ICT and the development of academic literacies in a university language programme

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Περίληψη

Η παρούσα μελέτη ασχολείται με την εισαγωγή των νέων τεχνολογιών και του Διαδικτύου στο γλωσσικό πρόγραμμα του Τμήματος Αγγλικής Γλώσσας και Φιλολογίας του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Συγκεκριμένα, στο πλαίσιο του μαθήματος του πρώτου εξαμήνου *Ακαδημαϊκός Λόγος*, οι φοιτητές/τριες καλούνται να ασχοληθούν με ηλεκτρονικό υλικό αυτοεκπαίδευσης. Για τον λόγο αυτό διερευνήθηκαν οι γνώσεις των φοιτητών/τριών σχετικά με τη χρήση των Η/Υ και του Διαδικτύου και παρουσιάζονται τα αποτελέσματα της έρευνας που πραγματοποιήθηκε κατά τα ακαδημαϊκά έτη 2000-2001 και 2002-2003. Επισημαίνεται η ανάγκη εντοπισμού των συγκεκριμένων δεξιοτήτων που απαιτούνται για τη χρήση του Διαδικτύου για σκοπούς αυτοεκπαίδευσης και η συστηματική ανάπτυξή τους στα πλαίσια των εκάστοτε αναγκών.

Key words: Academic discourse, self-study work, self-access material, computer and Internet skills, higher education

1. Introduction

Academic Discourse is a first semester compulsory course for all students at the Faculty of English Studies, National and Kapodistrian University of Athens. It is the first in a sequence of four courses which comprise the language programme of the Faculty. In developing *Academic Discourse*, we moved away from the tradition of an academic writing course and placed equal emphasis on developing academic reading, listening, speaking, writing and study skills with the purpose of familiarizing first year university students with a variety of

academic texts and equipping them with the type of academic literacies that will enable them to function successfully in academic encounters (Mitsikopoulou and Tzanne 2001). Taking into account that the development of academic literacies takes place in an extended period of time, in a complex, dynamic manner and from multiple sources, we structured the course around three main components: a weekly 3-hour core session, a weekly 3-hour workshop and a self study component.

Core sessions have two main purposes: the first is to familiarise students with academic texts and help them develop receptive as well as productive academic skills; the second is to help students develop academic study skills such as note-taking, bibliographical search, and exam taking. Weekly workshop sessions, on the other hand, aim at providing students with opportunities for practice in study skills and important issues dealt with in the core sessions, and encouraging them at the same time to engage in self-study work. The teaching methodology is aided by the use of EASE (Essential Academic Skills for English), a multimedia programme which engages students in interactive activities with the aid of specially prepared worksheets.

The third component of the course, which is systematically encouraged by both core and workshop sessions, is self-study work for language development. There are several reasons which have led us to turn to self-study work. First is the need to help students develop skills for autonomous learning, change high school mentality and develop inner-motivation for improvement. Second, the large numbers of incoming students every year, approximately 420 on average, and high student-teacher ratios may lead to insufficient individual training (cf. Curran 1998). As a result, it is rather difficult to cover individual language needs, which differ widely, in the classroom. Third, as is the case with most university courses, diverse material needs to be covered in very short time and self-study provides opportunities for further practice and consolidation of this material. Fourth, despite the high level of English language proficiency of our students, there is anecdotal evidence that their knowledge has regressed since most of them did not study English at least during the last two years prior to university entry. Thus one of the main purposes of the language programme offered to all students during the first two years of their study is to enhance their language skills, something to be achieved both through course and self-study material. Fifth, since, by law, attendance is not compulsory in Greek universities, we felt that self-study work would be an opportunity for our students to come to contact with material related to the course at their own pace and time.

On the basis of the above, we started to prepare two different types of self-study materials. The first one is electronic sources available in the Internet. These sources, selected by a team of five researchers after careful screening and evaluation, include websites for academic discourse and study skills, in addition to language development websites. The second type includes new materials we are currently producing especially for our students. These will soon be available through the e-class of *Academic Discourse,* an e-learning environment which uses the tools of the e-learning platform of the University of Athens.

Before introducing our students to the aforementioned self-study materials, we investigated their competence in computer and Internet skills necessary for the use of these materials.

2. Computer and Internet skills in higher education

Recent surveys in both European and American universities reveal increasing incorporation of ICT in university courses. Curran (1998), for instance, discusses the gradual but fairly continuous process of change of universities in most EU countries and illustrates how ICT can provide a powerful resource for teaching and learning in higher education. Moreover, Green (2001: 7) reports the results of a recent survey in 590 public and private US universities, according to which 64% of university courses use electronic mail, 47% use Web resources as a component of the syllabus and 35% have a course Web page. Based on such findings, O'Hanlon (2002: 55) wonders whether university instructors may assume that incoming students will have the necessary Internet skills to participate in these 'wired' courses.

Another US national study of first year university students in 2000 reports high use of personal computers (78.5%). However, despite reporting similar levels of experience, female students admit to being much less confident concerning their computer skills than males, and only 23% of female students rate their computer skills as 'above average' (Higher Education Research Institute 2000). Issues of gender, as well as race, class and academic background, seem to be key factors which affect the level of computer literacy students have when they come to university, according to Sax, Ceja and Teranishi (2001). Therefore, one problem that arises and which university instructors need to take into account is students' differing levels of computer and information literacy.

On the other hand, assessment of student computing and research skills as well as anecdotal feedback from instructors indicate that students often overestimate their abilities. For instance, Carlson and Repman (2000: 12) argue that computer literacy cannot be assumed for students since almost always students, when asked,

overrate their abilities. Based on the findings of an Internet skills proficiency test to first year university students, O'Hanlon (2002: 63) concludes that entry-level skills vary widely and for this reason they should be systematically assessed before appropriate instruction is integrated into courses. She also stresses the need for additional instruction to be offered through a variety of modes, such as short seminars and workshops, in order to provide students with a variety of learning opportunities and to cater for individual student needs.

Specifically, according to recent sources (e.g., McEuen 2001, Weiler 2001), each university department needs to identify expected Internet research competencies and information fluency skills and systematically address them creating opportunities and/or requirements for students. For instance, integrating Internet technology into a financial accounting curriculum proved to be a worthwhile enrichment, according to Murphy and Hoeppner (2002: 339-40), and as one of the students who participated in their study reported "Continue to make computers and technology an important part of the course. It may seem like everyone knows how to use computers and technology, but few actually do! If someone doesn't force students to learn the technology, odds are they probably won't learn it on their own".

In the area of English for Academic Purposes (EAP) and English for Specific Purposes (ESP), Jarvis (1997) reports that in the past there was very little use of new technologies especially in pre-sessional EAP courses and supports the need to incorporate ICT as a component in EAP courses. Similarly, Felix (1999) finds it hard to imagine that any language programme would not be strengthened by integrating the Internet into the curriculum. Her extensive survey of approaches to language teaching and learning via the Internet suggests that in some languages (English being one of them) resources are already so plentiful that it would be more economical to integrate the best of them into existing courses. In addition, Nesi (1998) stresses the need for EAP courses to keep pace with developments in learning technology and suggests that students be asked to consult the Internet. Finally, recent electronic publications (e.g. e-learning EAP courses, multimedia applications) indicate an invested interest in the development of electronic teaching materials. The question though still remains: How much do our students actually know about ICT and how prepared are they to use these materials?

3. Surveys with first year students of the Faculty of English Studies

In this section, we present the findings of two surveys we conducted with first year university students who entered the Faculty of English Studies in the

academic years 2000-2001 and 2002-2003. During the first few weeks of their first semester, students were asked to anonymously complete a questionnaire which focused on students' knowledge of information and communication technologies, and specifically on computer and Internet skills. The same questionnaire was given to both groups of students and the main findings of the two surveys are presented and discussed below.

Table 1. *Student responses to the question "Do you use a computer?"*

	2000-2001 survey		2002-2003 survey	
	N	%	N	%
Yes	95	40%	147	60%
No	150	61%	96	39%
Total	245	100%	243	100%

Perhaps the most important finding is a significant increase recorded in Table 1 which concerns the number of students who are computer users. In fact, the number of students who use a computer has increased from 40% to 60% within only two years. A change is also noted in the number of students who use the computer every day and once a month (see Table 2). Instead no significant change is noted in the number of students who use the computer occasionally (e.g. once a week).

Table 2. *Frequency of students' use of the computer.*

	2000-2001 survey		2002-2003 survey		Change
	N	%	N	%	
Every day	20	21%	43	29.3%	+8.3%
Once a week	36	38%	56	38%	-
Once a month	36	38%	46	31.3%	- 6.7%
When I have access to one	1	1%	–	–	
No answer	2	2%	2	1.4%	
Total	95	100%	147	100%	

The programmes most widely used by the respondents prior to university entry include word processing, spreadsheets and web browsers as indicated in Table 3. Concerning the distribution of the programmes used in the two populations studied, no important changes have been noted between the two surveys. What has greatly increased, however, is the frequency of advanced use of programmes in the *2002-2003 survey*, according to students' responses. A general increase at the level of good use is also found. Interesting, yet restricted,

is the distribution of other programmes that respondents report to have used. In the *2000-2001 survey* one respondent noted the use of a logistics programme, and two others the use of imaging processing and programming languages respectively. In the *2002-2003 survey*, five respondents reported that they have used databases and seven of them programming languages.

Table 3. *Student responses to the question "What programmes do you use?"*

| | Basic use | | | | Good use | | | | Advanced use | | | |
| | 2000-01 | | 2002-03 | | 2000-01 | | 2002-03 | | 2000-01 | | 2002-03 | |
	N	%	N	%	N	%	N	%	N	%	N	%
Word processing	36	38	42	29	25	26	46	31	3	3	29	20
Spreadsheet	27	28	48	33	6	6	35	24	1	1	5	3
Web browser	14	15	37	33	16	17	26	16	1	1	13	9

For 2000, N=95; for 2002, N=147.

In another question concerning the different types of computer applications that students have used, the category of games seems to be the most popular one in both surveys with a slight increase noted in the second survey (33% in *2000-2001 survey*, 39% in *2002-2003 survey*). On the contrary, the use of computers for academic purposes is limited to 13% in the *2000-2001 survey* with a slight decrease to 10% in the *2002-2003 survey*.

On the other hand, from the responses to another question addressing students with limited ICT experience, it emerges that using the Internet and word processing seem to be the two most popular applications among users and non users.

Moreover, among computer users, the number of Internet users has significantly increased from 42% to 65% in the *2002-2003 survey* (Table 4). Still, a large percentage of respondents who are computer users do not use the Internet (33%). We do not know, however, whether this is related to lack of access or to other factors.

Table 4. *Student responses to the question "Do you use the Internet?"*

| | 2000-2001 survey | | 2002-2003 survey | |
	N	%	N	%
Yes	40	42	96	65
No	53	56	49	33
No answer	2	2	2	2
Total	95	100	147	100

A greater change has been noted in the categories of students who occasionally use the Internet and those who use the Internet systematically every day, rather than in the category of regular (e.g. once a week) users (Table 5).

Table 5. *Frequency of Internet use.*

	2000-2001 survey		2002-2003 survey	
	N	%	N	%
Daily	6	6	18	12
2-4 times per week	8	9	18	12
Once a week	24	24	64	44
No use	57	61	47	32
Total	95	100	147	100

The distribution of Internet use (see Table 6 below) provides interesting results for the purposes of this study. It seems that the majority of the students view the Internet as a medium for entertainment and not as a learning medium. As becomes clear from the Table, only a small number of students use the Internet for study purposes and this seems to be consistent in both surveys. On the contrary, the frequency of use for entertainment has significantly increased in the *2002-2003 survey*, whereas the frequency for communication purposes has decreased. In addition, the number of students who use the Internet to locate information has also decreased in the second survey.

Table 6. *Distribution of Internet use.*

	2000-2001 survey		2002-2003 survey	
	N	%	N	%
Entertainment	24	25	56	38
Study purposes	13	14	25	17
News/Information	31	32	38	26
Communication	27	28	28	18

It would be interesting to compare the findings of these two surveys concerning the use of the Internet with the findings of other studies which analysed Greek populations. An earlier study by Dragona and Handa (1999) concluded that Greeks prefer using the cultural web (e.g. friends, relatives, family members etc.) for information and entertainment. However, the steady increase of computer and Internet use by Greeks, as indicated in the findings of this study as well as in various market reports, may at some point change this

situation. Also, the results of the two surveys we conducted with our students, the overwhelming majority of whom are female, should be seen against other surveys concerning the views of females towards ICT. Recent Greek studies, in particular by Νικολοπούλου (2002), Παπαγεωργίου and Σολομωνίδου (2002), suggest that Greek females are not interested in and do not use the computer and the Internet as much as the males and most of the time they have incorrect representations of the Internet.

Another question in the surveys concerned students' typing skills. In fact, only a small number of the students who participated in the two surveys seemed to have developed good knowledge of typing and keyboarding skills before entering the University. In addition, the number of students who prepare regularly their work on the computer (e.g. assignments) has significantly increased in the second survey, as shown in Table 7. At the same time, the number of students who do not type and of those who rarely do so seems to decrease.

Table 7. *Frequency of typing on the computer.*

	2000-2001 survey		*2002-2003 survey*	
	N	%	N	%
Quite often	12	13	16	11
Often	22	23	68	46
Rarely	42	44	49	33
No type	19	20	14	10
Total	95	100	147	100

Moreover, it is clear from both surveys that the existence of a computer at home is associated with computer use. It is also clear from the findings presented in Table 8 that the number of students who have a computer at home has greatly increased over the last two years (as market reports concerning the sales of computers for personal use in Greece also indicate). This finding may also be related to sociocultural and educational changes which have taken place in Greece during the last few years. For instance, the equipment of almost all Greek secondary schools with computer labs, the revised curricula for the ICT courses in Greek gymnasium and lyceum (cf. Βαβουράκη 2002), and the increased incorporation of ICT in the various school subjects constitute important changes in the development of literacy skills in the Greek lyceum. In addition, certified computer knowledge (e.g. through ECDL and other certificates) constitutes a job requirement for the public as well as the private sector. These changes in the

Greek society and education system have, in turn, raised parents' awareness concerning the ICT skills their children need to develop and may have led to the acquisition of a personal computer for home use.

Table 8. *Frequency of students who have a computer at home.*

	2000-2001 survey						2002-2003 survey					
	Computer users		No computer users		Total		Computer Users		No computer users		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Yes	65	68	18	12	83	34	110	75	17	17	127	52
No	30	32	132	88	162	66	37	25	79	83	116	48
Total	95	100	150	100	245	100	147	100	96	100	243	100

However, buying a computer is not generally associated with university entry as the results of Table 9 indicate.

Table 9. *Student responses to the question "If not, do you intend to buy one ...?"*

	2000-2001 survey						2002-2003 survey					
	Computer users		Non computer users		Total		Computer Users		Non computer users		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
This semester	4	13	18	14	22	14	8	22	19	24	27	23
Next semester	3	10	23	17	26	16	9	24	16	20	25	22
Do not know	23	77	91	69	114	70	20	54	44	56	64	55
Total	30	100	132	100	162	100	37	100	79	100	116	100

Although the number of students who report that they intend to buy a computer at the beginning of their university studies has increased in the *2002-2003 survey*, the majority of students in both surveys answer 'I don't know' when asked when they intend to buy a computer.

4. Changes in course objectives

The time period between the two surveys is quite short and as a result, we did not expect to locate significant changes over a period of two years. The comparison of the two surveys does provide, however, interesting insights concerning the two studied populations, and in some cases, it has indicated

interesting similarities and differences between the two. The results of these surveys should be seen as indicators of identified tendencies which have provided useful feedback for the incorporation of new technologies in the self-study component of the course. One thing that has become clear is that the particular student body has generally associated the computer and the Internet with entertainment and not with academic work, although students have occasionally acknowledged, in both surveys, the importance of using ICT for academic and professional purposes.

Most importantly, the results of the two surveys have led us to reconsider the aims of the *Academic Discourse* course. In agreement with previous related research (e.g. McEuen 2001, O'Hanlon 2002, Weiler 2001), it has become clear that in addition to academic literacies our students need to develop ICT skills in order to be able to cope with self-study. Therefore, the revised aims of *Academic Discourse* have become:

- to help students develop academic skills
- to help them enhance their language proficiency
- to help them develop computer and Internet skills (to cope with self-study)
- to help them learn how to learn by themselves.

To achieve the revised aims of the course, we have been involved in identifying those computer and Internet skills that are necessary for the students to be able to cope with the self-study component of the course. In addition, we have carefully considered and created related course requirements which include these skills. For instance, we are training students to evaluate educational material available in the Internet by giving them general as well as specific criteria for web evaluation and then asking them to complete an evaluation sheet of websites related to course material. We have also created opportunities for our students to have access to computers in the Faculty. This has involved making special arrangements with the Library staff of the Faculty and informing students about related procedures.

In addition, we have prepared a "Guide to the Internet" booklet which focuses primarily on the Internet skills that will enable students to engage in research and self-study work. We have also prepared a 3-hour session in the context of the weekly workshops introducing students to the basic features of the Internet-related skills for self-study and have trained the tutors who would conduct the workshop. In the weeks following this workshop session, the students are generally given the opportunity for hands-on experience in the Faculty's *Multimedia Centre* under the tutor's guidance. This gives the less

experienced students confidence with using the Internet. The feedback we have taken from our students so far concerning this introductory session is quite positive. Even experienced Internet users reported that this session has been a useful introduction which helps them to start working with the different types of self-study material we have prepared for them.

Moreover, within the context of a newly established *Self-Access Learning Centre* in the Faculty which will soon be ready for the students to use, we also plan to conduct special workshops which students may attend on a voluntary basis. These workshops will be offered periodically during the academic year and will focus on the development of different ICT skills. The general idea is that these workshops will be flexible in order to cater for different student needs.

From our surveys as well as from other Greek data, it has become clear that this is a changing period in the Greek society concerning familiarization with information and communication technologies. The change recorded in our surveys even within two years is indicative of this tendency. This implies that our students' future needs will most probably change over the next few years. Consequently, as educators we need to be aware of and keep in pace with these changes, becoming flexible in our curricula and adapting our programmes accordingly, by taking into account students' existing knowledge and emerging needs for ICT skills.

5. Concluding remarks

The two surveys have provided some interesting information concerning computer and Internet use by first year students of the Faculty of English Studies. They have not, however, given information on the types and quality of skills that the particular student body has developed before they come to university. In addition, these surveys rely on students' own interpretation and evaluation of computer and Internet skills, something that, as related research claims, we cannot take at face value.

Despite these considerations, the two surveys have yielded some interesting results. Evidently, the number of students who have developed some type of computer and Internet skills has increased significantly in only two years. Computer use seems to be closely associated to having a computer at home. Knowledge obtained in schools is not recorded as having a decisive role in the development of students' computer and Internet skills, at least not for the specific student body (something which may change in the near future, due to recent educational innovations stated above).

It seems that work needs to be done to change students' representations of the computer and the Internet as means of entertainment. If we want to engage students in serious academic work using ICT, we need to show to them the usefulness of the new media in academic research.

Finally, the findings of this study and our experience with introducing ICT in *Academic Discourse* point to the need for explicit and systematic development of ICT skills as a component of the course. In more general terms, it would be important to develop a more global view on the topic and decide, at a departmental level, the ICT skills and competencies that our students will need to develop during their studies in order to function successfully in the future as professionals in the area of English Studies.

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