processor at home. This may be due, in part, to the decrease in size and price of personal computers over the last decade, making them much more accessible to families. However, it appears that students from

independent schools have greater access to word processors at home than students from government schools. Just over half of the students in government schools sampled in the survey learned to use a word processor at home, compared with a much higher 71% of independent school students. Coupled with the fact that 4% of students from government schools said they had never used a word processor, this suggests that the government sector has a great responsibility to provide its students with sufficient word processing teaching and access.

TABLE 10 - PERCENTAGES OF WHERE STUDENTS LEARNED TO USE WORD PROCESSORS

| <i>Place Learned</i> | <i>Government Schools</i> | <i>Independent Schools</i> | <i>All Schools</i> |
|----------------------|---------------------------|----------------------------|--------------------|
| <i>Home</i> | 55% | 71% | 64% |
| <i>School</i> | 36% | 29% | 32% |
| <i>Course</i> | 0% | 0% | 0% |
| <i>N/A</i> | 4% | 0% | 2% |

Word Processors and Take-Home Assignments

The second question students responded to related to how many of their take-home assignments were completed on word processors. Such information might indicate whether students themselves are taking the initiative with the new technology.

One of the most interesting statistics that emerged from students' responses (summarised in Table 11) is the high proportion of students who hardly use word processors for their take-home English assignments. Table 10 shows that 64% of students learned to use word processors at home, yet 48% of all respondents said that they completed two or fewer assignments on the word processor at home. This could be because many assignments do not lend themselves to word processor use; but it may be argued that, again, it is more likely that students are not aware of the advantages the technology offers them in constructing their texts.

Responses to questionnaires also emphasise the fact that students at government schools are less likely to use word processors at home for English assignments. Twice the proportion of government school students stated that they did not compose any of their assignments at home on word processors. This does even itself out somewhat, however, when 50% of government schools students claim they complete two assignments or less on word processors at home, compared with 44% of independent school students.

Whilst the highest statistic in the "Total Students" column refers to *no* assignments being completed on word processors at home, the next highest refers to *all* assignments being completed at home. This suggests that there is very little "middle ground" for students. They either use word processors extensively, or use them very little at all. Such extremes may cause questions to be raised about the extent to which students are being educated about the potential of word processors for their English writing.

TABLE 11- PERCENTAGES OF "TAKE HOME" ASSIGNMENTS COMPLETED ON WORD PROCESSORS

| <i>No. of assignments out of 10</i> | <i>Government School students</i> | <i>Independent School students</i> | <i>Total Students</i> |
|-------------------------------------|-----------------------------------|------------------------------------|-----------------------|
| 0/10 | 34% | 17% | 25% |
| 1/10 | 8% | 11% | 11% |
| 2/10 | 8% | 16% | 12% |
| 3/10 | 4% | 3% | 3% |
| 4/10 | 4% | 5% | 4% |
| 5/10 | 14% | 6% | 9% |
| 6/10 | 1% | 1% | 1% |
| 7/10 | 5% | 5% | 5% |
| 8/10 | 8% | 9% | 8% |
| 9/10 | 0% | 16% | 9% |
| 10/10 | 14% | 11% | 13% |

Genres Written by Students on Word Processors in English

If word processors are considered valuable tools for students writing, then one would expect them to be used for composing a variety of different written genres. Students were asked which genres they composed mostly

on word processors, in order to provide information about how useful the technology was proving for such texts as newspapers, reports and poems.

Although almost half of all students said that they composed all different kinds of texts on word processors in English, this average does not account for the contrast between how independent and government school students responded to the question. Table 12 shows that the proportion of independent school students who stated that they wrote all different genres in word processing English lessons more than doubled that of government school students' responses, at 58% and 23% respectively. This may well be a function of the limited access to hardware and software in government schools, an issue which will be explored further in Chapter Five - Discussion.

As anticipated, because of the length of short stories and the time invested in planning, drafting and editing, this genre was very popular in all schools. Rather than viewing word processing as a unique writing process which offers students alternative ways of making meaning, many teachers see it simply as a tool used for producing a final neat copy of

work. For this reason, prose fiction is the only genre worth “setting up” a word processing lesson for.

TABLE 12 - PERCENTAGES SHOWING WHICH GENRES STUDENTS WRITE IN WORD PROCESSING ENGLISH CLASSROOMS

| <i>Genres</i> | <i>Government School Students</i> | <i>Independent School Students</i> | <i>All students</i> |
|---------------|-----------------------------------|------------------------------------|---------------------|
| Short Stories | 45% | 23% | 33% |
| Reports | 10% | 20% | 16% |
| Essays | 6% | 5% | 6% |
| Poems | 4% | 1% | 2% |
| Letters | 3% | 1% | 2% |
| Newspapers | 8% | 17% | 8% |
| All Kinds | 23% | 58% | 43% |

Differences Between Handwriting and Word Processing

Of particular interest to this study was whether students perceived a difference between writing with pen and paper and writing on a word processor. Many writers, when first experimenting with word processors, prefer to plan, draft and even write their texts by hand before transposing their texts onto the computer screen. This might be due to the conditioning effects of traditional process approaches to writing, but may equally be defended on the grounds that ideas flow more easily when writing by hand. The handwriter is not distracted by frequent typing errors which stand out so clearly on the illuminated word processing screen.

A small percentage of students interviewed in the study appear to agree that writing on a word processor is faster than handwriting. Table 13 shows that 33% of respondents in both independent and government schools felt this was a significant difference between the two forms of writing. The reason that the majority of students did not all choose one particular difference may be related to the limited word processor usage by students in these schools. Because students are not using the technology regularly (except in one of the independent schools) they do not have the knowledge to offer information based on experience.

It is interesting to note that only in the independent schools do students recognise the many advantages of editing tools when using word processors in English. This is clearly related to the type of hardware they can exploit compared to students in government schools. One of the government schools in the study was using word processors with only a two line text screen for English lessons, whilst the other one had eight old computers (which, according to the Head of Department, keep malfunctioning) in a classroom used for standard English lessons, making access a real problem for students. These experiences contrast markedly

with the independent schools used in the study, whose students had access to the very latest in computer hardware and software.

TABLE 13 - PERCENTAGES OF STUDENT RESPONSES TO HOW WORD PROCESSING IS DIFFERENT FROM WRITING WITH PEN AND PAPER

| <i>Differences - Word Processors are/have..</i> | <i>Government School Students</i> | <i>Independent School Students</i> | <i>All students</i> |
|---|-----------------------------------|------------------------------------|---------------------|
| <i>Faster</i> | 35% | 31% | 33% |
| <i>Neater</i> | 46% | 28% | 36% |
| <i>No Drafting</i> | 26% | 18% | 22% |
| <i>Easier to Use</i> | 4% | 18% | 12% |
| <i>Editing Tools</i> | 4% | 36% | 28% |
| <i>Spell Check</i> | 14% | 16% | 15% |
| <i>Slower</i> | 6% | 7% | 7% |
| <i>More Presentable</i> | 6% | 7% | 7% |
| <i>Shorter Texts</i> | 1% | 3% | 2% |
| <i>Font Options</i> | 1% | 11% | 7% |

Preferences of Students for Word Processing or Handwriting

It seemed appropriate to ask students which mode of writing they preferred, because increasingly they will be faced with such choices both at school and in the home. If students have real concerns about using the technology for writing, then this should be discussed by those responsible for setting up writing programs, before they make decisions about how best to use word processors in English.

Table 14 highlights the popularity of word processors among both government and independent school students in the study. Whilst one tenth of the government school students stated that they did not use word processors at all and so could not comment, 69% overall is still a significant statistic. It shows that the majority of students who have been exposed to word processors in some way are impressed by the advantages they offer.

Of course it could be that some students have been influenced by the novelty of using word processors when responding to this question, but as mentioned earlier, computers are now commonplace in many homes, as well as in classrooms at the primary and secondary level.

TABLE 14 - PERCENTAGES OF WHETHER STUDENTS PREFER WRITING WITH WORD PROCESSORS OR PEN AND PAPER

| <i>Preference</i> | <i>Government School Students</i> | <i>Independent School Students</i> | <i>All Students</i> |
|-----------------------|-----------------------------------|------------------------------------|---------------------|
| <i>Word Processor</i> | 66% | 70% | 69% |
| <i>Pen and Paper</i> | 21% | 29% | 25% |
| <i>Both</i> | 3% | 1% | 2% |
| <i>N/A</i> | 10% | 0% | 4% |

Reasons Students Prefer Word Processing to Handwriting

It is not enough to assume that the advantages gained by using word processors will be understood and exploited by English school students.

This study was interested in what advantages the students themselves see in the technology. Responses to Question 5 indicate that the majority of students who prefer using word processors do so because they can write faster and neater.

The information tabulated in Table 15 shows that only 4% of students who preferred to use word processors did so because of the lack of drafting needed. Students are obviously more concerned with the speed at which they can produce word processed texts, and the quality of presentation the technology offers. These two reasons alone appeared in 78% of students' responses.

TABLE 15 - PERCENTAGES SHOWING REASONS STUDENTS PREFER USING WORD PROCESSORS TO HANDWRITING

| <i>Reasons</i> | <i>All Students</i> |
|------------------------------|---------------------|
| <i>Faster</i> | 40% |
| <i>Neater text</i> | 38% |
| <i>Easier to Use</i> | 27% |
| <i>Presentation Options</i> | 15% |
| <i>Editing Tools</i> | 20% |
| <i>No Drafting</i> | 4% |
| <i>Fun to Use</i> | 6% |
| <i>Spell Check</i> | 5% |
| <i>No Sore Hand</i> | 3% |
| <i>Poor Handwriting</i> | 6% |
| <i>Graphics Capabilities</i> | 3% |

Reasons Students Preferred Handwriting to Word Processing

As anticipated, some students preferred writing with pen and paper to word processors, and Table 16 summarises students' reasons for this. Ironically, the main reason given by students who prefer to handwrite is the same as those who prefer word processing - they can write faster. What this does indicate is that the speed with which students can write is of great importance to them. Perhaps if more students had been exposed to word processing, and received some form of typing tuition, then maybe more students would prefer to use the technology for writing texts. Indeed, 13% of these students stated that the reason they preferred to handwrite was because they did not receive word processor access.

TABLE 16 - PERCENTAGES SHOWING REASONS STUDENTS PREFERRED HANDWRITING TO WORD PROCESSING

| <i>Reasons</i> | <i>All Students</i> |
|---------------------------------------|---------------------|
| <i>Faster</i> | 48% |
| <i>More Convenient</i> | 2% |
| <i>Familiarity of Pen and Paper</i> | 6% |
| <i>Slow Typist</i> | 9% |
| <i>Easier to Use Pen and Paper</i> | 9% |
| <i>Hardware and Software Problems</i> | 4% |
| <i>Handwriting More Personal</i> | 9% |
| <i>No Access to Word Processors</i> | 13% |

What Students Like About Word Processing in English

Students were asked what they liked about using word processing in English so that the researcher could gain a picture of whether or not the technology was being enjoyed by students during their writing lessons. Information about what students like about word processing might give teachers an idea of how they can use word processors in exciting ways to motivate students to write.

Table 17 highlights speed, neatness and fun as the things respondents from government schools liked about using word processors. The students from independent schools agreed with speed and neatness, but the fun factor did not appear to influence their reasons. Again, this may well be related to the ease and regularity with which students from independent schools can gain access to word processors and computers in general. In addition, the respondents from independent schools stated that the advantages word processing offered to the presentation of work, and the use of editing tools and spell checkers were other reasons why they liked using word processors.

TABLE 17 - PERCENTAGES OF WHAT STUDENTS LIKE ABOUT USING WORD PROCESSORS IN ENGLISH

| <i>Reasons</i> | <i>Government School Students</i> | <i>Independent School Students</i> | <i>All Students</i> |
|---------------------------|-----------------------------------|------------------------------------|---------------------|
| <i>Fastness</i> | 14% | 19% | 14% |
| <i>Neatness</i> | 15% | 20% | 18% |
| <i>Presentation</i> | 4% | 15% | 10% |
| <i>Editing</i> | 4% | 13% | 9% |
| <i>Fun to Use</i> | 18% | 5% | 10% |
| <i>Spell Check</i> | 5% | 17% | 12% |
| <i>Formatting Options</i> | 5% | 4% | 4% |
| <i>Easier to Use</i> | 5% | 13% | 9% |
| <i>Typing with Keys</i> | 4% | 0% | 2% |
| <i>Novelty Factor</i> | 3% | 3% | 3% |
| <i>Other</i> | 8% | 10% | 9% |
| <i>N/A</i> | 15% | 8% | 17% |

What Students Dislike About Using Word Processors in English

Information regarding students' dislikes about using word processors in English should provide valuable information to teachers about how they can set up or improve successful word processing writing programs. Responses to this question (summarised in Table 18) show that 18% of students chose N/A for this question, either because they had never used word processors in English or did not dislike anything about using word processors. A further 15% actually stated that they did not dislike anything about using word processors.

Perhaps the statistic worth highlighting most from Table 18 is that of technical problems. 14% of all students interviewed said that this was their biggest dislike. This is probably related to the lack of familiarity students have with the software and, in government schools, the lack of specialist support when problems occur in conditions which might best be described as “make do”.

TABLE 18 - PERCENTAGES OF WHAT STUDENTS DISLIKE ABOUT USING WORD PROCESSORS IN ENGLISH

| <i>Reasons</i> | <i>Government School Students</i> | <i>Independent School Students</i> | <i>All Students</i> |
|---|-----------------------------------|------------------------------------|---------------------|
| <i>Technical Problems</i> | 18% | 12% | 14% |
| <i>Unfamiliarity with Function Keys</i> | 9% | 2% | 5% |
| <i>Computers too Slow to Load up</i> | 0% | 18% | 10% |
| <i>Deleting Files</i> | 8% | 2% | 4% |
| <i>Slow Typist</i> | 4% | 12% | 8% |
| <i>Word Processors are Boring</i> | 1% | 5% | 3% |
| <i>Sore Fingers</i> | 6% | 0% | 3% |
| <i>Sore Eyes</i> | 3% | 2% | 2% |
| <i>Shorter text</i> | 0% | 2% | 1% |
| <i>Nothing</i> | 15% | 16% | 15% |
| <i>N/A</i> | 21% | 7% | 18% |

Time Given to Students to Finish Work on Word Processors

Because access to word processors for many students is minimal, it was appropriate to investigate whether students found they were given enough time to finish the texts they composed on word processors. As responses

to the survey questionnaire revealed (see Table 6, p. 70) almost one fifth of respondents stated that four or more students had to share one terminal during word processing writing lessons. Given such restrictions, pressure would be placed on students to finish their work as quickly as possible.

Of the 73% of students who responded either "Yes" or "No" to this question, opinion was divided on whether or not they got enough time to complete their work on word processors in English lessons. This was the case in both government and non-government schools. The reason for this might not in fact be related to word processor use. It may be the case that students in regular handwriting classes would respond in a similar way. A proportion of students in any class would argue that they do not receive enough time to finish work.

However, the 40% who complained of not having enough time may also be victims of word processing lessons which are organised according to a computer laboratory timetable, and so are rushing to finish before their access is complete. Similarly, limited computer facilities in English departments may be a cause of the substantial "No" response.

TABLE 19 - PERCENTAGES OF WHETHER STUDENTS FELT THEY WERE GIVEN ENOUGH TIME TO FINISH WORK ON WORD PROCESSORS IN ENGLISH

| <i>Yes</i> | <i>No</i> | <i>N/A</i> |
|------------|-----------|------------|
| 33% | 40% | 27% |

Students' Requests for Better Typing Skills

Related to this issue of the amount of time given to students to complete their texts are the typing skills of students. Many students would be unfamiliar with the typing keys and functions of word processors. Because some students only gain limited access to word processors, they would not be typing with speed and efficiency. Table 20 shows that nearly all students would prefer to have better typing skills to improve their speed and knowledge of function keys. Clearly students feel frustrated at having the technology at their fingertips, but not being competent enough to exploit it to its full potential.

TABLE 20 - PERCENTAGES OF WHETHER STUDENTS WOULD LIKE TO HAVE BETTER TYPING SKILLS

| <i>Yes</i> | <i>No</i> | <i>N/A</i> |
|------------|-----------|------------|
| 86% | 8% | 6% |

Word Processing Help Given to Students by their Teachers

Because word processing technology is relatively new to many teachers and students of English, it seemed appropriate to ask students whether they felt the help given to them by their teachers was adequate. It was

thought that this may highlight the extent to which teachers are currently equipped to provide quality word processing support for their students.

Although some interesting comments came out of responses to this question (namely that students often said they helped each other when problems occurred, or in the case of independent schools received help from technicians) the percentages may not be true reflections of students' opinions. The researcher felt that many students saw this question as an opportunity to criticise the teacher unfairly. They simply enjoyed the experience of writing something negative about their teacher without really thinking about the question. For this reason the researcher does not wish to comment on the results.

TABLE 21 - PERCENTAGES OF WHETHER STUDENTS FELT THEY RECEIVED ENOUGH HELP FROM THEIR ENGLISH TEACHER WHEN PROBLEMS OCCURRED WITH WORD PROCESSORS

| | | |
|------------|-----------|------------|
| <i>Yes</i> | <i>No</i> | <i>N/A</i> |
| 24% | 35% | 41% |

TEACHER INTERVIEWS

Because the teacher interviews were carried out as actual oral interviews rather than in written questionnaire format, it will be more appropriate to summarise the results in prose form rather than attempting to tabulate the information. Often the interviewees digressed from the original questions and at times it might be pertinent to report these experiences. Appendix 3 contains the question sheet used in the field study for interviewing teachers.

For obvious ethical reasons, the names of the schools where teachers were interviewed have been suppressed in this thesis. However, to make clear the distinction between schools in this discussion, pseudonyms will be given to each school.

The following is a brief description of the schools where teachers were interviewed:

1. Southcoates Senior High School

A co-educational high school in an outer city suburb, with a student population of approximately 1150. At the time interviews were carried

out, the English department had eight computers stored in the head of department's classroom. Due to reasons that will be discussed in this section, the computers were not set up for students' use.

2. Ryedale Senior High School

A co-educational school in an outer city suburb, with a student population of approximately 1000. Access to word processors for English students at Ryedale consisted of eight *Canon Wordstar* electronic typewriters housed in the hallway of the English department.

3. St David's College

St David's College is an independent school for boys situated in an old, well established, city suburb. It has a student population of approximately 1250. Word processor access for English students at St David's involved Yr.10 students being offered an elective called "Computers in English". The class was held in one of the information technology classrooms and ran for one term. Each student had access to his own computer, which was capable of running the very latest word processing software.

4. Alderman College

Alderman College is an exclusive independent school for boys. With a student population of approximately 1100, it is situated in an outer-city suburb. English students gain access to the very latest computer technology in a state of the art computer laboratory. However, English teachers are not very active in the amount of time they allocate for word processing in their programs.

Questions will be listed in the order that they were read to the participants in the study. After each question, teacher responses will be given with comparisons and contrasts highlighted.

Question 1: Which department “owns” the computers your students work on during their word processing English lessons?

At St David’s College, the information technology department was responsible for the computers used by English students. This was acceptable to both teachers, however, because access was not a problem and full-time technical support was always at hand. At Alderman College, a computer classroom was available for the whole school with

“subject ownership” not really an issue. The fact that this classroom was set up for all subjects was evident in the design of the room. The computer desks and the classroom layout were suited to independent study, group work and expository teaching situations. This will be elaborated on later in the main discussion of the survey.

The four government school teachers all stated that the English department “owned” the computers their students worked on for word processing. Whilst this might seem encouraging, the circumstances in which the computers were made available was less than conducive to optimum learning. At Ryedale Senior High school, eight word processing typewriters with two-line screens were set up permanently in the English department hallway. Obviously, “turn-taking” was necessary for all students to use the machines and technical problems (with little support) were common.

At Southcoates Senior High School, eight computer terminals were set up in one teacher’s classroom. Again, technical difficulties were one of the main sources of frustration for teachers. The computers were not working

during the period this research was carried out. The other main problem, according to the head of department, was that because the computers were set up in his classroom, students were often disturbed when other classes wished to use the word processors during his “regular” English lessons. Unfortunately, due to limited classroom availability and the fact that he was the most competent technically to deal with students’ problems, this was the best way to make computers available to students. The head of department did stress, however, that a classroom was being organised specifically for word processing and multimedia use.

2. Are you satisfied with the access you are given for your word processing writing lessons?

All teachers in independent schools responded with a definite “Yes” to this question. At Alderman College, in addition to the facilities offered by the information technology department, a class set of notebook computers was also available at all times. This set was housed on a specially designed trolley which could be transported around the building with ease.

Teachers at Ryedale Senior High School who were using the word processing typewriters, said that they were happy with the access they received - mainly because they did have sole "ownership" of the machines. The two teachers at Southcoates Senior High School complained that timetabling was a real problem for access. One particular teacher tried to organise a lesson in the business department's computer room but there was not enough time to finish and he had to wait another week for access again. The other teacher in this school complained that funds were a real problem for providing access to hardware and software for students.

3. Do you think you have enough say in decisions made about the purchasing of hardware and software for word processing lessons?

All teachers said that they either controlled the purchasing of hardware and software (funds were their problem - not control) or they were more than happy with the equipment the school provided. Independent school teachers stated that they did not feel they could suggest anything that was not already available.

4. Have you experienced any practical problems with management of time and space in word processing English lessons?

Problems associated with time and space were numerous among the respondents. Because the eight word processors were set up in the hallway of the English block at Ryedale Senior High, the teacher had to deal with two classes at once. He complained that if the word processing students needed to be "set up" in preparation for the lesson, the students in the classroom would sometimes get off task because they too needed his attention.

One teacher at Southcoates Senior High School complained of timetabling problems. Often when he wanted to make use of the computers in the business department, they were already booked. He stated that programming for an occasional word processing lesson was difficult in English, because teachers cannot say with any degree of certainty that they are ready for a word processing lesson weeks in advance. The other respondent at Southcoates explained that his "regular" English lessons were often disrupted by students from other classes coming in to use the computers. Due to a lack of space, however, coupled

with the fact that he was most familiar with the technology, his classroom seemed the best place to house the computers. He went on to argue that the present design of classrooms is not appropriate for up to thirty-three students seated at computers. Indeed, as will be discussed later, if English departments are to have their own computer laboratories, such rooms will have to cater for a range of teaching styles: expository, group work, classroom discussion and individual work to name a few.

Whilst two of the teachers from independent schools reported no problems with access to time and space, one teacher commented on the layout of the room. A teacher at St David's echoed the comments above by suggesting that theoretical and interactive lessons do not work well. Such "taken for granted" characteristics of the regular classroom as having room to put files on desks and being able to quickly rearrange the desks were not possible in the computer laboratory. The teacher recommended desks which "branch off" and allow students to face each other. Coincidentally, the final independent school in which research was carried out for this study, Alderman College, boasted such classroom features. This will be elaborated on later.

5. How much of a problem are students' keyboarding skills in word processing English lessons? What do you do to address this problem?

Responses to this question varied from "Significant problems" to "not a problem at all." This was largely due to the fact that teachers had different ideas about how important touch typing is in English. One teacher at Southcoates Senior High stated that although it was a problem because it slowed the lessons down, he did not think it was his job to teach typing skills and placed the responsibility for increasing typing speed on the students themselves. A teacher at St David's College acknowledged it as a huge problem and spends the first couple of lessons in each term giving students practice on computer typing tutorials.

There were no obvious differences in the responses of government and independent school teachers to this question. All acknowledged that slow typists do slow the production of texts down. Two teachers from different schools commented that typing speed was not an issue if students were being inspired to write.

6. Do you think that any particular groups of students benefit from using word processors in English? If so, which ones?

All teachers agreed that low achieving students and reluctant writers benefit from using word processors in English. The neat appearance of their work and the absence of multiple drafts seems to motivate these students in ways that pen and paper fail to.

Two teachers referred to the obvious benefits for dyslexic students, who could use a spell checker to correct spelling errors, and whose self-esteem increases when presented with a printed copy of their texts.

Whilst highlighting these groups of students as benefiting from word processing English lessons, four of the teachers stated that all students benefit. They explained how high-achieving students can use word processors to suit their own writing styles (either typing straight onto the computer or drafting first) and, particularly in the independent schools where resources are greater, can exploit more sources of information from external data bases to include in their texts. At St David's College, students were down-loading stories from a news agency on the internet,

to be included in their own class newspaper. Such is the potential of the computer in English.

7. Has your own word processing /computer knowledge always been sufficient to deal with students' problems when they write on word processors in English?

Whilst two teachers stated that, initially, they knew very little about the word processing software they were using, six out of seven teachers said that they were now competent enough to deal with most problems that cropped up in the course of a lesson. All the independent school teachers said that a technician is available at all times if they cannot solve a problem. One of the teachers at St David's College explained that many of the students are more competent than herself and solve their own problems. They also help other less computer literate students solve their problems.

The English teacher at Alderman College did acknowledge his vulnerability in the area of computer support, saying that he would like to be more competent but time constraints mean that it is low on his list of

priorities. Because a technician is present during all word processing lessons, he tends to focus on helping students with writing and allows the "expert" to quickly solve software and hardware problems.

8. What kind of computer/word processing support would best suit your needs as a teacher of word processing in English?

All teachers expressed a desire for more in-service courses relating to word processing and computers in English. The independent school teachers did acknowledge, however, that they were satisfied with the support they received and only had to ask for more support.

The government school teachers, in addition, specified a need for more funding to buy hardware. They also said that a support person to help with problems would be an invaluable resource to have at their disposal.

9. What specific computer and word processing skills do you teach students as part of your English programs?

Interestingly, all respondents declared that they teach very little in the way of word processing skills. Both teachers at Ryedale Senior High School said that apart from the delete key, none of the other word processing functions were taught. Students appeared to be competent enough to use the technology and the emphasis was on writing rather than the functions of the software. This of course indicates what capacity the word processor is being used for in English - as a motivator and to allow typing up of neat copies of work. Teachers at Southcoates Senior High, the other government school, reported very little in the way of word processing skills teaching.

The teachers at St David's College said that they taught the very basics of word processing skills at the start of a course. This included cutting, pasting and copying text, but also encompassed such skills as downloading information from the internet and using graphics and sound to enhance texts. The teacher at Alderman College said that no skills were

taught because it was assumed that all students were taught how to use word processors in a year eight introductory computer course.

10. Do you use word processors more when teaching some genres rather than others? If so, which genres do you use it for more - and why?

There was a clear distinction between the responses of government school teachers and independent school teachers to this question. Put simply, the government school teachers use word processors mainly for prose fiction texts and the independent school teachers use it for all texts.

One of the teachers at Southcoates Senior High School did specify newspapers and letter writing as the main genre he teaches with word processors, but this was the exception rather than the rule. At Ryedale Senior High, one teacher pointed out that he sees a correlation between the length of a text and the appropriateness of a word processing lesson. He did not see the point in setting up students to use word processors if they were writing short texts like letters and poems.

The main reason teachers gave for using word processors for student writing of prose fiction texts was that students are more likely to write longer texts if they know they are not going to have to write it out a second or third time. By “longer texts”, teachers were referring to those reluctant writers who often only manage one or two paragraphs per story.

11. What proportion of student writing time is/would you like to see devoted to writing on word processors?

Interviews at Ryedale Senior High School yielded responses of “50%” from both teachers. They felt that to allow students to write on word processors half of the time was a nice balance and they acknowledged the need to recognise that pen and paper will continue to be the dominant writing tool for many years. The other government school teachers, at Southcoates High, agreed that between 15% and 20% was enough writing time on word processors.

One teacher at St David’s College remarked that 25% was a reasonable proportion of time taken out of writing programs for word processing. Interestingly, the other teacher at this independent school declared that no

time should be given to word processing in English lessons. She said that she currently teaches word processing in an elective called "Computers in English" at the year ten level. She saw great value in it but argued against using word processors in English because the curriculum is difficult to get through as it is. She felt that if a proportion of writing was to be done on word processors she would never get through the content.

12. How do you think the skills taught in "word processing in English" are different than those skills taught as part of business and computer courses?

Most of the teachers responded to this question by stating that English teachers are more concerned with teaching the mechanics of language, how language works and the structure of specific genres, rather than the features of word processing software and computer hardware. They insisted that the literacy skills associated with English are the main concern - not the technology used to write with. Teachers disagreed as to whether or not word processing should indeed be considered a literacy skill that needs teaching in English in 1995.

One teacher at Southcoates Senior High School stressed the importance of a "whole school approach" to using computers and word processors. He felt that schools should embrace computers in as holistic a way as they have embraced such programs as *Stepping Out*.

The last teacher to be interviewed, at Alderman College, pointed out that students need to be taught that *how* they communicate ideas (referring to the layout of texts) is just as important as *what* they communicate. He therefore felt that there would be inevitable overlap between English and business courses and this did not need to be a problem.

13. When students write on word processors in their English lessons, do you think the actual processes of writing (prewriting, drafting, editing etc.) change? If so, in what way?

There were a variety of different responses to this question - so varied in fact that it is difficult to group them into any kind of pattern. At Ryedale Senior High, the school where students used eight word processing typewriters, one teacher said that the students themselves think there is no need to edit. Once the text is typed on to the screen they are satisfied that

it is complete. Perhaps this is related to their preoccupation with neatness rather than meaning.

The other teacher in this school explained that he still uses the terms associated with process writing. He stated that whether or not students choose to draft on paper first or type straight onto the word processor depends on the individual. He was unable to say what the first draft on a computer screen was and wanted to explore this idea further in his own time.

At Southcoates Senior High School, the first teacher interviewed said that the processes definitely changed, and in his experience students were more inclined to edit on word processors due to the powerful editing tools they offered. He also said that, because he makes it clear to students that they will not be going to the computer laboratory until the third or fourth lesson of a unit of work, they spend more time on the brainstorming and planning processes of writing.

The second teacher at Southcoates welcomed the word processor as a useful tool for those students who do not compose texts in accordance with process approaches to writing. He stressed that students need to be given a choice about how they go about the act of writing and the word processor offers another alternative. Students can use it as a powerful way of making meaning by exploiting its many editing, graphic and multimedia features, or may simply use it as a "fancy typewriter" once they have finished drafting their texts.

The independent school teachers were just as varied in their responses. At St David's College, the first teacher interviewed said that the processes do not change - the word processor simply makes writing faster and more enjoyable. Her colleague echoed earlier remarks by saying that many of her students see drafting by hand as a complete waste of time. She has thus had her own ideas about teaching writing challenged by the new technology. She also posed the interesting question of whether or not the thought processes associated with writing are hindered somewhat when using word processors. She argued that writers tend to edit *during*

the writing process when using word processors but are happy to leave editing until the end when handwriting.

The last teacher interviewed, from Alderman College, highlighted the fact that accuracy has become more important to students now that they write on word processors. A preoccupation with the neatness of the printed word might be seen as more important than the meaning-making process itself.

14. How does the “word processing computer” fit into or conflict with your beliefs about what the purpose of subject English is?

Teachers in all schools except Alderman College said that the word processing computer does not conflict with their beliefs about what the purpose of subject English is. They welcomed the technology on the grounds that: it stimulates reluctant writers; it offers a change and it is teachers who are responsible for whether computers isolate students in the strategies they employ. Two of the teachers stated that their job was to teach students how language can be manipulated to make different

meanings - the word processor allows the students themselves to manipulate language in the same way.

The teacher at Alderman College did express a fear that computers are part of the larger isolating nature of modern communications. He said that we might be on the internet communicating with someone in Brazil when a little old lady next door needs help with her shopping. This is the dilemma, he argued, in producing a technology that allows the individual to communicate in isolation.

This teacher also stated that students are reading less than they used to and was concerned that presentation is becoming more important than making meaning. Thus students are having increasing difficulty expressing themselves in a clear and coherent style.

15. Can you tell me about some of your most successful word processing English lessons?

Teachers in government schools found it difficult to report on successful word processing lessons. This was due to the absence of any systematic

programs being in place. Neither of the government schools were using word processors regularly enough to see positive results, though just seeing reluctant students writing was positive in itself.

Independent school teachers pointed out activities that were reflective of the kinds of resources they have as a result of more generous funding at the school level. One teacher at St David's College reported a series of lessons in which students were accessing news stories from A.A.P on the Nexus server, and how she was learning at the same time as the students. Her role became one of facilitator rather than teacher.

The other teacher in this school reported on a series of lessons which saw student using the *Story Book Weaver* program to write stories. They were able to choose colours and sounds to help construct picture books. Once students had completed their texts, they presented them on an overhead projector that was able to project computer images onto a large screen. Again, the access to such expensive technology is at this stage limited to the more affluent independent schools.

16. Can you tell me about some of your most unsuccessful word processing lessons?

Responses to this question centred mainly around problems with technology. Not being able to access files for a variety of reasons was something most teachers had experienced. One teacher at Ryedale Senior High reported a lesson in which he attempted to take a trolley with eight word processing typewriters into the classroom and it was a disaster. Plugs came out of the sockets, wires tangled up and students became frustrated very quickly while he was trying to set the machines up.

Another problem area was how students can be at very different stages of completing their texts, depending on whether they are fast or slow typists.

One of the teachers from Ryedale Senior High School works mainly with students in Special Education classes. She explained how her worst lessons are when students see the hard copy of their word processed text, and are extremely disappointed at its size. Because they have been working on word processors which only reveal two lines at a time, they expect to see pages of writing once they print out. Sometimes this puts

students off going back to the word processor, but the teacher finds that if she photocopies an enlarged version of their texts, they are happier with what they have achieved.

CHAPTER FIVE

DISCUSSION

Using the information gathered from the survey questionnaire and the teacher and student interviews, this section of the thesis will address the key research questions stated earlier. Each research question will be dealt with separately, using information from all three instruments. The author will then make further recommendations following on from this study, which might be a starting point for others to continue researching this important area of subject English.

1. What is the level of use of word processing in English in West Australian high schools?

Although 18% of all respondents to the state-wide survey claimed that between 80% and 100% of their teachers used word processors in English, it must be taken into consideration that this usage, in many cases, refers to simple "typing up" of student texts. Almost half of the respondents stated that less than 20% of teachers used word processors in English. This highlights the fact that word processor usage in West

Australian high schools is still minimal. Whilst there is much literature discussing the value of word processing for student writing, and the new student outcome statements do refer to the technology, computers in English are far from being an integral part of subject English.

The teacher interviews revealed that, generally, teachers do not see it as their business to teach the specific skills of word processing. This suggests that the technology is being used for what it can produce in terms of presentation possibilities, rather than how it can be used to aid the teaching of literacy.

The student interviews confirm the absence of word processor usage in English when 64% of respondents said that they learned to use a word processor at home. If subject English saw itself as being responsible for the teaching of "electronic writing", then perhaps a greater number of students would learn to use word processors at school.

An important social issue is revealed through this question. Only 55% of government school respondents learned to use word processors at home

compared with 71% of independent school students. Clearly, financial constraints being brought to bear on families have an impact in this area. To equip children with the latest in computer technology (an IBM compatible machine with Pentium processor, CD-ROM and bubble jet printer) parents could anticipate spending around three thousand dollars. This is not including connection to the internet via modem - an added expense. Many parents simply cannot afford this cost, whether their students are at government or independent schools. When reflecting on Table 11 in Chapter 4 (p. 79), though, the reason twice as many government school students complete no assignments at home as do independent school students is probably because they do not have computers at home.

The crucial point is, however, that many of the independent schools are providing such technology as part of the curriculum. The research carried out as part of this study confirmed that most government schools cannot compete with such a service due to budgetary limitations. What will continue to occur, then, if the current situation develops, will be a widening gap between the computer access and thus computer literacy of

students in government schools and those of students in independent schools. An injection of government funds into the area of technology across the curriculum may be the only measure that would prevent such a situation. It would also cause all subjects to consider ways in which they can use technology to enhance student learning. At the moment, in English certainly, such considerations are not being realised in the average West Australian classroom.

2. In general, how are word processors being used in English lessons?

According to the results gained in the survey questionnaire, the majority of English teachers are not using word processors in their subject. It should be stressed again that the respondents to the survey are probably those teachers or departments who have an interest in the technology. If we were to assume that the majority of other schools are not active in their word processor usage then the results offered in Table 2 (p. 63) are extremely flattering to subject English.

Again, the 37% of independent schools who reported that teachers use word processors for student writing throughout the writing process, highlights the social issues raised earlier in that only 19% of government schools claimed a similar use of the technology. As mentioned earlier, the word processing skills taught by teachers are minimal according to the teachers interviewed. The survey backs up this assumption in that the majority of teachers in all schools do not teach any of the skills - even ones as basic as saving files. It is quite clearly not considered "their business".

The most common form of access to word processors for English students is in another department. This reinforces the notion of word processing and computers in general being the business of "other" subjects. English departments do not have computer rooms yet because it is assumed they do not need them. Only 12% of all schools could boast such a privilege. The consequences of this are not necessarily negative. If subject English does prefer to gain access to word processors in a computer room of its own (and Table 5, p. 69, does suggest this based on responses to the survey) then it can stipulate from the very start how such

a classroom should be designed. Later on, in the "Further Recommendations" section of this discussion, the author will refer to his own experiences as well as observations made during the research stage of the project in relation to this very important aspect of word processor use in English.

Whilst almost 30% of respondents in the survey stated that they received no access to computers in English and therefore they could not provide a computer to student ratio, 27% claimed a one-to-one ratio. If students are to really make effective use of the technology for their writing, then this ratio needs to be maintained. Certainly there will be times when group collaboration is an effective way of working with computers in English, but this should be the teacher's choice of teaching style rather than a situation brought about by financial constraints or problems with access.

In terms of the types of texts being taught with word processors in subject English, there was a clear contrast in the responses of independent and government school teachers. Government school teachers mainly taught prose texts on word processors and this is related to the technology they

are using and the access to word processors they are given. Because the ratio of students to computers in the two government schools was at best four to one, teachers did not attempt to teach genres via the use of computers. Rather, students took out their draft copies of their texts and typed them onto the computer. Comments made by the teachers in relation to other genres they taught was mainly from their experiences with small groups or, in the case of one teacher, when he was teaching in an independent school with a greater ratio of computers to students.

Clearly, the teachers interviewed in the government schools did not teach other genres due to practical reasons. Firstly, it would be futile to try and teach students how to make up columns and use various fonts to construct a newspaper without having students seated at computers to experiment with such tools. This would be as frustrating as being taught how to drive a car whilst sitting in a lounge chair. The technology needs to be right in front of the student. The other reason it would be impractical is because the teacher would alternatively have to teach such genres four times to each group whose turn it was to go on the computers. Meanwhile, the other twenty two students would have to occupy

themselves in the regular classroom. Quite simply, teachers encourage students to type up neat copies of prose fiction texts because, given the limited technology and access, it is the only genre worth spending the time on.

Independent schools reported a greater variation in which genres they teach because they have a one-to-one computer to student ratio, and the technology they can exploit is more than capable of allowing for all genres in written English. Newspaper texts were being constructed during the interviews in one independent school, and the news articles themselves were down-loaded from a "real" news agency. In a subject which ideally wants to provide real experiences in terms of audience and purpose, such lessons are promising for the future of the subject.

Unfortunately, it may be some time before government school students can enjoy such experiences in English. At Ryedale Senior High School students were using typewriters with two line screens - hardly the ideal machine for teaching students how they can lay out their texts in dynamic ways. The other government school had eight computers in the head of

department's classroom sat idle due to problems setting them up. Such basic problems as access to electrical power points and finding a space to put the machines were preventing them from being used.

It should be stressed that these government schools were identified as possible participants in the study after extensive inquiries in many metropolitan schools. It can be seen then that if such experiences are the optimum in the government school system, then the vast majority of students are receiving no word processor experience in subject English.

The student interviews also confirmed the contrast between the way government and independent schools are using word processors in English. At 45%, almost half of the government school students stated they wrote mainly short stories on word processors, whilst 23% stated they wrote all different kinds of texts. Not surprisingly, 58% of independent school students said that they wrote all different kinds of texts. This confirms the trends that occurred in the teacher interviews, suggesting that independent school students are at present being given

greater opportunities to experiment with different genres on computers than are their government school counterparts.

3. Are there systematic differences in the level of use of word processing technology in state and private school systems? If so, what factors seem to account for this?

As the discussion throughout this chapter so far has established, there are clear differences in the level of use of word processors in independent and government schools. Whilst the specific learning experiences of government school students on word processors in English are inferior to those of independent school students, it would be a mistake to lay the blame for this on teachers. Rather, it is the lack of access that teachers receive to the technology that is preventing them from exploiting computers to their full potential in English. As such, any discussion about the differences between word processor use in state and private systems has to relate to the level of access to computers that government schools are given.

Table 7, shown in Chapter 4 (see p. 72), highlights the fact that almost 70% of government school English teachers are dissatisfied with the access they receive to word processors. Unless this statistic is reduced dramatically, there will continue to be a gap between independent and government school word processor usage.

4. What are the attitudes of teachers and students to the use of word processors in English?

According to the responses to question 10 in the survey questionnaire (see Appendix 2), the vast majority of English teachers would embrace the word processor into subject English if some of the constraints they face were removed. This reveals a positive attitude to the technology across West Australian schools.

The English teachers who took part in the interviews in four Perth high schools also responded positively to the word processor being an integral part of their subject. Only one of the teachers had fears about the isolating nature of computers in education generally, but acknowledged the

usefulness of the technology to all subjects. In general, teachers felt that the word processor could only enhance the subject - giving students more options when creating texts of their own.

The student interviews also reflect a favourable response to the use of word processors in English, with 70% of all students stating that they preferred to write on word processors, rather than using pen and paper. The reasons for this are shown in Table 15 of Chapter 4 (see p. 85) which shows that most students prefer to use word processors because they are faster and neater than writing by hand. It should also be pointed out that the students who stated they preferred handwriting, did so mainly because they can handwrite faster than they can type. Most students at Yr 9 and Yr 10 level would only be finger typing, however, so with an intense typing course their speed would increase. This is very useful information as it tells teachers not only what students like about word processors, but also what they dislike about handwriting. Teachers are aware that students dislike rewriting several drafts of their work and that they find the writing process a rather slow and laborious one at times. The word processor is one way of taking away some of the tedium of writing.

It could be argued that eventually word processors will also seem slow and boring to students, but if this is the latest writing technology that exists for the current generation of students, then they should be given the opportunity to use it.

When asked what they disliked about writing on word processors in English, the majority of students responded with "N/A". As mentioned in the analysis section, this was either because they did not use word processors, or they did not have any dislikes. Interestingly, the next most common response was that relating to technical problems. The statistic in government schools (18%) was slightly higher than in independent schools, which may relate to the lack of support they receive with their technical difficulties. This study has certainly revealed the lack of technical support received by English teachers in government schools in relation to their word processor usage. Independent schools have almost unlimited support, and if word processing English lessons are to be successful in government schools, they too need to be able to call upon expert help if required.

Because the majority of students in all schools stated that they would like to have faster typing skills, it can be concluded that students too welcome the word processor into subject English. Students obviously realise the potential of the technology, but are aware of their own weaknesses in the area of touch typing. English departments, when developing curricula for the computer in English, will need to allow for some typing tuition so that students can build on their speed. There are many programs on the market which allow for personalised tutoring, so students could use the first five or ten minutes of a word processing lesson to practise their typing skills and try to beat their previous speed.

Considering the constraints that teachers face when trying to implement word processors into their English lessons, the attitudes of teachers and students generally are a positive sign of things to come. There is not the resistance to computers that might have been anticipated from a subject traditionally seen as opposed to an increasingly technologising education system.

5. What practical problems impact upon the use of word processors in English lessons?

As has already been established, financial constraints cause the greatest hindrance to the successful implementation of word processors in English. The survey questionnaire revealed that 80% of government schools did not use word processors to their potential because of a lack of finances. Although the independent schools' statistic was smaller, 50% is still a significant percentage. Unfortunately, because of the expense of computers, this problem will not be solved unless educationists at all levels are convinced of the importance of computers to student writing.

For the mean time, schools will have to find other ways to gain access to computers for students. Timetabling of computer rooms might be made better use of, with English teachers booking them more regularly. Indeed, ten English teachers demanding computer access weekly for their students might be the quickest way of finding the funds for a computer room in the English department.

Another source for computers might be from businesses who are updating their systems. The machines which are currently being discarded by big businesses (IBM 386s) are more than capable of running the software students need to experiment with word processing. Because of the fast pace at which computers are being superseded, second-hand computers do not hold their value very well.

Some may argue that the purchasing of second-hand hardware would cause problems in areas of maintenance and technical support, but it could equally be argued that a classroom in the English department with thirty second hand computers is a more desirable situation than what is currently available to English staff. Moreover, many English teachers would be experimenting with word processors themselves for the first time as they program for students' writing. The very latest machines might not be necessary until curricula have caught up with the technology.

Related to the lack of department funds in a direct way is the other main constraint facing schools - lack of access to computers. In all, 71% of

schools in the survey highlighted this as a problem area. Because computer, business and mathematics also require the use of the computer room (and in most schools therefore have "ownership" of the room) English teachers find it difficult to find free spots which are suited to their own timetable. If English departments had their own computer rooms, teachers could be allotted regular timeslots for each class so that they had a choice of whether or not to use the room on certain days.

Other practical problems facing English departments are the time it takes to set up lessons. By the time students have been taken to the computer department (often in a "one-off" situation) and set up, much of the lesson has been wasted. It is clearly through bad experiences in computer rooms that teachers give up attempting to use the technology on a "one-off" basis. Lessons on word processors need to become regular so that students learn to orient themselves quickly and efficiently at the start of a lesson.

The other constraint realised by teachers in the questionnaire was that of "space". Interestingly, the two government schools used for the teacher

interviews were experiencing problems finding a suitable space to set up the word processors. What is clear is that a regular classroom set-up is not the ideal environment for computers in English. Students need to be able to work in many different modes whilst still having access to the computer in front of them. The design of desks, for example, needs to be reconsidered - to mount computers on regular classroom desks would be a nuisance to students when wanting to refer to notes. Such practical issues are crucial to an understanding of the constraints facing teachers who are contemplating using word processors in English.

In terms of technical problems, most teachers interviewed in the study said that they were able to deal with technical hitches during word processing English lessons. Teachers appear to be more than happy to help students with technical problems, but as the survey and teacher interviews highlight, they need support themselves. A lack of computer experience is one area identified as being a constraint to word processor usage - this is a clear signal to the Education Department and Independent School bodies that English teachers will need to be given a

lot of in-service support if they are to provide students with valuable learning on word processors.

6. What have successful schools done to overcome the practical problems of using word processors in English?

Unfortunately, the experiences of the government school teachers interviewed in this study suggest they have not had a great deal of success in overcoming the word processing problems they have faced. The English department at Southcoates Senior High School, at the time this research was carried out, was not using the word processing computers at all. The machines were either not working or were proving too difficult to set up in a convenient place for everyone to take advantage of.

The head of department was, however, extremely keen to overcome these problems and was in the process of organising a separate room for the computers to be used in. He was also organising students to spend time in the English department's office on the CD-ROM computers. He had bought various CDs relating to English and English literature and was at

least in some small way trying to expose students to the multimedia possibilities in subject English.

At Ryedale Senior High School, where students were using the electronic typewriters as word processors, some success has been achieved in response to practical problems. Initially, the teacher with the greatest interest in word processing had the machines in his classroom. He commented on how difficult it was to try and run two lessons at once - one for the word processing students and another for the regular class. He also found that students on the word processors were easily distracted by other students and did not make good use of their word processing time. The teacher therefore moved the machines out into the hallway of the English department where students could have some space of their own, but where they were still at arm's reach if the teacher needed to assist them.

The same teacher also tried using the machines on a trolley, taking them into the classroom at the start of the lesson and hoping to set them up quickly for students to use. Unfortunately, the lesson was not a success

and the teacher found an alternative in the hallway. Whilst the teacher is not entirely happy with the technology he is afforded, he is at least attempting to find the best possible way of using the word processors. This kind of commitment to finding the best situation to meet the needs of teacher and students is in itself a success.

In general, however, the success stories in government schools are few and far between. Until word processing receives the kind of attention it receives in some of the more fortunate independent schools, this will continue to be the case.

The three independent school teachers interviewed in this study came from schools where the English departments had resolved any problems they had setting up word processors in English. Indeed, the teachers spoke about the use of computers occurring at the *school* level, so that English departments did not have to "fight" for access and finance. In both schools, the information technology staff were involved in the English lessons in a supportive way.

At Alderman College, the most obvious and distinctive feature of the word processing classroom was its layout. The room was very large and contained desks that were both unique in their design and placed in "sensible" areas for all styles of teaching. The desks were much larger than the regular classroom desks and had branches on either side to allow students to put their books and files next to them. Also, because the desks had branches on both sides, they suited both left and right-handers.

If the teacher wished to hold an expository lesson, he could simply tell students to move to the left or right of the terminals, where they could see the board and contribute to classroom discussions. The desks all faced the front of the class - allowing for teacher exposition or individual work. Another highlight of this classroom was that the computers were all networked to a master control in the teacher's office next to the room. If the teacher wanted to hold an expository lesson, and wanted to ensure the full attention of all students, he was able to turn off the computers from his office to avoid students fidgeting.

If word processing is to be an important part of the writing components of English curricula, it is these kinds of experiences which need to be used as models for how best to set up the classroom. The present design of computing rooms in most schools does not serve the needs of the English teacher, who will often employ two or three different teaching styles in one lesson.

7. What results have successful schools obtained in relation to the use of word processing in English?

As has already been established, the government school teachers interviewed in the study do not have many "success stories". Due to the limitations placed upon them in terms of technology and access, they are still at the "setting up" stage of word processors in English. That one school is using electronic typewriters, and another has nowhere to put the computers is testimony to this.

The independent schools have had much more success. St David's College was running an elective in Yr 10 entitled "Computers in

English". Students met at one of the information technology classrooms several times a week to take part in a class which saw them constructing a variety of different English texts. These included group newspapers, using news stories down-loaded from a news agency, and picture books, using the program "Story Book Weaver", which allows for selection of graphics and sound to enhance written stories. Both of the teachers interviewed had computer experience and said that they were looking for new ways to exploit the latest multimedia products available, so that they too might be included in the course.

One particular teacher at this school spoke positively of the great satisfaction she is getting from learning with and from the students in her class. Many of them have computers at home and are highly computer literate. Her most successful lessons had involved students showing her new things they had learned - so that the roles of teacher and student were not as "fixed" in the class.

Although the conditions for computing in English were ideal at Alderman College, the teacher, by his own admission, was not utilising the

technology enough. He was in his first year as Head of Department at the school and had not had time to establish a regular word processing component in his English programs. Suffice to say, when he does organise the program, he will have the resources and support of the information technology staff at his disposal. A technical support member of staff was available in the word processing computer room at all times to assist teachers and students.

CHAPTER SIX

CONCLUSION

The general aim of this thesis was to explore the level of use of word processors in West Australian high schools, and to investigate whether or not there is a gap between the state and private systems in their use of the technology. It can be concluded that West Australian schools, in general, have not responded to the large body of literature which has proposed the use of word processors (and computers in general) in English for the past decade.

Although the survey questionnaires were not returned in large numbers, there were enough returned to establish some clear trends in word processor usage. The large majority of English teachers in this state are not using word processors in their English lessons. It is the opinion of the author that this will continue to be the case until the technology receives greater attention in syllabus and curriculum documents. As the 1994 Student Outcome Statements show, this may well be starting to occur slowly.

There does appear to be a definite gap between word processor use in state and private systems. This gap occurs at many different levels. Firstly, the financial limitations placed on government schools are responsible for obvious constraints on the technology they can purchase. The two government schools used in this study were using outdated machines. The two independent schools were using the very latest technology. Also, timetabling did not appear to be a problem in the independent schools, but in government school (due to large numbers) access to word processing facilities was difficult. Other differences occurred at the technical support level, where in the independent schools a "whole school" approach to computers meant that English teachers received excellent technical support.

It should be stressed again that although the experiences of these two independent schools suggest that independent schools are embracing word processing technology in English, this is a very small sample of the independent school population in Western Australia. The survey suggests these two schools would be an exception to the rule. Indeed, the survey exposed the fact that 48% of independent school respondents have

English departments were less than 20% of the teachers are using word processors in English. So, although the experiences of a given “word processing independent school” might be more positive compared with a word processing government school, the general lack of use that this thesis will record applies to both the state and private system. Indeed, further studies might find that the gap is even more accurately described as one between “wealthy” and “poor” schools.

FURTHER RECOMMENDATIONS

Future Research

1. This study has not attempted to analyse closely word processing lessons in practice. It has been the purpose of the study simply to describe general trends and report the experiences of teachers and students. Now that at least one independent school has been identified as using word processors in English in a dynamic way, it is recommended that further research be carried out to determine the success of such programs.

Such a study might provide other teachers with a starting point from where to begin their own word processing programs in English. There are many issues relating to teaching styles which need to be considered when setting up word processors in English. To actually spend time working with a class in an ethnographic style would provide valuable research data in this area.

2. Coincidentally, at the time this research paper was written, the author was himself involved in a word processing writing unit at university. Unfortunately, due to technical difficulties and the different levels of

various students, the word processing part of the unit caused a lot of time to be wasted in the initial periods of each tutorial. Eventually, the unit was moved to a regular classroom where students could again enjoy the comfort of a desk to put their files and where they could face the lecturer. This experience exposed the many practical difficulties that impinge upon the teacher attempting to use word processors in English.

One particular independent school used for the teacher interviews could provide some valuable data in relation to how best to set up the physical environment of the word processing English classroom. Although the amount of word processing in English at this school was minimal, the physical lay out of the room would provide an excellent model for schools wishing to implement their own word processing English programs.

3. As mentioned in Chapter 5, there is further scope for researchers to determine whether there is a difference between the word processor access for English students in “wealthy” and “poor” schools. The two independent schools which were involved in the teacher interviews as part of this study might be best described as “wealthy” schools. Whilst

independent school responses to the general survey questionnaire were poor, future studies might explore this area in more detail.

Action Within Education

1. Although the West Australian Student Outcome Statements (1994) do briefly mention the use of word processors in English, future documents will need to place more emphasis on the use of the technology if it is to be used widely. There are sound theoretical reasons for the inclusion of word processing as a literacy skill students should acquire at school; educational policy makers must now address such issues in future syllabi and curricula.

2. This study has revealed that the vast majority of English teachers welcome the word processor into subject English. However, in most cases, teachers do not have access to the finances they require to set up quality word processing writing programs within English departments. West Australian Schools (whether centrally funded or directly resourced) need to be given increased funding in the area of technology in English,

so that students receive access to word processors on a par with some of the wealthier schools in the state.

3. Due to the fact that many teachers who take on the challenge of teaching English with word processors do not have experience with the technology, professional development courses will need to be put in place. Whether at the school level (with the help of staff in the information technology and business departments) or through professional associations such as the *English Teachers' Association*, teachers need increased support in the technology area.

One of the most positive outcomes of this study is that two schools have been discovered that appear to be tackling the issue of word processors in English at the school level. Teachers from different departments are sharing expertise and resources so that all subjects can take advantage of the great possibilities computers offer students. Such systems might be used as models for other schools who are still struggling to find ways of overcoming the practical and financial problems associated with using word processors in English.

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APPENDICES

Appendix 1: List of Schools

| <u>Senior High Schools</u> | | | | | |
|----------------------------|--------|------|-------------------------------------|--------|------|
| Albany | 8 - 12 | 842 | Karratha | 8 - 12 | 604 |
| Applecross | 8 - 12 | 1229 | Katanning | 8 - 12 | 513 |
| Armadale | 8 - 12 | 684 | Kelmscott | 8 - 12 | 1449 |
| Australind | 8 - 12 | 915 | Kent Street | 8 - 12 | 862 |
| Balga | 8 - 12 | 923 | Kewdale | 8 - 12 | 450 |
| Balcatta | 8 - 12 | 724 | Kwinana | 8 - 12 | 881 |
| Belmont | 8 - 12 | 726 | Lakeland | 8 - 12 | 701 |
| Broome | 8 - 12 | 334 | Leeming | 8 - 12 | 1167 |
| Bunbury | 8 - 12 | 821 | Lesmurdie | 8 - 12 | 844 |
| Busselton | 8 - 12 | 928 | Lockridge | 8 - 12 | 768 |
| Cannington | 8 - 12 | 565 | Lynwood | 8 - 12 | 1240 |
| Carnarvon | 8 - 12 | 301 | Maddington | 8 - 12 | 504 |
| Carine | 8 - 12 | 1330 | Mandurah | 8 - 12 | 1101 |
| Cecil Andrews | 8 - 12 | 767 | Manjimup | 8 - 12 | 558 |
| Central Midlands | 8 - 12 | 209 | Margaret River | 8 - 10 | 406 |
| Churchlands | 8 - 12 | 926 | Melville | 8 - 12 | 796 |
| City Beach | 8 - 12 | 363 | Merredin | 8 - 12 | 351 |
| Collie | 8 - 12 | 608 | Mirabooka | 8 - 12 | 834 |
| Como | 8 - 12 | 701 | Morley | 8 - 12 | 1417 |
| Coodanup | 8 - 12 | 871 | Mount Barker | 8 - 12 | 323 |
| Cragie | 8 - 12 | 887 | Mount Lawley | 8 - 12 | 1229 |
| Duncraig | 8 - 12 | 1034 | Narrogin | 8 - 12 | 822 |
| Eastern Goldfields | 8 - 12 | 1127 | North Albany | 8 - 12 | 776 |
| Eastern Hills | 8 - 12 | 1246 | Northam | 8 - 12 | 672 |
| Esperance | 8 - 12 | 748 | Ocean Reef | 8 - 12 | 1432 |
| Forrestfield | 8 - 12 | 1206 | Padbury | 8 - 12 | 864 |
| Geraldton | 8 - 12 | 1115 | Perth Modern | 8 - 12 | 836 |
| Girrawheen | 8 - 12 | 839 | Pinjarra | 8 - 12 | 530 |
| Gosnells | 8 - 12 | 1151 | Rockingham | 8 - 12 | 1126 |
| Governor Stirling | 8 - 12 | 1153 | Rossmoyne | 8 - 12 | 1380 |
| Greenwood | 8 - 12 | 867 | Safety Bay | 8 - 12 | 1276 |
| Hamilton | 8 - 12 | 1038 | Scarborough | 8 - 12 | 512 |
| Hampton | 8 - 12 | 960 | South Fremantle | 8 - 12 | 777 |
| Harvey Agric. | 8 - 12 | 371 | Swan View | 8 - 12 | 916 |
| Hedland | 8 - 12 | 573 | Swanbourne | 8 - 12 | 602 |
| Hollywood | 8 - 12 | 925 | Thornlie | 8 - 12 | 1118 |
| John Curtin | 8 - 12 | 1098 | Wanneroo | 8 - 12 | 778 |
| John Forrest | 8 - 12 | 795 | Warwick | 8 - 12 | 993 |
| John Willcock | 8 - 12 | 765 | Willeton | 8 - 12 | 1712 |
| Kalamunda | 8 - 12 | 789 | Woodvale | 8 - 12 | 1067 |
| Kambalda | 8 - 12 | 203 | Total no. of Senior High Schools | | 81 |

| <u>Catholic Colleges</u> | | <u>Other Independent Schools</u> | |
|---------------------------------|--------------|--|---------------------------|
| Aquinas | 5 - 12 1011 | All Saints' Coll | pp - 12 925 |
| Aranmore | 8 - 12 668 | Aus. Islam Coll | 8 - 12 182 |
| Bunbury | 8 - 12 634 | Bunbury Cathedr. | pp - 12 490 |
| Chisholm | 8 - 12 1090 | Christ Church Gr | 1 - 12 1240 |
| Christian Bros. | 5 - 12 543 | The Foothills | 8 - 12 100 |
| Corpus Christi | 8 - 12 922 | Frederick Irwin | pp - 11 970 |
| Iona Present. | 8 - 12 586 | Guilford Gramm. | pp - 12 1030 |
| John Paul | 8 - 12 360 | Hale School | 1 - 12 1075 |
| John XXIII | pp - 12 1289 | Helena | 8 - 12 310 |
| Kolbe | 8 - 12 604 | John Calvin | 8 - 12 162 |
| La Salle | 8 - 12 803 | John Wallaston | pp - 12 850 |
| Lumen Christi | 8 - 12 677 | Kingsway | pp - 12 889 |
| Mandurah | 8 - 11 224 | Lake Joondalup | 8 - 12 525 |
| Mater Dei | 8 - 10 248 | Methodist Ladies' | pp - 12 960 |
| Mazenod | 8 - 12 460 | Penrhos | pp - 12 1000 |
| Mercedes | 8 - 12 738 | Perth College | pp - 12 820 |
| Mercy | 8 - 12 685 | Presb. Ladies' | pp - 12 900 |
| Nagle | 8 - 12 682 | Rehoboth Christ. | 8 - 12 200 |
| Newman (Church) | 10 - 12 669 | Scotch College | 1 - 12 1030 |
| Newman (Doubvw.) | 8 - 9 483 | St Hilda's | 1 - 12 950 |
| Prendiville | 8 - 12 801 | St Mark's | pp - 12 942 |
| Sacred Heart | 8 - 12 834 | St Mary's Angl. | pp - 12 1000 |
| Santa Maria | 8 - 12 660 | St Stephen's | pp - 12 930 |
| Servite | 8 - 12 828 | Swan Christ. | 8 - 12 450 |
| Seton | 8 - 12 747 | Wesley College | pp - 12 1150 |
| St Brigid's | 8 - 12 648 | Winthrop Baptist | 8 - 9 150 |
| St Joseph's | pp - 12 737 | | |
| St Luke's | 8 - 12 211 | | |
| St Norbert | 8 - 12 693 | | |
| Trinity | 4 - 12 907 | | |
| Ursula Frayne | pp - 12 989 | | |
| | | Total no. of Independent Schools | 26 |
| Total no. of Catholic Colls | 31 | TOTAL NO. OF NON-GOVT. SCHOOLS FOR RESEARCH | 57 |
| | | TOTAL NO. OF SCHOOLS FOR RESEARCH | 103 + 57 <u>160</u> |

Appendix 2: Survey Questionnaire

1. How many teachers are in your English Department?
2. How many teachers are incorporating word processors into the writing component of their English programs in some capacity?
3. How are teachers incorporating word processors into their English lessons? **NO. OF TEACHERS**
- students word process final copies of work, without using editing tools (block, cut, copy, paste, delete, insert)
 - students word process final copies of work, using editing tools
 - students word process from re-draft stage, without using editing tools
 - students word process from re-draft stage, using editing tools
 - students word process from draft stage, without using editing tools
 - students word process from draft stage, using editing tools
 - students word process from pre-writing stage, without using editing tools
 - students word process from pre-writing stage, using editing tools
 - Other.....
.....
4. Which of the following word processing/computer skills are taught to students as part of English word processing programs?
1 = taught by all teachers using word processors; 2 = taught by most teachers using word processors; 3 = taught by some teachers using word processors; 4 = not taught. Please tick one box per line.
- | | 1 | 2 | 3 | 4 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| - Turning on computer and opening file | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - Saving documents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - Printing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - Editing skills (cutting, pasting, copying, deleting, inserting etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - Efficient use of spell checkers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Italicising/Underlining/Bolding

- Page set up and tab skills

- Advanced skills (headers-footers/macros/importing graphics/merging/creating tables etc.)

5. How do teachers gain access to word processors for their students during English lessons?

NO. OF TEACHERS

A - Computer lab in English department

B - Computer lab in other department

C - Students bring personal notebook computers into classroom

D - School-owned notebook computers brought into classroom

E - Other.....
.....

6. Using the categories in Question 5, rank the ways in which you would prefer your students to gain access to word processors in English (1 = most preferable)

A

B

C

D

Other.....
.....

7. When your English students gain access to word processors in English, what is the ratio of computers to students?

1:1

1:2

1:3

1:4+

8. How would you describe the access your department receives to computers for word processing lessons?

Non-existent

unsatisfactory

satisfactory

Very Good

Excellent

9. Which of the following impose the greatest constraints on the use of word processors in English? 1 = significant constraints; 2 = some constraints; 3 = no constraints

- Lack of access to computers
- Lack of time
- Lack of school/department funds
- Lack of space
- Classroom management concerns
- Teachers' limited experience with word processors/computers
- Teachers belief that writing is better taught without the use of word processors
- Other.....
.....

10. If some or all of the above constraints were removed, would you incorporate more word processing into the writing components of your English programs? YES NO

Appendix 3: Teacher Question Sheet

1. Which department "owns" the computers your students work on during their word processing English lessons?
2. Are you satisfied with the access you are given for your word processing writing lessons?
3. Do you think you have enough say in decisions made about the purchasing of hardware and software for word processing in English?
4. Have you experienced any practical problems with management of time and space in word processing English lessons?
5. How much of a problem are students' keyboarding skills in word processing English lessons? What do you do to address this problem?
6. Do you think that any particular groups of students benefit from using word processors in English? If so, which ones?
7. Has your own word processing/computer knowledge always been sufficient to deal with students' problems when they write on word processors in English?
8. What kind of computer/word processing support would best suit your needs as teacher of word processing in English?
9. What specific computer and word processing skills do you teach students as part of your English programs?
10. Do you use word processors more when teaching some genres rather than others? If so, which genres do you use it more for - and why?

11. **What proportion of student writing time is/would you like to see devoted to writing on word processors?**
12. **How do you think the skills taught in "word processing in English" differ from those word processing skills taught as part of business and computer courses?**
13. **When students write on word processors in their English lessons, do you think the actual processes of writing (prewriting, drafting, editing etc.) change? If so, in what way?**
14. **How does the "word processing computer" fit into or conflict with your beliefs about what the purpose of subject English is?**
15. **Can you tell me about some of your most successful word processing English lessons?**
16. **Can you tell me about some of your most unsuccessful word processing English lessons?**

Appendix 4: Student Question Sheet

1. **Where did you first learn to use a word processor? (home, school, course?)**
2. **How many of your "take-home" English assignments do you complete on a word processor?**
3. **What kind of writing do you mainly do with word processors in English? (stories? newspapers? poems? reports? all different kinds?)**
4. **How is writing with a word processor different from writing with a pen and paper?**
5. **Do you prefer writing with a pen and paper or a word processor? Explain why.**
6. **What do you like about writing on a word processor in English?**
7. **What do you dislike about writing on a word processor in English?**
8. **Do you think you get enough time on word processors to finish your work in English lessons?**

9. **Would you like to have better typing skills to help your word processing speed?**

10. **How much help does your English teacher provide you with when you have problems with the word processor in English lessons?**