

EXAMINING STUDENTS' ATTITUDES AND USE OF TECHNOLOGY TOOLS
TO WRITE

A THESIS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

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ABSTRACT

The normalization of technology in many aspects of our lives suggests a need to examine the impact of using technology on language learning and use. There is an underlying assumption that children born in this technological age are “digital natives,” (Prensky, 2001) who are naturally proficient at using technology and need no further training. Even though recent studies have shown the benefits of technology in facilitating learning, Prensky’s assumption, that this generation are “born naturals” at using technology, should not be left unexamined. Although there is a growing literature that covers the students’ experiences and attitudes toward technology tools used in writing or online publishing, many aspects of the learning experience are still unknown such as what technologies learners prefer and why. In addition, there are few studies that compare the attitudes of graduate and undergraduate students towards these writing tools.

This study examined the differences between graduate and undergraduate students in their attitudes towards using technology to enhance their writing skills. 10 MATESOL students and 36 undergraduate students currently enrolled at the American University of Sharjah participated in this study. This study addressed areas related to

technology use, perceived advantages and disadvantages from students of both levels towards technology tools used to write, and the discrepancies between the two levels in their attitudes. Furthermore, the findings of the study suggest that among the participants there is a high usage rate of technology tools to write. Students from both levels exhibited good implementation of technology tools to write, research, and augment their lexicon. However, there are some results that show students, from both levels, experience frustration related to the limitations of technology or lack of training.

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DEDICATION

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CHAPTER ONE

INTRODUCTION

Purpose of the Study

Voicing students' perceptions and personal experiences in using technology for writing can assist professors in deciding which technology to utilize in their classrooms. Many students nowadays are better equipped with and knowledgeable about technology tools, as they seem to be, in Prensky's (2001) terms, "digital natives." Often, technology tools such as software or web based applications are reviewed from the perspective of the teacher or the designer (Fischer, 2007; Otto & Pusack, 2009). Therefore, it is important to investigate students' needs and preferences in using technology which can highlight the technologies used in their own learning and why they prefer some tools over others.

Examining students' experience with writing tools might shed light on students' learning styles outside their classrooms, thus providing the teacher with insights on how to promote students' autonomy by means of modern technology. Also, the voices of the students point out their areas of weakness, for example, weak typing skills that the teacher can bridge. The multitude of technologies for the teacher to choose from is very overwhelming; therefore, narrowing them down, in the light of students' needs and preferences, could improve students' learning experiences. Investigating students from different courses at both the graduate and the undergraduate level can shed light on students' perceived needs and preferences regarding the use of technology at different stages of their academic lives. Thus, this study seeks to answer the following research questions:

(1)- What technology tools do students use to improve their writing skills?

(2)- What are the perceived advantages, if any, held by students of both levels regarding the use of technology to help improve their writing skills inside and outside the classroom?

(3)- What are the perceived disadvantages of such tools, if any, held by the students?

(4)- What differences, if any, in attitudes do graduate and undergraduate students hold toward such tools?

Significance of the Study

Writing is a very important skill. For many students in higher education, assessment is related to their writing proficiency. Students are assessed on their writing skills, command of the language, as well as how well they know the content of their work. Nowadays there are more tools that facilitate writing than ever before. These tools are no longer restricted to software and word processing applications. Some of the new platforms, such as wikis, blogs, discussion boards and other Web 2.0 tools, have revolutionized the experience of writing. Writing can be a collaborative act in which students can share their original work while their peers can update or edit the content on platforms like a wiki. Tools like Blackboard and blogs enable students to post their papers for peer review. Students can also use these platforms to comment on other students' work. One consequence of this revolution in writing tools is that professors are now expected to use technology tools in their classrooms, but many still do not know how these tools impact their students' attitudes or linguistic skills. As Sokolik (2001) points out, "with the development of new technologies, there has been an attendant interest in applying these technologies in the educational arena, and

in making predictions of how they would affect the educational future of our classrooms and students” (p. 477).

Recently, in most universities, the students are asked to formally evaluate their professors’ use of technology in their classrooms. Professors may feel pressured by their administrations to use technology tools, for example, iLearn, PowerPoint, etc. However, whether the technology tools that professors use in their classes are perceived as effective or not is an area that needs more exploration. Due to the fact that professors’ use of technology is usually one of the criteria by which professors are evaluated, this might lead professors to mistakenly utilize the same set of technology tools in different courses and levels which might not effectively meet the students’ needs. Also, knowing what technologies the students prefer to use outside and inside the class can make choosing technology tools, which are appropriate to the level, an easier task.

The teacher’s assessment of the students’ use of technology to write and share their work can help him/her in promoting independent learning through the use of technology outside the class. As Gunn and Kassas (2010) point out, there are many studies about students’ general attitudes towards technology use emerging from the United States, the United Kingdom, Saudi Arabia, Jordan, and even the United Arab Emirates, but there is still a gap when it comes to varying perceptions depending on the students’ academic levels. Therefore, exploring students’ attitudes at different levels of education might help teachers make better-informed decisions which respond to students’ perceived needs.

Context

The participants in this study were students who were enrolled at the American University of Sharjah (AUS) in an undergraduate course (ENG 204) during the summer semester 2010 and students in the MA TESOL graduate program. ENG 204 is the course that covers advanced academic writing skills. At the end of the course the students are expected to produce final research papers that meet university level research skills. They might use Word documents, discussion board, and iLearn, as well as the occasional use of PowerPoint presentations. The MATESOL graduate students are either ESL teachers in practice or studying to become teachers. Many of their writing assignments are reflection journals that can be posted on iLearn or on a blog. They also write research papers, literature reviews, synthesis essays, critiques, and other genres of academic writing. They are expected to type their assignments in a word processor. The graduate and undergraduate students come from diverse ethnic and linguistic backgrounds, with participants coming from Iran, India, the Arabian Gulf, and Middle East, and America.

Overview of the Chapters

Chapter one has an introduction of this study, research questions, significance of the study, and its context. Chapter two surveys the literature related to the subject of this study. This chapter debates Prensky's (2001) assumption about this generation being "digital natives." Then it reviews the relationship between writing as a cognitive activity and the use of technology tools. Also, several findings about the topic of students' attitudes towards technology tools are cited to examine possible positive and negative attitudes towards using these tools to write.

Chapter three is about the design of the study, the adopted methodology of collecting data, and the description of the participants. Chapter four analyses the data and discusses the study. It covers the trends and attitudes displayed by students from both levels. Chapter five concludes with implication of the study's finding for curriculum designers and policy makers. It also includes the limitations of this study and suggestions for further research. The appendices include the undergraduate and graduate student surveys and interview questions.

CHAPTER TWO

REVIEW OF THE LITERATURE

Much of the world operates under the spell of technology. In the developed world, students take it for granted that they have to use technology to meet their academic requirements. This is one of the characteristics related to the “net generation” students. “Net generation” is a term that refers to the generation that was born in the 80s and characterized by their reliance on digital technology in daily life and thus preferring more interactive mode of classroom instruction (Tapscott, 1998). It is believed that the Technology tools that students from the “net generation” use to write change the experience of writing. Nevertheless, claims about the “net generation” (Tapscott, 1998) or the impact of technology on students should not remain unexamined.

This chapter offers a review of the debates about today’s students being technology natives and to what extent technology has become normalized. This chapter closely examines findings about the impact of some technology tools like wikis, blogs, and discussion boards on students’ writing. It also offers a review of some recent studies about students’ attitude towards technology tools used to write.

Technology and Normalization

The concept of normalization, according to Bax (2003), refers to “the stage when the technology becomes invisible embedded in everyday practice” (p. 23). This reflects a stage in which technology, of any kind, is so integrated that it becomes as normal as use of a pen. Bax believes that normalization had yet to be realized in language classes and that several steps were needed before it could occur. First, he suggests identifying the “criterial factors which normalization requires” (p. 24) and

then, “auditing the practice of each teaching context in the light of these criteria.”

Lastly, “the final step is to adjust our current practice in each aspect so as to encourage normalization” (p. 24). Only then can we have a clear framework that will pave the way to total normalization of technology.

Kern (2006) argues that the situation now with technology mandates that teachers research and reflect critically on students’ needs pertaining to technologies used to assist language learning. In this light, language teachers “still need to know how to make the best uses of [technology in the language classroom] to accomplish specific goals” (Kern, 2006, p.189). Regardless of whether we are now in the stage of normalization or not, what is more important is that language teachers should continue to “reflect on pedagogy in technology-mediated ...environments and assess the extended use and value of older technologies, as well as those that are state of the art, which can remain highly relevant for language learning” (Levy, 2009, p. 779).

Digital Natives

According to Prensky (2001), the digital native generation refers to individuals who were born after 1980. They are also known as the “net generation” (Tapscott, 1998) because of their reliance on technology and familiarity with its different applications. The digital native generation is characterized by complete immersion in technology use while the digital immigrant generation is born before the digital revolution and characterized by somewhat good adaptation of technology in daily use.

Prensky (2001) claims that this generation is more fluent in using technology and thus they differ in their learning styles. He claims that “Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach” (p.1). These digital native students are said to be more

comfortable using technology, which makes them more task-oriented, preferring to get information quickly, and being accustomed to multitasking (Conole, 2008). Students no longer appreciate the technology-void teaching style of their “digital immigrant” teachers (Prensky, 2001). Thus, a fundamental reform of teaching approaches should be implemented to meet these students’ needs and learning preferences.

Prensky claims that this generation is more attuned to the use of technology. However, not everyone agrees. Bennet, Maton, and Kervin (2008), for example, examine these claims about “digital natives” and “net generation”. They explain that instead of viewing the new generation’s sophisticated relationship with technology as something that necessitates a radical reform in education, they called for further research and more informed investigation. As Bennet, Maton, and Kervin (2008) put it, what remains understudied is the “the relationship between technology access, use and skill, and the attitudinal characteristic and disposition commonly ascribed to the digital natives generation” (p. 778). Bennet, Maton, and Kervin (2008) found that recent research outcomes show that a large percentage of young people are skilled users of technology, but that there is also an undeniable population of this generation that is not at the same competence level or has the same access to technology tools. The danger of the claims of digital natives is that educational systems might neglect students who are under-skilled in technology use. Also, there is another assumption that comes with the idea that this generation consists of “digital natives,” which is that they have another learning style.

In a survey study carried out by Jones, Ramanau, Simon, and Graham (2010), the findings showed that the students believed that they used technology extensively.

The students used the same technology tools for both interpersonal and educational purposes. Students in the survey reported different opinions on what technologies they were expected to use in some of the university courses, suggesting that it was not immediately obvious which technologies were best to use. In general, Jones et al. (2010) agreed that “we should not assume students fully understand course requirement in terms of technology use, no matter how clearly these requirement are expressed and no matter how often they are reinforced” (p. 730). This resonates with Gunn and Kassas’s (2010) findings that students seemed to need more instruction and assistance from their teachers with technology used in their learning despite their overall positive attitudes towards technology tools.

Writing and Technology

The second part of the 20th century witnessed the invention of new technologies like the internet which changed our interaction and communication to the point of no return. Therefore, the normalization of technology in today’s world is bound to change the way we define knowledge and deliver instructions in the classroom, particularly on a skill like writing. As Levy (2009) indicates, people perceived word processing that first emerged in the 80s with very positive attitudes since this tool changed the experience of writing. More than 20 years after the invention of word processing, students and teachers use a myriad of tools to write, edit, and publish their writing, such as blogs, wikis, and even Power Point. Today, the technology tools that impact the writing experience abound. As Olshtain (2001) claims, the technological advancement has transformed writing to what is beyond the traditional paper and pencil medium, or even print press. As Godwin- Jones (2008) notes, writing applications have changed the “modes and the uses of writing online”

(p. 7). Technology has added a new dimension to the experience of writing because the “interaction with peers and teacher will provide multiple opportunities for interaction with the language in different ways” (Erben, Ban, & Castaneda, 2009, p. 140). According to their claim, this will provide more chances to acquire better writing skills. Students in developed countries with cutting edge technology, regardless of their educational setting, are expected to progress and exhibit more advanced skills and better linguistic proficiency. Therefore, teachers are in constant search for choices and tools that will promote this objective (Kroll, 2001).

The main goal of any writing course should be to increase the students’ writing proficiency and promote autonomy (Kroll, 2001). The student writers should “learn to become informed and independent readers of their own texts with the ability to create, revise, and reshape papers to meet the needs of whatever writing task they are assigned”(Kroll, p. 223). The challenges facing language teachers now are even more than ever because they have to “extend students’ Internet world beyond their first language, to leverage participation in the read-write Web as a learning opportunity for language self-development, and to find means to link informal and recreational writing with formal and academic writing” (Godwin- Jones, 2009, p. 7). This indicates that the opportunity to write, reflect, edit, and publish with technology, both in a formal and an informal setting, can improve learners’ writing skills (Erben, Ban, & Castaneda, 2009, p. 17). After all, as Erben, Ban, and Castaneda (2009) point out, the “discussion of texts and the production of text are important practices in the development of content- area literacy and learning” (p. 17). Levy (2009) states many of the Web 2.0 technologies like wikis have expanded the experience of writing because they incorporate new dimensions like social networking and multi-literacies

by integrating videos and images (Levy, 2009). Due to the fact that these recent emerging technologies have changed the experience of writing, it is important to review these tools in light of students' own perceptions.

Web Based Documenting and Publishing

Wikis

There is no doubt that web-based instruction has changed the nature of writing. Wikis are a revolutionary tool that enables students to publish and share their work with a larger reading community (Cundell, 2008). It is a collaborative website that "many people can work on or edit" (Erben, Ban, & Castaneda, 2009, p. 133). The original purpose behind this tool was for users to post their writing in order for it to be accessed by others and changed or edited (Erben, Ban & Castaneda, 2009, p. 133). Thus, the webpage is constantly updated by different users. The real breakthrough in wikis is transforming the experience of writing from primarily an individual act to a global "collaborative project work" (Cundell, 2008, p. 16). As Cundell suggests, educators can focus on introducing wikis to facilitate collaborative work and creating a learning community (p. 16). According to Erben, Ban, and Castaneda (2009), this collaborative act of writing is perhaps a good application of Vygotsky's notion of the zone of proximal development (ZPD). They point out, "ELL's use of wikis fits nicely within [the concept of ZPD] because as they work together their writing community is formed and the meditational process is enriched" (Erben, Ban & Castaneda, 2009, p. 133).

Wikis are said to promote a student-centered approach because students are the real editors of their wiki page. Students decide what stays and what should be removed or edited (Erben, Ban, & Castaneda, 2009, p. 135). As Richardson (2006)

indicates, the less control the teacher has over a wiki project, the more these projects prove to be successful and efficient. In addition to participating in process writing through wikis, there are other important writing-related applications of a wiki. For example, wikis can be used by the students to create pages that are based on the teacher's lectures. A wiki page can include target vocabulary and specific terms, summaries, journals or reflection on some lectures and assignments (Cundell, 2008). Also, Godwin-Jones (2008) points out, wikis can also be a great platform for e-portfolios.

Blogs

Blogs are a great tool for online publishing and asynchronous communication. Blogs refer to "web logs or journals, posted on a website where they can be seen by anyone" (Erben, Ban, & Castaneda, 2009, p. 136). Blogs can have many applications related to writing, as they "furnish dynamic, versatile, and inexpensive environments for publishing student work, not to mention teacher assignments, syllabi, announcements, and parent communications" (Frye, Trathen, & Koppenhaver, 2010, p. 50). The applications of blogs can vary from publishing personal journals to posting or using online notebooks (Cundell, 2008). Although blogs are similar to wikis in terms of facilitating online publishing, blogs usually do not allow others to edit the content unless the blog's main administrator allows his/her visitors to post comments (Erben, Ban, & Castaneda).

When blogs are used as journals, the students can then develop their writing skills since they can use blogs to respond to their assigned reading, or as a free writing prompt, or even to reflect generally on a topic of their preference (Cundell, 2008). Blogs also do not have to be in one language. According to Erben, Ban, and

Castaneda (2009), publishing bilingual or multilingual blogs can promote literacy. Blogs can replace content management systems (CMS) in institutions that cannot afford such services which allow students to communicate with each other and post their reflections without any cost (Cundell, 2008). Overall, blogs can motivate learners in terms of self-expression, particularly because they promote informal writing (Levy, 2009). However, blogs seem to demand more teaching moderation and monitoring to be successful in an educational setting (Levy, 2009).

Discussion Board

According to Cundell (2008), discussion boards are “powerful tools that encourage well- developed and organized writing... [which] are an integral part of most Course Management systems (CMS)” (p. 14). A very famous example of platforms that allow discussion board is Blackboard (Godwin-Jones, 2002). This platform makes creating a web site for a class very easy (Godwin-Jones, 2002). There are direct pedagogical implications of using a discussion board that are related to writing. What is great about a discussion board is that it allows learners who cannot participate in class to voice their ideas ask and respond to questions and post their journals and reflections (Cundell, 2008). A study carried out by Al-Jarf (2004) showcased how a discussion board was incorporated in a low proficiency EFL class as part of the class writing assignments in addition to in-class writing. The results showed significant improvement in students’ writing style and quality. As Al-Jarf (2004) points out, discussion boards are now providing new mediums of social interaction and a new learning setting. Students who shared their writing compared their mechanical mistakes and style with others. As Zhan, Kelly, MeeAeng, and Fitzgerald (2006) indicate, the ZPD theory applies to discussion boards particularly

because they allow room for collaborative work. The downside, however, can be an imbalance in participation (Gunn, 2009). Often, some students will dominate discussion boards which will leave others marginalized.

Investigating Students' Attitudes toward Technology

There are many issues entangled with students' use of technology outside the classroom. Sagarra and Zapata (2008) stress the need to investigate the students' attitudes since "participation in courses in which technology is part of the curriculum can shape attitudes toward technology tools and, in turn, influence the success or failure of those courses" (p. 209). The problem here is that in most cases, assumptions about the students' use of technology are made on the basis of the availability of these tools. However, simply because a given tool is available does not really mean that learners will be able to make the best use of it.

Therefore, it is very important to investigate students' attitudes towards technology tools and whether these tools are used at all. As Fischer (2007) questions, "Do we know in any detail the extent to which students use software components as they navigate their way through an application?" (p. 410). These concerns are echoed by Erben, Ban, and Castaneda (2009) when they point out that students' use and engagement with new technologies like sending their friends an SMS, participating in networking websites, or downloading a podcast, do not mean that they are "technoliterate" (p. 79). The fact that students might read blogs and surf the World Wide Web does not necessarily mean that they will use these tools for learning. As Fischer (2007) states, the challenge now is mainly related to collecting data that reflects how technology is used by the students to assist their language learning. Erben, Ban, and Castaneda (2009) recommend that "one way to gauge student's

computer literacy level is to conduct a needs assessment at the beginning of the year” (p. 79). Erben, Ban, and Castaneda (2009) claim that the results of this needs’ assessment will help the teacher reflect on how much technology to incorporate in class and “how much scaffolding a teacher needs in order to support students’ learning” (p. 79).

Students’ adequate use of technology is related to both the students’ training and knowledge about using technology and the students’ attitude. Levy (2009) argues that success in using technology tools is determined by both the teacher’s and the learner’s adequate understanding of this tool. Levy gives the example of Microsoft Word, the word processing program that most students use, yet not all students make use of many important features like Track Changes, Bookmark, and Hyperlink. In light of investigating the students’ attitudes towards technology in Saudi Arabia, Doll (2008) states that “the faculty in [their] university were able to begin to streamline their education of students learning English to more appropriately respond to their English level preferences” (Doll, 2008, p. 189). Surveying the students’ perceived needs can help the teacher address the challenges that the students are having with technology. This can help in fostering positive attitudes both towards the language and towards the use of technology.

Investigating Students’ Positive Attitudes

In a study that dates back to 1991, Nue and Scarcella (1991) concluded that when teachers used computer tools in writing instruction, students started to feel more positive about the process of writing in general. This changed the role of the teacher. By using word-processing tools, the classroom shifted from being a teacher-centered setting to a learner-centered environment (Nue & Scarcella, 1991).

Therefore, assessing the actual degree of students' use and reliance on word-processing technology as a tool can enable us to explore areas that we need to address further in classroom instruction. Also, technology in this case can be used to foster positive attitudes towards language learning in general.

The new application of technology in writing classrooms was followed by studies examining the "impact of the new tools on students' motivation and language acquisition" which shows a prevalence of positive attitudes (Sagarra & Zapata, 2008, p. 209). Sagarra and Zapata (2008) investigated students' attitudes about using web-based workbooks and a course management system called ANGEL. The study covered 245 second language Spanish learners over two semesters. Overall, the students' attitudes were positive and emphasized aspects like "user friendliness, instant error correction feedback... [and other areas of] grammar and vocabulary acquisition" (p. 208). Students appreciated submitting their work and answering vocabulary and grammar items on ANGEL. In Sagarra and Zapata (2008), students reported that this new medium, ANGEL, allowed them to learn on their own and at their preferred pace. Students in this study viewed submitting their work on ANGEL favorably because it allowed them to take more time to answer challenging tasks and ANGEL helped them avoid the stressful situation that might occur in class when they are pressured to answer on the spot. Also, the students surveyed reported that ANGEL was user-friendly which meant that they learned how to use it with minimal assistance. These positive attitudes came coupled with remarkable increase in the students' scores in grammar finals. Grammar and vocabulary are logically sub-skills that are related to writing skills (Olshtain, 2001). Thus, this study is particularly important because it suggests that students' positive attitudes towards some

technology tools can positively impact their writing skills since vocabulary and grammar are regarded essential components of writing. Gunn and Kassar (2010) investigated students' attitudes towards using tools like Microsoft Word and grammar software. The study was carried out at the American University of Sharjah, and surveyed Intensive English Language Program (IEP) students. They found that students viewed these tools favorably, especially in that these tools improved their writing by detecting their grammar and spelling mistakes. This helped them in improving their linguistic skills for upcoming assignments. In addition to that, the surveyed students had positive attitudes towards the online dictionary because it helped them develop their lexicon.

In a study carried out by Conole (2008), the impact of Web 2.0 and other new communication media was investigated. The study voiced the participating students' experience related to using technology. The students expressed positive attitudes about using communication technologies such as chat rooms and writing emails. Many students reported that the "use of communication technologies to support their studies was extensive" (Conole, 2008, p. 134). The students valued the flexibility inherent in the use of emails because it enabled them to get quick responses and feedback from their instructors outside the classroom. Overall, as Conole (2008) claimed, the study shows how the students are "task oriented and experimental" (p. 9). Students preferred to get the information quickly. Most students valued using online dictionaries in addition to Microsoft Word to detect their grammar and spelling mistakes which helped them present their work in a better way. However, Conole (2008) implies that the fact that students' final work was presented nicely, does not necessarily warrant better content. Conole's (2008) remark reminds us that it is

important to make a distinction between the students' positive attitudes expressed about technology in improving their learning and their actual competence. It is important to note that Conole (2008) states that the surveyed students appeared to rely heavily on Microsoft Word and PowerPoint, suggesting that they might not be able to finish their writing tasks without these tools (p. 135).

Investigating Students' Attitudes towards Technology in the Gulf Region

The aforementioned findings about students' favorable attitudes towards technology resonate with studies conducted here in the Gulf region, particularly in Saudi Arabia and the UAE. It is worth noting that some of these studies like the one carried by Al-Shammari (2008) and Mynard and Troudi (2008) clearly emphasize gender roles affecting the female students' attitudes.

Al-Shammari (2009) argues that there are few studies about technology in the classroom here in the Gulf region, especially the ones that investigate students' attitudes towards technology (2009, p. 124). Al-Shammari's (2009) study examines students' attitudes, in general, towards CALL (Computer Assisted Language Learning) in the Institute of Public Administration (IPA) in Saudi Arabia. Also, she tried to examine the differences between female and male students and which had more positive attitudes. Her detailed statistical analysis revealed that female students had, by far, more positive attitudes. Among the most important findings in this study is that students liked to use technology in their language learning which might positively impact language acquisition (p. 133).

Also, Al-Shammari argues that these positive attitudes held by female students can be attributed to the restrictions that women experience in conservative societies. Therefore, technology offers female students learning opportunities that are

otherwise not feasible. The new idea of technology enabling the female students to communicate with the outside world is also echoed in Mynard and Troudi's (2008) study. They investigated whether students perceived chat rooms as "appropriate" and beneficial and the way chat rooms served language learning. The participants were 10 female students of the first year of the "foundation" English program and their ages varied from 18 to 26. They participated in an experiment in which they participated in "virtual classrooms" which refers to a chatting session that took part during the class time. The aim of the study was not to generalize the findings, but to explore the participants' perceptions of a given learning tool. The students' responses revolved around three main issues: enjoying the activity, language learning, and learning about culturally specific aspects pertaining to the speaker's country. The majority of the students found the activity enjoyable because they felt that these virtual chatting sessions helped them achieve some progress in language learning and it was fun and enjoyable. The students expressed that chatting helped them communicate and overcome their inhibition and shyness.

The fact that these female students had more access to other cultures via chatting might have helped them in developing meta-linguistic skills and thus improve writing. When the female students in this study were asked why they enjoyed the chatting classes, the majority of the students reported that it made them improve their English. They attributed this to the idea that chatting helped them improve their vocabulary, grammar, and their writing and composition skills. The surveyed students loved to be exposed to authentic input and reported learning new vocabulary items that more were challenging when they chatted with native speakers.

Also, they learned new words by inferring their meaning and noticing them in context.

Regardless of the students' positive attitudes towards the use of chat rooms in this study, it is important to note that the focus of the chatting tasks puts accuracy in second place (p. 251). When fluency and intelligible communication is valued more, this can lead to the occurrence of spelling and grammatical mistakes. Nonetheless, Mynrad and Troudi (2008) concluded that the participants developed good awareness about language. As Mynrad and Troudi (2008) assert, the surveyed students "perceived activities to be useful for developing both receptive and productive skills" (p. 259). They also claim that the students used comprehension strategies to finish the task, challenged themselves to practice new advanced vocabulary, and improved their grammar and spelling skills.

Investigating Students' Negative Attitudes

There are some drawbacks that come with the use of technology which sometimes can adversely impact the students' attitudes towards using technology to learn. A very good example of this is students' responses pertaining to ANGEL in Sagarra and Zapata's (2008) study. The students agreed that this online workbook was time-consuming when it came to completing their tasks and it did not provide them with a final accurate answer, due to its configuration, after the students posted their answers.

Conole's (2008) study provides interesting findings about the students' perception of discussion boards used as part of their course work. Conole voices some of the students' challenges regarding the use of the discussion forum on Blackboard. The most common complaint about the discussion board was that some

students dominate the discussion which left some students more inclined to read the forum rather than participate. Others attributed their frustration with discussion board to the fact that there was a “time lag” between the time the students posted their contribution and the time they got any response, which made it hard to engage in inspiring or deep conversations. Conole stated how students preferred other types of media like chat and social networking pages in which they interact with others in a more immediate way.

Conclusion

This literature review has discussed the integration of technology tools in the classroom and how this impacts students’ writing. Students certainly have different experiences of the writing process when they use technology tools. The outcomes of Sagarra and Zapata (2008), Conole (2008), and Gunn and Kassas (2010) offer insight into the experience of “digital native” students. Emerging technology tools like Web 2.0, discussion board, blogs, and wikis facilitate collaborative writing and scaffolding and make it more feasible than ever before.

CHAPTER THREE

METHODOLOGY

Introduction

This study examines graduate and undergraduate students' use and attitudes towards technology tools used to write. Surveys and follow-up interviews were used to answer the following research questions:

- (1)- What technology tools do students use to improve their writing skills?
- (2)- What are the perceived advantages, if any, held by students of both levels regarding the use of technology to help improve their writing skills inside and outside the classroom?
- (3)- What are the perceived disadvantages of such tools, if any, held by the students?
- (4)- What differences, if any, in attitudes do graduate and undergraduate students hold toward such tools?

Research Instruments

Surveys and follow-up interviews were used to gather the data for this study. The surveys were distributed to undergraduate and graduate students (see Appendices A and B). Both surveys asked the same questions in order to address issues of technology usage, perceived advantages and disadvantages among both groups (undergraduate and graduates), and differences among undergraduate and graduate students. The survey included demographic, closed-ended and open-ended questions. The survey also included a consent statement through which only those who agreed to be contacted were selected to participate in the interview.

The follow-up interviews were conducted with the participants who volunteered. The interviews were semi-structured with open-ended questions (see Appendix C) in order to triangulate the results of the survey and to give the students the chance to further elaborate their views about the use of technology in their writing.

Data Collection

After being granted the Institutional Review Board (IRB) approval at AUS, the surveys were distributed to both undergraduate and graduate students who were willing to participate in this study. Participation was strictly voluntary for all students. The survey was a basic paper- and- pencil questionnaire; however, I sent the graduate students the surveys via email which is more convenient for adult students in the MA program. In general, MATESOL classes are capped at 15 students and, thus, ten participants is a sufficient number to demonstrate dominant trends and attitudes.

I compared the responses from the graduate students and the undergraduate students to find answers to my research questions. In light of the survey's responses, I interviewed six students from those who agreed to leave their personal contacts for further reference. I chose three students from two sections of ENG 204, and three students from the TESOL program. This was contrary to what I planned initially, as I wanted to interview eight students, four from each category; however, it was very hard to find undergraduate students who responded to my phone calls. Therefore, I decided to interview three from the graduate and three from the undergraduate students for a total of six. All interviews were audio-taped. Only one interview was

not face-to-face which was with a graduate student who suggested a phone interview. This interview was also recorded digitally.

Participants

Subjects for this study included 46 students. I surveyed 36 students from two different sections of an undergraduate course, ENG 204-Advanced Academic Writing (see Appendix A). ENG 204-Advanced Academic Writing is the course that covers advanced academic writing skills. These sections were chosen based on professors who volunteered to allow me to survey their classes. The surveys were handed out in the first week of the Summer, 2010 session. The surveyed students had taken at least one prior writing course in the department of Writing Studies. The outcomes of the writing courses are the same for all professors, but each professor is free to teach the courses as he/she sees fit and use technology as per his /her preference. Thus, the surveyed students have had different exposure to technology in their writing classes. At the end of any writing course, students are expected to produce final papers that meet university level writing skills.

Also, I surveyed 10 students who are currently enrolled in MATESOL graduate courses at AUS (see Appendix B). The MATESOL surveys were sent via email to students listed on the current MATESOL mailing list. This list does not include MATESOL alumni. Tables 1 and 2 show demographic and background information about both the graduate and undergraduate students .

Table 1. Demographic information about the surveyed participants

Participant	Age Group				Gender	
	18-20	21-24	25-30	31+	Female	Male
Undergraduate Total of 36	29	7	0	0	19	17
Graduate Total of 10	0	4	2	4	8	2

The majority of undergraduates fall under the age group of 18-20 while the majority of MATESOL students fall under the age group of 21-24 and 31+. The female to male ratio for the undergraduate sample is 19 and 17, respectively while the MATESOL students are 8 and 2, respectively.

Table 2: Surveyed Participants' Nationality

Nationality	Arab Countries	India	Bangladesh	Iran	America	Total
Undergraduate	27	6	1	2	0	36
MATESOL	7	1	0	1	1	10

The majority of the participants were from Arab countries.

Interviewed Participants

Table 3: Interviewed Participants

Interview Participant	Name	Gender	Age Group	Nationality /Language	Field
Undergraduate	Sarah	Female	18-20	Jordanian/ Arabic	Architecture and Design
	Hassan	Male	21-24	Jordanian/ Arabic	Engineering
	Ali	Male	18-20	Iranian/ Persian	Engineering
Graduate	Mariam	Female	21-24	American/ English	MATESOL
	Omer	Male	+31	Iraq/ Arabic	MATESOL
	Tahani	Female	21-24	Emirati/Arabic	MATESOL

The six undergraduate students who consented via the survey to be interviewed were contacted and interview dates were set accordingly. However, only three undergraduate students turned up for their interviews. Therefore, I decided to interview the first three consenting MATESOL students who respond to my request. All students who consented to be interviewed were given pseudonyms to maintain their anonymity. All the interviews were face-to-face with the exception of Omer's interview. After agreeing to be interviewed, he informed me that it would be very difficult for him to meet face-to-face since he is a full-time teacher as well as completing his MATESOL studies. Thus, for his convenience, we conducted the interview over the phone. I digitally recorded all the interviews including the

telephone interview. The audio was of an excellent quality. All selected parts of the cited quotes mentioned in my research are as spoken by the participant and transcribed from the audiotapes. No editing has been done.

Conclusion

Students' use of technology as well as dominant trends and attitudes are closely examined in the next chapter in order to answer this study's research questions. Also, the next chapter displays the differences among undergraduate and graduate students in their attitudes towards using technology in their writing.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

Introduction

The aim of this study is to examine graduate and undergraduate students' usage of technology tools, their perceived advantages and disadvantages of these tools, and different trends and attitudes occurring among these two groups. In this chapter, the findings are divided into categories. The first category relates to the first research question which is about students' usage of technology tools. The second category relates to the second research question which addresses undergraduate and graduate students' attitudes towards technology tools used inside and outside the class to improve their writing skills. The third category relates to the third question which is about the perceived disadvantages held by both levels. The fourth category is about the differences, if any, in attitudes that graduate and undergraduate students hold towards technology used to help them with their writing assignments. The fifth section analyzes students' attitudes from both levels.

Research question 1: What technology tools do students use to improve their writing skills?

It is evident from participants' responses that they used technology tools extensively. In addition, the participants spent many hours using computers and the internet. The patterns of internet and computer use varied among the two groups. Table 3 shows the differences between undergraduates and graduates in using computers and the internet.

Table 4: Technology use

Participant	Hours on average spent on computers/internet per day				
	0 hours	1-3 hours	4-6 hours	7-10 hours	10+ hours
Undergraduate	0	11/36 (30.6%)	20/36 (55.6%)	5/36 (13.9%)	0
Graduate	0	4/10 (40%)	4/10 (40%)	1/10 (10%)	1/10 (10%)

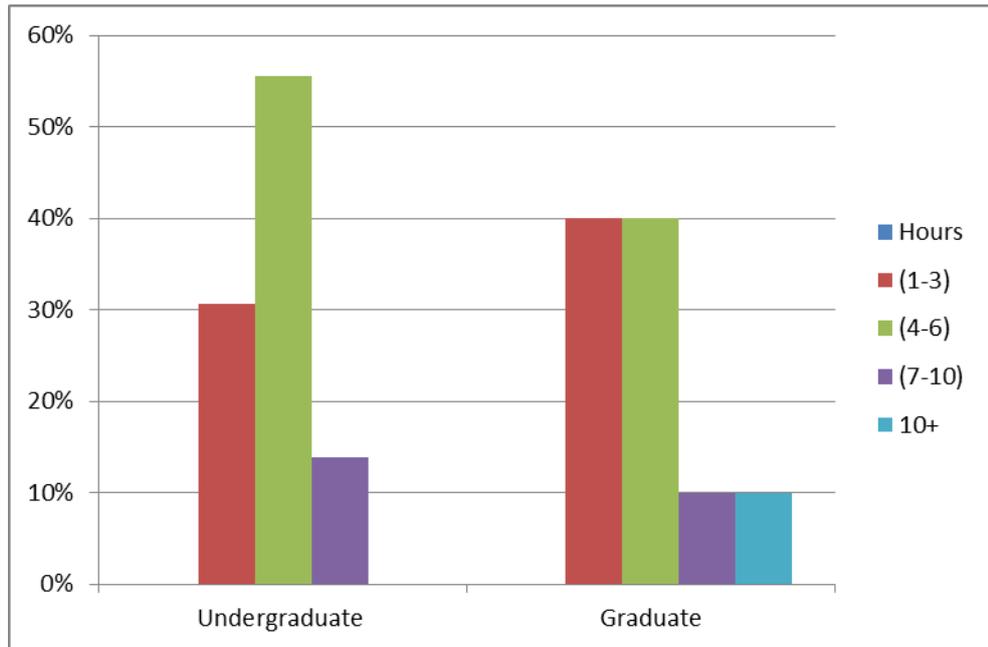


Figure 1: Hours on average spent on computers/internet per day

The results in the table and figure above show that all surveyed students use technology. Based on Figure 3 and Table 3, it is evident that a greater percentage of the undergraduate students spend more hours a day using computers and the internet compared to their graduate counterparts. However, the participant using computers/the internet the most (10 hours /day) is a graduate student.

Answers to questions 6 (Which of the following tools, discussion board, blogs, MS processing, wikis, e-portfolio, other, do you use to improve your writing?) and 8 (What are the advantages/disadvantages that you encounter when using some technology tools in your own writing (word processor, blogs, wikis, iLearn) of the

survey indicate further technology tools students use to improve their writing. The responses to these questions are displayed in Tables 4 and 5, respectively.

Table 5: Technology Tools Used to Improve Writing (Question 6)

Participant	Technology Tools					
	Discussion board	Blogs	MS processing	Wikis	E-portfolio	Others
Undergraduate	9/36 (25%)	7/36 (19.4%)	19/36 (52%)	6/36 (16.7%)	6/36 (16.7%)	e-dictionary, Thesaurus, Google, Internet
Graduate	5/10 (50%)	1/10 (10%)	10/10 (100%)	0/10	1/10 (1%)	Google, Answers.com

Students' views about the advantages and disadvantages varied between the two groups. As seen from Table 4, Word processors seem to occupy the highest usage, which is not surprising since all students, undergraduates and graduates, are required to submit their final written projects typed. Students from both groups gave this tool the highest percentage for tools used to improve writing. Among the graduate students, the second most-used tool is discussion boards. This might be attributed to the fact that many professors in MATESOL utilize this tool more at the graduate level than at the undergraduate. In addition, graduate students are sometimes given participation grades for posting their writing on the discussion board. Other technologies, such as wikis, blogs, and e-portfolios were used very little by both groups. In general, as noted in the open-ended questions, undergraduate students used a wider array of technologies, which included iPad and iPhone applications, electronic hand-held -dictionaries, and Google's online translator.

Research question 2: What are the perceived advantages, if any, held by students of both levels regarding the use of technology to help improve their writing skills inside and outside the classroom?

As shown in the data in question 8, the majority of students' statements, from both levels, about the advantages of technology were very positive. Students from both levels use technology tools to improve their writing. Moreover, both groups showed beliefs about the advantages of technology, how technology facilitates learning, and how it creates a sense of a learning community. The following two sections will now address how the advantages are perceived by each group separately.

Perceived Advantages Held by Undergraduates

The advantages perceived by undergraduates included the belief that technology tools are convenient and facilitate completion of their writing projects, help them improve the content of their writing, allow them to learn on their own, especially in building their lexicon, and facilitate both collaborative work and learning, for example, how e-mails and discussion boards help them share their logs and communicate.

Technology Facilitating the Completion of Students' Writing Assignments

Undergraduate students stressed the fact that technology is really convenient. Several students said that they use online journals articles as well as e-books to acquire research and background information, verify their referencing style, and improve the content of their writing assignments. The majority of students also mentioned the internet in their explanation and mentioned benefits such as being able to search for topics and background information from a variety of sources, review

different points of view, find good synonyms and terms, and the fact that it provides information useful in forming their citations and checking their grammar. Students also mentioned as benefits the fact that it is available any time of day, and also that it is time-saving. For instance, one student wrote that the internet is “available or 24 /7.” Another student pointed out that the internet provides him with vocabulary and synonyms.

From the data collected from students’ responses to question 7(Does technology help you with your writing assignments? Please explain your answer.), almost all students indicated that technology helps them in their writing assignments. Only four students agreed that technology helps them somewhat in finishing their writing assignments. These students indicated that the internet provides them with good exemplary writing samples which illustrate to them different ways to approach a given subject. One of the students mentioned on his survey that technology helps him “simultaneously analyze other pieces of writing on the same topic” and “helps confirm the different styles of referencing.” Similarly, another student indicated that the internet helps in improving his/her writing style, since it helps “In getting many information and having a look at what good style of writing is while reading on computer for technological articles as an example.” Another student wrote, “It helps in finding more informations about any topic, and giving some supporting ideas and examples.”

Undergraduates’ responses highlight how technology facilitates the completion of their writing tasks. The majority of the students, who strongly agreed that technology helps them with their writing assignments, attributed this to the fact that MS Word helps them to improve their grammar and style and check their

spelling, as well as the fact that typing on MS Word is easier than using a paper and pen. The students showed a preference for using MS Word due to practical reasons. Many students wrote about MS Word and how it fixes their grammar and provides alternative vocabulary. We find this view voiced in several statements like the following: “Microsoft word. It helps me with spelling, grammar, and even synonyms.”

The interviews helped to shed more light on undergraduates’ perceptions of technology tools. The three interviewed students hold strong beliefs that technology helped them to finish their written assignments, edit, and format them. Hassan indicated that he relies mainly on MS Word, Excel, and Power Point. As Hassan pointed out, “spelling check, choosing your own font. ... To be faster and clearer..... You can change your font, size, color, layout you can change margins.” Sarah also agreed with Hassan on the ease of finishing and editing one’s work once it is typed in MS Word. According to Sarah, technology tools like MS Word help her to finish writing projects “because it is very flexible as you can create your work save it and go back any time to edit it.” Ali also agreed with Sarah on how MS Word helps him in moving sections and editing the paper. Hassan pointed out other aspects of the benefits of technology: “sometimes you don’t know the spelling for specific word, the computer can correct it for you and also you will not be involved in your own handwriting because sometimes people can’t understand the others’ handwriting, so it will be more specific and clear.”

Overall, undergraduates saw more positives about technology than negatives. Students agreed that it makes formatting, editing, and checking their grammar much easier. However, only one student pointed out that MS Word provides good citation

options. Another point that students did not mention is the track changes options, comments, and mark-up options that are very helpful in drafting any writing project. This finding might confirm previously cited research findings about how students are not aware of all of MS Word's applications that can improve their writing, such as track changes, and the ability to make comments.

Most of the comments, in both the surveys and the interviews, from undergraduates stressed how MS Word helps them with the mechanics of writing, like correcting their spelling and punctuation, and providing, and synonyms. For instance, Ali indicated that he is not a native speaker and MS Word offers him great help. "It is a magic, definitely. ...As at least for us, I don't come from an English background. I am from Iran. This is not our language and we will have some weakness. When I use it is amazing. You will have sometimes mistakes it will correct for you even if it is typing; it will tell sometimes that this is a frag. It is really amazing, keep track and finds synonyms; it will save a lot of time." This was in agreement with the statement made by the other two undergraduate students who were interviewed, except that Sarah mentioned that although technology helps her check for spelling mistakes and grammar, she prefers writing her assignments by hand. Another comment about MS Word was that it helps students improve the layout of their writing. As one of the students wrote, it "helps you format your writing in a variety of ways." One student commented in question 8 that MS Word "improve my writing" another student wrote "Helping a lot in outputting a better writing."

The undergraduate students' views about blogs revolved around how blogs provide them with views and information that helps with the research aspect of their writing projects. Students indicated that blogs provide them with people's opinions on

different subjects, updated information, and authentic examples. However, only seven undergraduate students used blogs. Only one student pointed out that blogs “Improve my writing.” It is not clear if undergraduate students use blogs to post some of their writing projects or just to find ideas and background information for their research. Many students mentioned that they use the internet to find information to put into their research papers, and blogs are one possible source of such information. As Hassan said in the interview, “Sometimes I should use the internet because there is recent issue you cannot find in books.” Technology here is perceived as a facilitator. For instance, Ali said that he learned from his academic writing classes that every argument he makes should be backed up. Therefore, he relies heavily on information found in e-books and database articles because locating books in print is not that easy. Ali commented, in the interview, that “technology facilitates finding information and cuts on the time we need to locate resources and references needed for research.” This way the internet is perceived as the fastest way to enrich one’s writing with evidence and background information.

Hassan expressed similar views to Ali, in the way the internet is a source of information. “When you are writing about something and you don’t know about it you can search through the internet and know the definition for the topic or whatever you are writing about... brainstorming and collecting the information through the internet.” On the other hand, many students indicated that they use the internet, blogs, e-journal and the library database to gather information about the topics of their research and evidence to back up their arguments.

The students’ answers also suggest that they use the internet to find written samples or published work that they can model their writing after. Students strongly

believe that internet articles, and e-articles from the database provide good writing samples while platforms like blogs can help them find good arguments.

Technology Tools Improve One's Lexicon

The undergraduates' responses in the interviews and surveys indicate that they use electronic dictionaries or the MS Word built-in thesaurus to find synonyms or check the meaning of a word. One student wrote that technology "helps in correcting grammar and understanding the meaning of the words." Another student wrote: "Technology helps me find better words to use and better ways of saying what u want to." Other students from the survey responses pointed out that they used Google translate. The interviews also showed an interesting trend as the students admitted to using a dictionary with their first language (L1). This might indicate that undergraduate students need reliable resources that incorporate their first language. It also might explain some errors occurring from the reliance on translation to their first language, as some tools like Google translate do not always offer accurate and appropriate translation. During the interview, Hassan's comments echoed those in the survey. He said, "While I am searching the internet sometimes I find new word I don't know, I start to search for that meaning in the dictionary." Generally, he uses a dictionary called Babylon. Hassan also uses Google translation, but he does not always rely on the latter as it does not offer accurate translation all the time.

Technology Facilitates Collaborative Work and Learning

It is surprising that only nine students said that they use discussion board at AUS, especially since the Blackboard platform allows teachers to open discussion portals. Eight out of these nine students believed that discussion board promotes peer review and collaboration. This view is evident in the following statements from the

survey: “interaction with other students,” “helps me to know other views,” and “It helps in sharing the ideas and get a feedback from different readers.” Two students wrote remarks that can be linked directly to writing skills, the first being how discussion board helps them “discuss mistakes,” and the second being that it “improves writing.” Those who had used it confirm claims in the literature that platforms like discussion board help students notice their mistakes. Also, it provides a good platform to discuss one’s views and mistakes. Ali pointed out how he really enjoyed using discussion boards in his ENG 102 class. In this class, students used the discussion board heavily. Typically the professor would post some articles that they had to discuss on the discussion board before they went to class.

According to Ali:

I am assuming there is 20 person in class and you have 20 friends which they go and check your writing and comment and feedbacks. 20 persons send their ideas so you can compare the ideas with yourself and see what you’re missing or what angle of the topic you didn’t cover ... I really think it’s useful it gave me a lot of ideas we were opening topics in the discussion board... I tell you that was the only writing class I enjoyed.

Other participants echoed Ali’s favorable opinion of discussion boards. In fact, the discussion board seems to be perceived favorably as a platform that enables students to negotiate their learning, as well as allowing them to be autonomous and creating a sense of community. As Ali pointed out, discussion board bridges the distance among the students who might not have enough time in class to discover their peers’ views of the assigned reading. Hassan, on the other hand, did not perceive discussion boards as a tool to improve academic writing, although he admitted that

the fact that his classmates were reading his post made him avoid mistakes. Thus he may be suggesting that one of the advantages of discussion board is that it causes some students to edit their posts more carefully. In Hassan's words, "you should do your best to avoid mistakes in front of others." Although Hassan did not endorse discussion board as much as Ali, he admitted that students tend to avoid posting a written production with mistakes knowing that their instructor and their classmates will read it.

From the survey answers, we find that blogs were used by undergraduate students. Seven students listed advantages while only four students mentioned disadvantages. Some of the advantages students pointed out were that blogs helped them in sharing their ideas with others, provided a window into others' ideas, and could be a source of interesting and updated information about a given subject. One of the students commented that blogs provide "interesting opinions and views," while another said they "give info on what other people think." Among the students who were interviewed, Sarah seemed to endorse blogs more than the others. She would like to have a personal blog in spite of the fact that she did not use them heavily because she likes the layout and platform. Sarah is a design student, and having a blog where she can change the layout or post photos seems to be more of a draw to artistic students like Sarah. She said that they used blogs in one of her classes which was "more of sharing feeling, emotions, and ideas, whatever. ... So whenever we write is not always 100% perfect English." In spite of the fact that she believes that blogs do not promote academic language, Sarah's statement reflects awareness about how aspects of saving face play a role in blogging. She realized that knowing that her peers will read her post creates more awareness towards the accuracy and value of her

post. As Sarah said, “Maybe when you write and everybody would see it you, you would improve it yourself, you would not write whatever, so when people read it you wouldn’t have this huge mistake in it and everybody would know you made it. This is kinda of a crowd thing. It is more like a diary, but not.” Blogs here are perceived favorably by Sarah because she clearly likes the personalized features. The majority of students mentioned that blogs can voice other people’s views. This is beneficial in developing students’ argumentative writing skills. Furthermore, being aware of different views can provide students with different ways to approach a topic in an essay. With all that said, it also seems that the students are aware that the parameters of academic writing do not really apply to all blogs.

Perceived Advantages Held by Graduate Students

Similar to the undergraduate students, the graduate students agreed that technology helps in the completion of their writing projects. The dominant attitudes among graduate students were the following: Technology facilitates the process of writing and improves the content, creates a virtual learning community, helps them learn on their own, and promotes fluency. Furthermore, graduate students stated that modern tools such as the internet provide models of different writing genres as well as information to improve the content of their final written projects. Graduate students expressed views about how technology tools, especially Web 2.0, create a sense of belonging to a virtual learning community. Many graduate students gave examples of how technology tools helped them learn on their own.

Graduate students valued discussion board and blogs more than undergraduate students as they were endorsing it as a fluency- enhancing platform. As mentioned earlier, the views about advantages of technology tools from both undergraduates and

graduates were overlapping, if not very similar. Overall, the graduate students viewed technology tools favorably. However, it was clear that not all graduate students had a chance to experiment with all the technology tools available, as one student clearly stated in the survey, “I did not get a chance to use or test any of the new tools such as blogging or else for writing.” From the graduate students’ responses to question 7 in the survey, I found that the majority agreed that technology helped them with their writing assignments.

Technology Facilitated the Process of Their Writing and Improved the Content

From the data collected from both the surveys and the interviews, the graduate students seem to perceive technology in a positive light when it comes to tools that help them type, review their grammar, and edit their mechanics like MS Word processing. This is evident in students’ response to question 8, as all ten students that were surveyed stated that they use a word processor, while seven students used discussion board, and three used blogs and Google docs.

The survey and interview responses contained several statements that show how these graduate students perceive technology tools in a favorable way. For instance, Tahini pointed out how technology and writing go together, saying : “For me I do see this connection. A strong connection between technology and writing that I cannot see in other skills. For me it (technology) is more associated with writing than any other skill.” Omer, another interviewed student, stated that technology is helpful, saying, “I don’t see anything negative about using technology; in fact it is big help. It helped me; it helped a lot in doing my assignments, it saves time.” In the survey, all ten surveyed graduate students wrote statements that reflected specifics about how technology tools help in improving their writing skills or facilitate their

writing tasks. For instance, one student wrote: “It helps in many ways. Some of them are: spelling and grammar check, internet search engines, neat presentation etc.”

Another student mentioned: “...I can use MS processing for writing my assignments. It makes revision much easier.”

Students listed many ways that MS Word helps them to edit and format their work, check spelling and typos, find synonymous, and save time. Tahani commented in the interview that word processing helps her with mechanics, but not that she learns from it. She focuses more on how it makes her job easier. Others pointed out how MS Word is compatible with all types of academic projects. Also, students mentioned that technology tools like e-dictionaries and e-thesaurus, online search engines, and corpora help them with improving their vocabulary. These tools help them in defining unknown words and finding better synonyms and collocations.

In addition, technology provided graduate students with easy access to models of academic writing. In the interview, Omer mentioned that he relies heavily on model writing provided on the internet. Mariam mentioned how she models her writing after articles and academic journals as that is what her professors want her to emulate, but she will not model her writing after informal articles published in the internet as she believes that the internet is not entirely reliable. The graduate students also pointed out how technology helped them in composing the content of their writing assignments, as one student wrote, “I make use of the online resources in the library in order to write my assignments.”

Technology Creates a Virtual Learning Community

The view that technology creates a learning community of academic writers was a strong trend in graduate students’ responses. The students strongly agreed on

the advantages of using a discussion board which revolved around sharing one's work, scaffolding, and receiving both teacher and peer feedback. One student wrote: "provides input to other's writing and writing style...helps students to focus on writing fluency and meaning as opposed to language accuracy alone." Another student mentioned, "you can discuss things with people without having to meet them face-to-face."

The graduate student feedback does not only show how discussion board provides interesting feedback and scaffolding with others, but also how these platforms like discussion board and blogs create a sense of a virtual learning community. For instance, Omer talks about how discussion board is a face-saving space. He explains "I find it very useful ...because it helps you sometimes, you are sitting at home and comfortable and it helps you like it lowers the anxiety, like sometimes when you are in class a lot of things are going on at the same time. It is hard to remember things you want to say." He thinks the time spent at home to respond to others makes his responses better as it is impossible to mention everything in class time. Omer elaborates by saying that when he participates in discussion board it helps him to "recycle" old information acquired at the beginning of the course. It is also useful as he can converse with his peers at his own pace as the deadline is usually flexible. In this way discussion board becomes a normal extension of class time which allows students to interact academically and share their reflections. It also creates a sense of belonging to the same learning community. As Omer indicated, "when you post them ok you start reading them because are too eager to see what others wrote about it and you find some mistakes that you ..oh this is where I went wrong, because I don't know, I don't understand this part of language .. You look at yourself in a

reflective way.” Omer mentioned that his obligation to his profession does not allow him to meet up with his peers to discuss things as well as the fact that class time is not sufficient to discuss everything. Therefore discussion board bridges that gap and creates a sense of community, and it is flexible, as Omer mentions that he posts and responds to others at his own pace. There is more time to respond virtually compared to time allocated to classroom discussion.

Technology Facilitates Group Work

A number of graduate students mentioned that they use Google docs to facilitate projects involving group work. As one student wrote in the survey: “Can collaborate with others who have a Google account. You can revise the same document meaning you don’t have to make changes separately and then consult about them.” Mariam pointed out that she uses Google docs to share an Excel spread sheet with her partner in a research project. Mariam also wants to try using Google docs with her partner to edit a Word document. According to Mariam, Google docs can be used “to co-edit rather than her writing something and me putting in my comments and e-mail it back to her and it is just what we have been doing..It auto-saves and the history of who changed what... I think it would be good, but I have not used with her yet so I’ll see.” Another tool that graduate students use to connect with their peers is emails. Several students in the survey wrote about its benefits in connecting them with their professors and peers.

Technology Helps Students Learn on Their Own

Students’ responses reflected how they believe that technology promotes learning outside the class. The three interviewed graduate students talked at length about how technology tools like discussion board, email, wikis, corpus, Moodle, and

electronic dictionaries, Google docs, and the internet helped them learn and improve their writing skills outside the class. In the interview, Omer commented, “when you browse the internet. If you want to work on yourself, ok and browse some websites that teach you a lot of things about grammar. It does help me.” He talked about how technology is great and helped him learn on his own to fill in some gaps as his training does not cover all the areas taught in MATESOL.

Technology Promoting Fluency

Free writing, reflective writing, blogs, and other activities that promote fluency seem to be perceived positively by graduate students. While undergraduate students regarded technology tools which promote un-academic writing as something negative, graduate students seem to regard fluency as a positive thing. Graduate students are aware that tools like discussion board or blogs do not display academic writing only. One student wrote that blogs “enhance fluency,” while another student mentioned that electronic dictionaries help with fluency. This use is not perceived as something negative. This view is evident in graduate students’ responses to the advantages of discussion board and blogs.

Research question 3: What are the perceived disadvantages of technology, if any, held by the students?

Overall, both groups voiced fewer perceived disadvantages than advantages. The dominant trends among the undergraduate students were the following: less personal feedback, laziness, frustration related to the limitation of the tool, and reliability and validity issues. Graduate students, on the other hand, exhibited even fewer negative attitudes which consisted of problems with feedback and

communication with their peers and professors, and frustration related to the limitation of the tools.

Perceived Disadvantages Held by Undergraduates

Less Personal Feedback

The data on feedback is somewhat conflicting: While undergraduate students indicated in the interviews that feedback mediated by technology is sometimes impersonal and detached, the majority of the students indicated in the survey that they prefer to receive feedback via email from their professors. In the interview, Sarah stated that from her personal experience, professors do not rely a lot on electronic forms of feedback like MS Word's track changes. For her, feedback is not a matter of the medium or the tool. As she articulates: "I actually like to go to the professor and show him or her paper, so he or she would just scratch what's wrong. I would prefer emails that do not require any feedback or correction..." The student attributed this to the fact that the amount of teacher's hand written correction would show her the professor's interest in her work and if she needs to work more on her assignment. Sarah has also noticed that feedback tends to be briefer if sent electronically rather than handwritten.

Ali agreed that it is not really about the tool, but about the quality and the length of the feedback. Ali received MS Word's track changes from peer reviews, and he had only once received an MS Word's track changes feedback from an ENG 102 instructor as his class conflicted with a presentation he was delivering in his engineering department. Ali requested his professor to provide him with feedback using track changes. Ali commented, "the feedback she gave me on that paper was not as perfect as she could do." Ali states that from his experience that when the

professors provide handwritten feedback they tend to be more detailed in that they underline every section and comment on everything. He elaborated, saying, “If they can do that electronically, the same amount of details that is good. Because we will always have a backup... I prefer it if and only if the feedback is the same.” At the same time Ali believes that providing feedback electronically is more difficult for the teacher: “it is hard to do things electronically because you get tired because you need to look at the computer. Your eyes will get tired.”

Hassan’s views about electronic feedback are similar to Sarah and Ali’s views. Hassan stated that he likes MS Word’s track changes; however, he prefers handwritten feedback. Hassan says, “I think if I had it in a written form, it would be better because you know your mistakes. Where exactly you had your mistakes and you get the feedback from the Dr. I think by e-mail it would be less personal.” In spite of the fact that the survey responses indicates that students prefer to receive their feedback via e-mail, the interview responses seem to suggest that students find electronic feedback less personal and believe that handwritten feedback is more detailed, indicates students’ mistakes more clearly, and shows professors’ personal interest in their work.

One might attribute undergraduate students’ preference to receive feedback by e-mail to the fact that e-mails can solve mobility issues, especially at the end of any term. The students’ responses imply that MS Word’s track changes would be ok as long as the teacher voices his/her interest in the students’ work.

Laziness

Many students believe that technology can “make us lazy.” This statement might contradict the previous finding that students regard technology as convenient and facilitative of learning. The survey responses included some statements that show how students’ over-reliance on technology can make them lazy. One student commented, “of course it helps and also makes us lazy. Word, for example, can find meanings, spell check, etc.” Another student pointed out that “technology like web sites is more efficient than reading books. Plus, it helps to locate books easily.” This statement suggests that technology enables students to read less, and also keeps them from having to check out books from the library since many books are available online.

On the other hand, Hassan talks about how when he types something, he does not remember it or learn it as much when he hand writes it. As Hassan said: “It is actually easier, but it might make people more lazy..yah technology is practical. When I write something in my hand I understand it more. When I write on the computer I feel I am lost.” Ali has a positive disposition towards technology and points out the positive aspects about technology which is that it allows him to finish his work more quickly. “Definitely, it is making us lazy. It will minimize the amount of time you need for work and still you will have better outcome.” However, Ali complains about how technology can be also physically exhausting to him as he cannot stay on the computer more than 30 minutes. He also said he prefers to take a pen- and- paper exams because computer tests are physically draining for him.

Lack of Training

Students' responses show how they need more training to realize the full potential of some technology tools. Although some of the participants noted that they can see the usefulness of technology, especially related to finding background information and writing samples online, the data collected also suggests that some students are not aware of the full potential of some technologies. Others are not aware of some useful tools that can be used in collaborative work. In addition, when responding to question (8), 18 students indicated that they used Google docs. Unfortunately, their answers are irrelevant because they seemed to have misunderstood the question, and thought that by Google docs I was referring to Google's search engine. This confusion was apparent since they mentioned attributes such as that it locates new information and research.

MS Word is useful for making tables, managing the format and the layout of documents, word processing, finding better synonyms, and track changes; however, there are many other options in MS Word that many students are not aware of. In the interview, Ali discussed how his lack of knowledge about the applications in MS Word used to be very frustrating, but now he seems to believe that he is a more competent user and more aware of the myriad of application stored in MS Word. He believes that he is the one who was limited in his use of MS Word and not the tool itself. For example, Ali talked about how he used to copy and paste the formulas and equations onto his written report before he discovered that he could actually store these formulas and symbols in MS Word. Ali talked about the expectation in engineering for writing reports which is beyond their training. In the beginning in the engineering department, he had to write equations coupled with explanation. Ali

found MS Word limiting to him as he did not know how to insert the equations. Now he has discovered that he can insert equations and store them in MS Word. Also, Ali talks about how his lab reports need to be submitted in MATLAB which is a programming platform that Ali and other engineering students have difficulties dealing with. His program does not offer sufficient training in writing reports, as professors usually say they expect students to learn it by “inspection.” Thus students are often forced to learn to use tools like MS Word by themselves, without any formal training from their teachers.

Students’ Frustration Related to Tool’s Limitations

Other negative attitudes are related to the limitations of the software. Eight out of the thirty- six undergraduate students surveyed expressed their concerns about some limitation related to MS Word’s word processing, like not providing accurate correction or alternative word choice or how sometimes it ignores some grammatical mistakes. One student commented that MS Word has “not always accurate grammar,” while another pointed out how it is limited in its corrections since “it doesn’t suggest solution [sic] for many grammatical mistakes.” Another student believed MS Word was limited with regard to word choice saying that MS Word is “not always [sic] useful for finding suitable words.” Only one student expressed fear of losing his /her work when the computer crashes.

Students also pointed out that peer feedback on discussion board might be confusing. One student wrote in the survey, “Sometimes getting many different opinions confuses the writer.” In the interview Hassan discussed the disadvantages of discussion board with regard to plagiarism. He said, “Sometimes many students take your thought, take it as their own.” Another negative attitude that Hassan expressed

was his conviction that discussion board does not promote the improvement of academic writing skills. He commented, “you can access other posts and see other people mistakes, but it does not really help improving writing skills.” Hassan’s views about discussion board not improving his linguistic skills are congruent with Ali’s views. Ali points out that discussion board was a good forum for exchanging ideas, but not improving his academic writing skills. Ali said “the helpful part I told you, it was the ideas I was getting. But the fundamentals of English. No, I didn’t find anything which helped me.” In other words, the discussion board might allow the display of grammatical errors without fixing them. These views might stem from the teachers not interfering with the students comments, since as Ali said, the professor had access to students’ posts but rarely commented on them. The fact that students considered the logs or posts they share on discussion board as unacademic, might reflect how they do not value the importance of fluency, critical thinking, and synthesizing and debating ideas as important skills in academic writing. Linguistic issues, which students do not feel are addressed by discussion board, are only one of the sets of skills required in good academic writing.

The main limitation students saw with blogs was that they were perceived as less reliable. Ali expressed the security and reliability issues related to blogs. Unlike discussion board, blogs (public blogs which are not administered on iLearn) can be run by imposters who assume another identity. Ali said “discussion board on i-learn is good because I know the people, they are in my class. I might not like the ideas, but I know that guy. Blogs are hard to read, there are forums on the internet and you don’t know who is there unless they detect the IP.” Sarah, on the other hand, pointed out that she likes blogs as she used one in one of her classes. Sarah said that she does not

have a personal blog. Sarah believes that blogs are not beneficial to academic language because they promote informal style of writing.

Credibility Issues

Undergraduate students are apprehensive about the credibility surrounding the technology tools they use. The internet articles provide a great resource, yet some undergraduate students expressed concerns about the reliability of some online resources. Ali mentioned the importance of relying on peer-reviewed library resources and .org websites and ignoring information mentioned in blogs or wikis. Students pointed out that some free software, for example, Google translate, provided online is also less reliable for them. Online translators like Google translate seem to be less reliable in the eyes of Sarah and Ali. In the interview, Ali pointed out how, as an engineer, he admires software like Google translate, but he does not use it because it is not reliable. He knows that this tool is useful in translating individual words, but not linguistic chunks. Hassan also uses Google translate and believes it does not always provide accurate translations; he believes that there are more reliable software programs, like Babylon.

Overall, however, there is no doubt that participants in this sample harbor favorable views towards technology; however, the heavy reliance on the internet might be negatively impacting the students' writing as it might be limiting their creative skills, especially since many students mentioned how they rely on internet sources to inform their writing style. Also, I found many lexical and syntactic errors in students' survey responses and heavy emphasis on acronyms and abbreviations which might be linked to the language used in SMS and chat writing style.

Also, there are misconceptions about the definition of technology. For example, Sarah said that technology did not help her improve her vocabulary. She relies on TV and movies to do that. This view is a clear misconception about the definition of technology tools, as TV is also considered a technology.

Perceived Disadvantages Held by Graduate Students

Feedback and Communication with Their Peers and Professors

The majority of graduate students, in the survey, mentioned that they prefer handwritten feedback as opposed to electronically-mediated feedback. In spite of that, students displayed an appreciation for electronic feedback. One student commented: “as far as feedback and improving my writing are concerned, I am probably used to the traditional style with feedback written all over my paper.” Mariam said that she received track changes feedback only once from her professor in international studies when she doing her BA. Mariam finds track changes less personal. She prefers to receive the feedback written or via e-mail. She mentioned, “I prefer e-mails it is easier, I think it is to the point, not every detail. Not very detailed, it gives you the whole idea to what the feedback should contain.” Tahani, on the other hand, confirms Mariam’s claims; she said: “I think, I prefer e-mails because.. I cannot read everybody’s handwriting.... I prefer it on word track. It can get really confusing. Sometimes they have a lot of options and details you don’t know to which part this comment refers to.” Mariam seems to favor track changes as she can in this way avoid confusing, unclear handwriting. She also likes it that with track changes, her professors can give more detailed feedback, since she believes typing is easier than writing comments by hand.

Graduate Students' Frustration Related to the Limitation of the Tool

There was a strong negative attitude on the part of the graduate students which was related to not mastering the full potential of some software. As one student wrote, "Formatting can be tough to figure out." Another limitation in MS Word processing was related to the inaccuracy of the suggestions that the software makes. One of the students wrote, "Sometimes it gives wrong suggestions to your words simply because they don't exist in its dictionary." Other students also agreed with this view and wrote that not all MS Word processing corrections are accurate. Another student mentioned in the survey that it might be "slow in typing." Also, among the remarks related to the disadvantages, one student wrote, "over use of thesaurus might change the meaning of the whole sentence." Lack of knowledge about the software was another point mentioned by a student as s/he mentioned "there are some disadvantages when some lacks the knowledge on how to use the sw."

Another tool that has some limitations is Google docs, as graduate students mentioned that it has a time lag which frustrates them. One student elaborated about the disadvantages and wrote, "Must have a Google account. It is difficult to scroll down the page because it's not very responsive. Sometimes when you are making a change there is a delay b/c the website has to load. Sometimes you change things by accident and again there is a lag and it can be a bit frustrating." Graduate students also talked about the asynchronous nature of communication in discussion board which might impede communication. For instance, discussion board posts might create hostility or might be misunderstood. Security issues were related to the fact that some tools such as blogs might compromise the privacy of students. As one of the students

wrote, "Issues of writer privacy can be at stake." Privacy issues were stressed by a few graduate students. Tahani pointed out that using blogs can be open to the public which compromises students' privacy. Another student mentioned that blogs accounts will contain ads unless the blog is paid for. Others pointed out the unreliability of internet sources, and MS Word's flawed corrective capabilities.

Research question 4 - What differences in attitude, if any, do graduate and undergraduate students hold toward technology used to help them with their writing assignments?

The difference in views between graduate and undergraduate students is to some extent similar to the difference between the views of an amateur painter and a professional one. As the first one might be using the state of art tools involved in any artistic production, s/he might not be fully aware of the critical and theoretical implications of one's work. On the other hand, a professional painter is engaged with the criticism as well as the literary background behind his/her work. In the same way, graduate students displayed more awareness in understanding the pedagogical implications behind the tools they used. They are more engaged in academic writing aiming at contributing to the research community in the MATESOL field. Based on what students mentioned in the interviews, graduate students seemed more inclined than undergraduates to engage in several attempts to learn on their own how to use technology tools like the Moodle or Wikipedia. The undergraduate students, on the other hand, seem to struggle with some issues like lack of training and misconception about the definition of technology. For instance, Sarah denied using technology to learn new words, but she pointed out the positive role of television in that. Clearly, television is a technology.

Undergraduate students' responses in the survey reflect heavier reliance on internet resources and samples of academic writing posted on the internet. For instance, several undergraduate students talked about how blogs offer ideas of counter arguments and authentic examples. Graduate students exhibited stronger attitudes about technology helping them learn on their own outside the class. For instance, Tahani talked about experimenting with wikis even though she could not proficiently use it, but she tried to operate it. Omer talked about Moodle and how he bought a book to learn more about utilizing this tool. Graduate students use technology, but they are less dependent on technology. Mariam pointed out that she switches off her word processing. Also, graduate students were more critical of their professors' use of technology in class. The three graduate students in the interview talked about how they liked their professors' use of technology in class, but were critical of it at the same time. They were critical of reliance on PowerPoint slides to lecture. Also, Mariam, in the interview, pointed out how she prefers her professors to use typed handouts to specify assignment requirements rather than presenting them in class. Overall, the majority of students from both levels perceived technology in a favorable way.

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

Summary of Results

This study's outcomes show how students, from both undergraduate and graduate levels, rely on the internet and technology tools to write. The responses show how more undergraduate students spend more hours on average on computers/internet per day compared to graduate students.

Based on the aforementioned findings, both undergraduate and graduate students showed very strong positive beliefs about technology tools used in writing. The main positive attitudes held by undergraduate students were the following: technology is really convenient; technology facilitates the completion of their writing projects, improves one's lexicon, and facilitates collaborative work and learning. On the other hand, graduate students' positive attitudes were the following: technology facilitates the process of writing and improves the content of one's work, technology creates a virtual learning community, facilitates group work, helps students learn on their own, and promotes fluency.

There were fewer disadvantages held by students from both groups. Undergraduate students' negative attitudes were about the following: less personal feedback, laziness, frustration related to the limitation of the tool, and reliability and validity issues. Graduate students, on the other hand, exhibited even fewer negative attitudes such as, problems with feedback and communication with their peers and professors, and frustration related to the limitation of the tools.

Overall, the study shows how students, both graduates and undergraduate, view technology in a positive sense. Some students did not mention any limitations or negative aspects of technology tools. However, those who were critical pointed out the limitations of some software or technology tools and lack of training in particular software. There is no doubt that technology has made students more reliant on themselves to learn how to write, learn more vocabulary, give and receive feedback, and share their work with others in cyber space.

Implications of the Study

The implications of this study are addressed to curriculum designers at AUS and academic writing instructors in general. The results show how participating students come from different backgrounds and thus have different efficiency levels when dealing with technology tools. Contrary to claims about this generation being digital natives, a number of students expressed a lack of training in some tools. This finding shows how teachers should not overestimate what students know about technology. Students were not aware of all MS Word's and other tools' potential. Students, especially undergraduates, also did not incorporate tools like blogs, wikis, and Google docs into their writing tasks. This lack might be a call for creating more introductory courses at the undergraduate level in which students are introduced to the rudimentary skills of dealing with technology to avoid the frustration that stems from students' lack of training. Writing instructors dealing with undergraduate students can also raise students' awareness about the benefits of certain technologies, like the importance of sharing one's posts with others. The statements some undergraduate students made show that they did not view discussion board very highly because, for

them, accuracy was regarded as more important than free writing or virtually sharing their work with their peers. Wikis, Google docs, and blogs seem like wonderful tools that can be easily utilized in writing classes and collaborative work, so long as students are made aware that such tools exist.

The fact that students relied on their first language to learn more vocabulary points to the importance of locating reliable bilingual dictionaries. Students expressed how they favored electronic dictionaries for their simplicity, but they were pulled back because of the lack of reliability of some technology tools like Google translate.

Limitations of the Study

The fact that gender was not taken into account is one of the limitations of this study. This limitation is evident more with the interview participants. The undergraduate students who were interviewed were two males and one female while the graduates were one male and two females. This asymmetrical data makes it hard to take into account gender as a variable.

Another limitation is related to the way the survey was worded. Several students' responses revealed that they mixed up Google docs with the search engine powered by the same company.

Direction for Further Studies

There is a difference between students' attitudes and views and their actual use of technology. A follow-up study in which students' behaviors and use is subject to observation would help to point out some of these differences. One example might be observing a focus group in a session of a writing lab and then comparing students' observed behavior to their expressed views.

Also, one can study the lexical and syntactic errors, and forms of abbreviation in students' responses in their hand written statements which might show new trends of writing influenced by the new emerging language of SMS and chatting. Furthermore, a follow up study can be done in which views of undergraduate students before they graduate are examined. We can explore further how students perceive technology tools as facilitating learning outside the class.

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Appendix (A)

Investigating Student Perceptions and Use of Technology Tools to Write

ENG 204

Please complete the following survey. Your survey responses will be strictly confidential and data from this research will be used for an MATESOL research purposes. Completion of the survey signifies consent for responses to be used in MATESOL research. Thank you for participating.

1. Gender: Male Female

2. Age Group and Nationality (Important)

16-17 18- 20 21-24 25 – 30 31 +

Nationality:

3. First language.....

4. How many hours, on average, do you spend on the computer/internet a day?

0 1 - 3 4 - 6 7 - 10 10 +

5. I prefer to get feedback from my professor via:

- MS Words' track changes
- Email
- Handwritten notes

6. Which of the following tools, if any, do you use to improve your writing? Tick all that apply.

- Discussion board
- Blogs
- Microsoft Word processing
- Wikis
- E-portfolio
- Other

7. Does technology help you with your writing assignments? Please explain your answer.

8-What are the Advantages/disadvantages that you encounter when using some technology tools in your own <u>writing</u> (word processor, blogs, wikis, iLearn) ✓ Remember to indicate whether or not you use each tool				
Tools	I do not use	I use	Advantages	Disadvantages
1-Word processor				
2-Google Docs				
3-Blogs				
4- Discussion board				
5-Other				

Note (very important):

I would like to be contacted for an interview based on my answers in this survey.

My email is: My mobile number is:

Thank you for your help ☺

Appendix (B)

Investigating Student Perceptions and Use of Technology Tools to Write MATESOL

Please complete the following survey. Your survey responses will be strictly confidential and data from this research will be used for an MATESOL research purposes. Completion of the survey signifies consent for responses to be used in MATESOL research. Thank you for participating.

1. Gender: Male Female

2. Age Group and Nationality (Important)

16-17 18- 20 21-24 25 – 30 31 +

Nationality:

3. First language.....

4. How many hours, on average, do you spend on the computer/internet a day?

0 1 - 3 4 - 6 7 - 10 10 +

5. I prefer to get feedback from my professor via:

- MS Words' track changes
- Email
- Handwritten notes

6. Which of the following tools, if any, do you use to improve your writing? Tick all that apply.

- Discussion board
- Blogs
- Microsoft Word processing
- Wikis
- E-portfolio
- Other.....

...

7. Does technology help you with your writing assignments? Please explain your answer.

8-What are the Advantages/disadvantages that you encounter when using some technology tools in your own <u>writing</u> (word processor, blogs, wikis, iLearn) ✓ Remember to indicate whether or not you use each tool				
Tools	I do not use	I use	Advantages	Disadvantages
1-Word processor				
2-Google Docs				
3-Blogs				
4- Discussion board				
5-Other				

Note (very important):

I would like to be contacted for an interview based on my answers in this survey.

My email is:

My mobile number is:

Thank you for your help ☺

Appendix (C)

- 1- What technology do you prefer to use to finish your writing projects? Can you remember **specific** things that you learned from using this tool?
- 2- Are there any negative aspects regarding the technology tool you use to finish your writing assignment? Mention some. Are these technology tools imposed on you, or do you use them electively in spite of the difficulties you encounter?
- 3- Does technology help you learn new writing skills more on your own or not? How? Can you mention some **specific** examples?
- 4- Do you really like it when your professor uses technology in class, or can you do without it? Can you explain further your statements? Do you have specific examples?

Thank you for your help ☺

VITA

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