

TEACHING ENGLISH IN THE LAPTOP UNIVERSITY

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Abstract

The concept of the laptop university refers to the extensive use of portable computers by faculty, students and administrators in a wireless learning environment. Though few substantive studies have examined this area, e-learning environments of this kind have a number of implications for pedagogical practices in EFL. This paper will discuss faculty and students' access to Computer-Based Learning (CBL) materials and a Course Management System (CMS) using the Internet. In particular, it will address their promise to deliver effective multimedia-based course content using an integrated platform, and improve communication and collaboration among students and faculty. The article is based on data collected from undergraduate English major students at a Japanese university.

1 Introduction

In 1993 the University of Minnesota-Crookston in the USA became one of the first institutions to provide faculty and students with laptops. By 2001, more than one hundred universities in North America had already implemented a laptop initiative, bringing these educational technology developments to the attention of pedagogical institutions around the world. As is so often the case, technological factors have frequently preceded a concern with the pedagogical implications of a new technology, and the laptop university has also suffered in this respect. In order to examine some of these developments, this paper discusses a number of educational technology issues related to the introduction of a laptop university initiative in an EFL teaching context.

The paper is based on a study of English major students at a private business university in Japan, which has progressively introduced a wireless learning environment over the last three years. The university has developed an educational technology strategy based on students' and faculty's use of laptops, a campus-wide wireless LAN environment, and the Blackboard Learning System as a Course Management System.

The use of Blackboard has prompted discussion about the appropriate methodological framework for undergraduate teaching in a multimedia-learning environment for EFL. For the Faculty of Foreign Languages, these developments raise a number of interrelated issues: How can the laptop university help Japanese students to learn English more effectively? How will faculty and students adapt the laptop learning environment to facilitate foreign language learning, both in terms of presence and autonomous learning?

Each university student is given a Macintosh G4 iBook when they enrol at the university, allowing them to access a range of software and computer-based learning materials. Similarly, the use of the portable computers raises a number of issues for students: How can they use the technology to manage their English learning? How effective is learning using Information Communication Technology (ICT) of this kind? Following the introduction of Blackboard and the campus-wide wireless environment, research is required about the initial response of faculty and students to these developments. This research will enable the next phase of the educational technology strategy to be implemented.

2 History and Organisation of the University

Founded in 1953, the Nagoya University of Commerce and Business Administration (NUCBA) is one of the 90% of Japanese universities currently operating in the private sector. NUCBA is located in the Aichi Prefecture in Central Japan, fifteen kilometres south west of Japan's fourth largest city. The university is small in terms of student numbers, currently having approximately 4000 under- and 500 postgraduates, but has national and international ambitions. This is evident in NUCBA's registration with the Association to Advance Collegiate Schools of Business (AACSB) and the European Federation for Management Education Development (EFMD). The university is ranked in the top four in the central region of Japan, second in its prefecture, and twenty-fifth out of 765 national institutions, according to a leading national newspaper in 2005. This status allows it to recruit students from all over Japan as well as international students from Taiwan, China and Vietnam. The Department of English Communication currently has twenty-five full-time members of staff employed on a scale from Assistant to Full Professor, and drawn from fifteen countries around the world.

3 Educational Technology Policy

The educational technology strategy of the Faculty of Foreign Languages is based on six points:

1. There are five dedicated computer/language laboratories with 170 desktop computers available for student use during lesson time. All rooms are fitted with Macintosh computers (G5 or eMac using OSX) and high quality digital projectors. In addition, six further classrooms are fitted with digital projectors, 200 x 240 inch projector screens, and video and audio facilities, for use with wireless laptop computers.
2. Every student and faculty member is given a laptop computer. For new entrants in the academic year 2005, this is the Macintosh G4 iBook (15" Screen/256 MB RAM/1.2 MHz Processor/DVD).
3. Every iBook can be connected to the wireless LAN (100 Mbps) enabling effective communication and fast data transfer.
4. Access to the network, the library and administrative data for each student through the university's Enrolment Management software is possible 24 hours per day, 7 days per week.
5. The Blackboard Learning System (Multi Language Version) is used as a course management system to organise courses of study using a consistent template design that provides course content and communication tools.
6. All new freshmen receive an Apple iPod Shuffle (512MB) with the specific intention that it be used to aid language learning, as well as function as a portable data storage device.

4 Literature Review

Though laptop universities have existed since the early 1990s in the USA, little substantive research has been done in this area. A series of short institutional surveys (Henderson, 2004; Kontos, 2002; Sherrod et al., 2004) have reported feedback from American universities, usually from the institution's own Professional Development Unit, but they have not situated the new technology in a wider academic and pedagogical context. Similarly, few substantive studies on the specific use of laptop initiatives in an EFL context have yet to emerge.

Student Use of Laptop Computers

Kontos (2002) discusses students' attitudes to the use of computer programmes on laptops and the impact laptop technology is having in the higher education sector. In Zayed University the laptop initiative responded to the inequity of computer provision. Increasingly some students had been turning to portable solutions, and a gap appeared between those students who had access to computing facilities with their own laptops and the other students who had to rely on the university's hard-wired network. As well as lacking portability, desktop computer labs were unable to keep pace with the constantly changing upgrades of expensive equipment. Kontos makes the case for the adoption of a more flexible infrastructure that could extend student access to electronic resources to dormitories, libraries, classrooms and even cafeterias.

While Kontos outlines numerous advantages of introducing a laptop programme, the underlying critique from a pedagogical perspective is that the laptop initiatives "do not address an educational problem but a financial problem instead" (p. 56). This perspective is evident in the four modes of laptop implementation that Kontos identifies:

1. Laptops are required but not provided by the institution.
2. Hard- and software are provided by the institution.
3. Equipment is provided in phases.
4. Everything is provided in full at the commencement of the study programme.

Laptops were issued to faculty and students from the foundation of the university in 1998. Kontos' data collection process used a questionnaire, consisting of thirteen questions aimed at identifying how students have adapted to the introduction of the laptop concept, and what they use their laptops for. The thirteen questions are:

1. My laptop helps me learn better.
2. My laptop is important to me.
3. My laptop helps me communicate with others better.
4. Using laptops in my studies is fun.
5. I believe that using my laptop helps me increase my technology skills.
6. I believe that using laptops in my studies will help me find a job when I graduate.
7. I believe that I learn better when I study with my laptop.
8. I prefer to take exams where I can use my laptop during the exam.
9. I use my laptop every day.
10. I use my laptop for e-mail every day.
11. I use my laptop for Internet searches every day.
12. I use my laptop mostly for: (a). University work (to do my homework), (b). Personal work (to write letters to friends, etc.).

13. I use my laptop for: (a). Word-processing (Word), (b). Spreadsheets (Excel), (c). Presentations (PowerPoint), (d). Internet (Web searches), (e). e-mail.

Surveys were disseminated via e-mail to a student population of 1600, of which 254 students responded. More than 60% of all respondents answered “Yes” to all questions. 100% of respondents said that “laptops had helped them learn better.” 99% answered that laptops “help them improve their technology skills.” 93% said that their laptops help them “communicate better.” 94% concluded that “using laptops in their studies was fun.” Using laptops was also linked with securing a better job when they graduate, according to 96%.

For Question 12, university work accounted for 71%. Respondents who were reticent to answer this question may well fall into the “personal work” camp, though they were protective of giving such an answer. In Question 13, the Internet accounted for 37% of usage and Word for 30%. Surprisingly, both PowerPoint and Excel were ranked by only 1% of respondents. 26% of students similarly refused to answer this question, perhaps indicating that extra-academic work activities would have acquired higher percentages if registered.

Kontos’ study of the use of the laptop concept provides some interesting findings about students’ use of this new learning environment. It is clear that students find the new infrastructure useful both for classroom-based and autonomous study. One deficiency of the study is the absence of a specific focus on which pedagogical tasks and activities students actually use their laptops for.

Some of the elisions of Kontos’ study are taken up by Schoepp and Erogul (2001), whose research focuses specifically on the use of laptops in a language learning context in Turkey. Their questionnaire uses five questions to examine the role of English learning in the laptop university:

1. Does having a laptop with unlimited high-speed Internet access promote English computer usage?
2. Does language proficiency contribute to the choice of English or Turkish Internet use?
3. Do students believe that computer technology is an essential element of their English language learning?
4. Do students enjoy using computer technology as part of their English language learning?
5. What do students mainly use their laptops with Internet access for?

This study was primarily concerned with student use and perceptions of technology outside of the language classroom. This includes activities such as using the Web as a research or reading tool and a place to exchange information. Research on the use of computers at home and performance in school has been undertaken (Selwyn, 1998; Underwood, Billingham & Underwood, 1994), but has yet to address such developments through the lens of the laptop initiatives.

Schoepp and Erogul’s study was based on data collected from a student population of ninety students, representing a range of language levels. Data from the questionnaire provided information about both internal and external classroom usage of e-learning facilities. The study assumed that there would be a correlation between English proficiency and the use of and attitudes toward the computer technology (p. 6). It was noted that 71.7% of students had had regular access to a computer with Internet access before attending the university, and students spent 14.8 hours per week using their computer in their own time. At university, data shows that students spent 13.5 hours using the Internet. This is reflected in the high response rate of students who registered that “Computer technology at the university has enhanced my English language learning” (78% strongly agreed). 87.7% of respondents agreed or strongly agreed with

the statement that “I enjoy using my computer to enhance my English language learning.” The most popular activities for computer use were:

1. e-mail in English or Turkish.
2. Games in English or Turkish.
3. Surfing in English or Turkish.
4. Chatting in English or Turkish, and
5. School work in English or Turkish.

The correlation between the use of the Internet and language proficiency levels, parallels the research of Warschauer and Whittaker (1997b), who interestingly argued that language proficiency can be a barrier to computer use. Clearly, a positive attitude to computers is indicated by the Turkish students. At the beginner level, 80% of respondents affirmed that “technology enhances their English language learning,” a figure that increased to 93.3% for the intermediate level. High levels of enjoyment were also registered: 80% for beginners and 93% for the intermediate level. Consequently, students with extra-school access to computers have a far superior attitude to the use of computer technology in language learning. This was reflected in the findings in that students from both groups ranked English work as the activity they spent most time on with their laptops. Accordingly, they conclude that “there is a positive correlation between school-work in English and proficiency in English. As the students’ English gets better, the students spend more time using their computer for school work in English” (p. 8).

Schoepp and Erogul’s findings, then, underline the fact that students enjoy and recognize the value of the laptop environment as it enhances their English language learning. Moreover, the students’ proficiency in English language has an important role in influencing which tasks and learning activities they engage in.

The Use of Instructional Technologies by Teachers

As with research on students’ use of the laptop university, few studies have focused on the role of faculty’s attempt to come to terms with teaching and learning in this new environment. The need for effective programmes of staff development and the attempt to bridge the gap between technology and educational technology competence are the main elements of discussion in this area.

Spotts and Bowman (1995) focus on the way that faculty are integrating instructional technologies in their teaching strategies. Their survey of 696 faculty responded to five research questions:

1. How knowledgeable is the faculty about instructional technologies?
2. How much experience does the faculty have with these technologies?
3. How important does the faculty think technology is to teaching?
4. How likely is the faculty to adopt a new technology in the near future?
5. What are the characteristics of the faculty in regard to gender, rank, and home computer ownership? (p. 59)

Faculty were asked to rate their level of knowledge about and experience with twelve different technologies: audio, film, video, word-processing, computer spreadsheets, statistical computing, electronic mail, computer-assisted instruction, presentation software, computer conferencing, multimedia and distance learning.

The results of the research indicated that word-processing was the most popular technology used by the majority of faculty, followed by the older technologies such as video, audio and film, though they were used by only 20%. The data revealed that there was a high level of computer competence with e-mail and CALL; however, these technologies “have not yet been widely accepted within” academe (p. 62). No significant differences in competence were affected by university rank. However, in the gender category, it was evident that men are more aware of the newer instructional technologies than their female counterparts. Such differences did not exist with older educational technologies.

As a whole, faculty registered a low level of familiarity with presentation software (16%), computer conferencing (16%), multimedia (13%) and distance learning (9%). Although there was interest in instructional technologies among faculty, the data suggests that “fewer will actually be using them in their teaching in the near future” (p. 62). The authors link this to the conclusion that “today’s knowledge and practice at the university level continues to rely more on traditional methods of delivery than on innovative technologies” (p. 63).

A recent study of the status of ICT implementation in Japan (Fujitani, Bhattacharya, and Akahori, 2003) continues this theme, arguing that it has been inhibited due to “age-old traditional paradigms of learning and instruction” (p. 33). The implication is that Japanese teacher training methods have created a resistance to the incorporation of e-learning. Japan’s geography and island status contributed to the slow pace of educational reform, and reforms that have been developed have been based on a piecemeal approach. Consequently, ICT has been used more as an “information ‘transmitter’ (learning *from* technology) rather than for the purposes of learning *with* the aid of technology.” This is based on the Japanese tradition, which “puts a lot of emphasis on acquiring knowledge through memorization and repetition” (p. 34). What needs to emerge is the idea that ICT can be a partner in learning and to move beyond the simplistic notion that the Internet is only for accessing information. Existing surveys of the use of ICT in Japanese schools also support this view. ICT is viewed as either a “tool for cooperative research projects or tools for communication” with other institutions in a distance partnership, or “as a source of educational materials to be useful for classes.”

Secondly, there is a need for the greater availability of “materials in multimedia formats” (p. 35). Teachers need to transform their teaching practices by using the new technology to involve students in new forms of knowledge discovery. This would challenge the traditional way of understanding technology as “an exemplification of their own explanations.”

The model suggests that the existing curriculum is flexible enough to make large-scale changes unnecessary. The curriculum has a key role of driving the methods and approaches adopted rather than vice versa. The authors recommend the features of an online collaborative Problem-Based Learning (PBL) environment to contextualise the integration of ICT in Japan. This system would allow: 1). Teachers to create PBL materials; 2). Student groups to engage in online discussion; (3) Feedback to be provided online; 4). Assignments to be submitted online; 5). An online evaluation process would be possible for teacher and students; and 6). The results of student learning would be displayed graphically by the system along with feedback.

This model is based on a process-oriented approach to curriculum design, which should include a “cycle of activities, artifacts, and reflections in a spiralling-up process of learning progression or authentic problem solving” (p. 36). Teachers should be involved in active research and consider their roles as reflective practitioners if they are to be responsive to the needs of their students.

Constructivist Methodologies and Online Learning

The development of online learning environments has inevitably been concerned with the theoretical infrastructure necessary for considering the relationship between technological and pedagogical goals. Constructivism has played a major role in discussions about a suitable theoretical paradigm to articulate these new learning objectives (Greening, 1998; Hung & Nichani, 2001; Squires, 1999; Tan & Hung, 2002). How can the principles of constructivism apply to a laptop learning environment?

Tan and Hung (2002), for example, argue that to best take advantage of the learning potential that the Internet provides, a social constructivist approach should be adopted. While one of the main presuppositions of their wider argument is that “learning management may enhance the efficiency of learning ... its effectiveness in enhancing learning is based on a few assumptions” (p. 49). Tan and Hung’s understanding of e-learning relates to a model of “information pumping,” which relies on the learner to:

1. Be capable of self-directed learning.
2. Be sufficiently motivated to learn.
3. Apply what has been learned to a real-world context in a natural process.

In practice these assumptions often break down, especially when students are at educational institutions. However, the constructivist paradigm supports one of the best integral elements of online learning, namely that it facilitates increased communication and collaboration. Constructivism here describes a process of “learning through social interaction and construction of knowledge.” E-learning’s myth that “information access” and the “management perspective of learning” are the only real conditions for learning, presupposes too many assumptions about the self-directed nature of learners (p. 54). A constructivist e-learning environment “captures the full essence of e-learning by creating a rich learning environment that provides motivation, engages higher-order thinking, promotes collaborative knowledge building, and enhances transfer of learning.”

Drawing on two models (Jonassen, 1999; Perkins, 1992), Tan and Hung illustrate how constructivist principles could be used to guide the design of an e-learning environment. This environment would be based on six factors:

1. Learners would be acting within the context of a problem.
2. The problems would be dealt with in a simulated environment.
3. Cognitive tools or construction kits would be used to allow learners to solve the problems.
4. Information resources or banks allow learners to search for knowledge.
5. Communication and collaboration tools allow learners to engage in the active sharing and construction of knowledge.
6. Task managers and social context support provide administrative, mentor and peer guidance support.

These themes are continued by Hung and Nichani (2001) in their attempt to balance the individual and social levels of cognition when e-learning meets constructivism. Collective understanding must be internalized by individuals so that there is a balance: “Learning should ultimately occur in the learner’s head, and not just at the social level” (p. 44). They therefore promote the idea of a learning community, in which there is “a mutual dependency on one another’s expertise.” This community is based on sharing and respect for each other’s views.

In the practical situation of an e-learning context, learners would be able to log onto a university network and they would find themselves in a learning context determined by their personal profile. Instructional content would be targeted to individual needs. Consequently, the system would be so responsive that the personal profile it compiles would make a history of the students' activities and the "e-learning environment would be able to recommend timely and appropriate resources and materials for the students' learning" (p. 44). Furthermore, "it would be able to recommend directions for the students, for example, possible projects or assignments in which the student would most likely be interested." Applying constructivist principles in this e-learning environment based on "collaborative filtering-based personalization" would link individuals to "their most related communities."

This idea of challenging the transmissive model of learning via Jonassen's notion of "constructing their own version of reality" (p. 41) is common to many accounts of constructivism (Caprariis, 2000). Squires (1999), for example, recognises that "the use of software ... will be determined by the way their assumptions are interpreted in varying educational contexts" (p. 52). Squires argues therefore that instead of relying on teachers and learners to adopt a subversive role to the intentions of the author, that it is actively incorporated into the software's design. This conclusion is another way of advancing the point, as Greening suggests, that there is a need "for theory to drive the application of technology within educational institutions" and not technology or financial limitations (Greening, 1998, p. 32). The constructivist position, therefore, occupies a middle ground, at once rebelling against the "linearity of traditional computer-based instruction, on the one hand, and the irresponsible nature of those who suggest, on the other hand, that the Internet can just be plugged into and that good education will somehow take place within the rush of information that results" (p. 33).

While a limited amount of research has been done in the area of faculty or student perspectives on the laptop university initiative in EFL, those studies discussed above suggest that students find the laptop environment: 1). a more stimulating and enjoyable environment in which to study, and 2). more effective at promoting the types of skills necessary to foster English language learning in the present, as well as encouraging technology skills which will be useful for their future.

For faculty, similarly, this teaching environment: 1). provides a situation in which courses can be managed more professionally and effectively, and 2). improves student-student and teacher-student communication and collaboration. If this environment is to be fully integrated with the underlying assumptions of the curriculum, however, effective and continuous training programmes have to be developed.

The constructivist methodology, with its emphasis on replacing the transmission model of content delivery with actively engaged and collaborative learners, has radical implications for the design of stimulating, interactive learning environments underpinned by current educational technology.

4 Methodology

Two questionnaires were administered to collect data about faculty and students in the laptop university environment. Each questionnaire compared how faculty and students from the Department of English Communication use the Blackboard Learning System for online content using the laptop learning environment. Ten full-time English Communication faculty were surveyed using a questionnaire aimed at collecting data about how they use Blackboard for teaching English Language courses. Questionnaires were disseminated individually and the goal of the survey explained. All Year 2 and 3 undergraduate English major students were issued with a questionnaire during their regular classes, and the teacher

asked to devote sufficient time for their completion before the end of the class period. Both approaches produced a 100% response rate from the ten faculty members and 256 students.

5 Analysis

The teaching and learning environment of the Blackboard Learning System acts both as an e-education platform and as a tool for supplementing traditional face-to-face learning. The utilities making up this environment are:

1. Content Management and Content Sharing (*Digital Drop-box, PowerPoint Presentations, Contact Information, Microsoft Word, Announcements, Syllabus*).
2. Assessment Management (*Online Quizzes*).
3. Collaboration and Communication (*Synchronous Chat, Groups, Discussion Forums, Student Homepages*).
4. Gradebook and Assignment Management (*Online Gradebook*).

Faculty were asked to rank twelve features from the four areas identified above using a five-point scale.

Faculty Feedback

The Digital Drop Box and online Gradebook features scored a maximum five. Four features were awarded four points: Announcements, PowerPoint, Forums, Chat and Word. Homepages, Contact Information, Groups and Quizzes received three points. Taken collectively, all features were viewed as important to very important on the scale.

The priority accorded to these features can be accounted for by some of the faculty's written responses that concluded the questionnaire. Using PowerPoint and Word it was "possible to create online learning units," arrange them in documents and "send learning materials and links to the course website." Faculty can also "decide the timetable of events," indicating when to present certain materials to each student according to his/her learning requirements at that time. Students who are absent from class or who need to review input can also "view lesson plans, information and self-study assignments."

These comments strengthen the idea that Blackboard can be used to enhance student-teacher and student-student communication. Teachers are keen to use the Announcements facility precisely for these reasons also, to keep students and teachers informed about the day-to-day operation of the course, including homework assignments, tasks and course meetings. Announcements were formally required for administrative purposes to provide information about examinations, teacher consultation hours and important course requirements; however, teachers indicated that this allowed the class to stay on track and keep to well-defined curriculum targets. Likewise, Syllabus documents and Contact Information kept students up-to-date with important course-related information.

Some of the negative implications were nevertheless of concern for faculty. Inevitably, an overdependence on the platform's ability to provide key lesson content could sometimes be "compromised by technical problems associated with the Internet." Adding content could also be "troublesome" and "time-consuming" in that up to five separate mouse clicks are often required to complete the process.

The Assessment Manager enables faculty to use different types of student tests in a variety of formats - multiple-choice, multiple answer, true/false, matching, ordering, cloze as well as open answer tests or short essays. Online Quizzes obtained an average faculty score of three, which underline a number of comments made by faculty, suggesting that they are “largely popular with the students who could access them using their laptops in and out of class.” Used for a small percentage of classwork, the quizzes could provide a fun activity at the start or end of an EFL class as a warm-up or review activity. The weaknesses focused on the pedagogical appropriateness of the quiz formats to test course content. Secondly, technical problems were sometimes encountered which caused problems with navigation in Internet browsers. If such problems arose, students might lose valuable data, making the students do them again or the tests redundant.

The third area of Blackboard under consideration concerned collaboration and communication features. Synchronous Chat, Bb’s multifunctional environment for synchronous and asynchronous communication, scored highly. Similarly, Discussion Forums and Student Homepages were seen as an effective way to promote the use of English as well as tapping students’ creativity.

Overall the Groups function was viewed as an effective tool for improving communication and collaboration, and for giving the students a feeling of belonging to a learning community. The teacher also has sophisticated tools for conducting online discussions and they can be recorded and archived for future use. Students were advised that all e-mail communication would use English, and to use the medium for questions about the coursework and assignments.

Finally, the Assignment Manager tools allow teachers to create, evaluate and handle tasks, as well as to record each student’s performance in the *Gradebook*. The average faculty score of five reflected their interest in using its features to store and display student data within the Blackboard platform. Like a standard spreadsheet, student data entered in the Gradebook can also be processed to produce statistics and percentages according to criteria established by the teachers themselves.

In summary, the features of the Blackboard Learning System presented faculty with a powerful tool for teaching and managing English language resources. Utilising the features of the four systems described above, faculty have been able to promote English language teaching in a range of areas. There is a high level of faculty satisfaction with the Blackboard system as it has been used to distribute course materials and improve teacher-student and student-student communication and interaction. In addition, two main areas of weakness are evident. The introduction of the system should include an induction that focuses on both pedagogical as well as technical aspects of the system’s integration for faculty. The use of Blackboard should be encouraged as a standardised platform for course management and delivery.

Student Feedback

In the second questionnaire, students were asked to answer fifteen questions. Data collected from students reveals an equally positive message about the introduction of laptops into their English language studies, as well as helping with general study skills and research. As is shown in Table 1 below, students indicated that the laptop program had been an influential factor in their decision to choose the university (Q.11. Strongly Agree / Agree: 64%). And students are confident that they are learning more in a laptop environment than in a traditional learning context (Q.14. Strongly Agree / Agree: 75%). In the short time that the laptop environment has been available, it has become an “integral part of their English language learning strategy” (Q.15. Strongly Agree / Agree: 94%).

Table 1: *Feedback about Student Use of Laptops for Studying English*

No.	Question	Strongly Agree	Agree	Agree nor	Disagree	Strongly Disagree
1.	I use my laptop to help me learn English.	78%	12%	6%	4%	0%
2.	I usually use my laptop for independent self-study purposes in English at home.	26%	36%	12%	15%	11%
3.	I usually use my laptop in class-time for studying English.	21%	23%	14%	24%	18%
4.	I usually use my laptop for studying English in the Self-Access Centre.	24%	35%	13%	18%	10%
5.	Studying at a laptop university makes learning English more enjoyable than traditional learning.	65%	27%	5%	8%	0%
6.	Working with a laptop helps me improve my technology skills as well as my English.	65%	31%	4%	0%	0%
7.	Being able to connect 24/7 to the Internet in a wireless environment improves access to study materials.	32%	29%	14%	18%	7%
8.	The Blackboard Learning System helps me to improve my English in many ways.	26%	30%	26%	11%	7%
9.	I mainly use the Internet connection for learning English.	18%	32%	13%	23%	14%
10.	I mainly using the Internet connection for other work not connected to English learning.	14%	12%	15%	31%	28%
11.	The availability of the laptop learning environment played a key role when I chose NUCBA to study English.	28%	36%	15%	21%	14%
12.	Teachers use the laptop environment to improve their English language teaching.	16%	34%	21%	17%	12%
13.	All teachers seem to have been well trained to use the laptop environment for teaching English.	16%	19%	26%	27%	12%
14.	I am confident that my English will improve more in this learning environment than in a non-laptop one.	23%	52%	12%	5%	8%
15.	The use of the laptop university is an integral part of my English language learning strategy.	68%	26%	4%	2%	0%

The laptops helped students learn English (Q.1. Strongly Agree/Agree: 90%), making the experience “more enjoyable” than at a traditional university (Q.5. Strongly Agree/ Agree: 92%). Students are split evenly between those who use their laptops to study English at home as part of independent study (Q.2.

Strongly Agree/Agree: 62%), and students who use their laptops for studying English in class-time (Q.3. Strongly Agree/Agree: 51%). In addition, many students use their laptops for independent study in the Self-Access Centre (Q.4. Strongly Agree/Agree: 59%). Students are well aware that the use of the laptop environment helps them to become acquainted with a broad range of information technology skills (Q.6. Strongly Agree/Agree: 96%).

Students were then asked a series of questions about their use of the Internet and the Blackboard Learning System for studying English. Accessing the Internet 24/7 has improved access to English language study materials (Q.7. Strongly Agree/Agree: 61%), and students mainly access the Internet for English learning purposes (Q.9. Strongly Agree/Agree: 56%). Blackboard “has helped students to improve their English in many ways” (Q.8. Strongly Agree/Agree: 56%). On the other hand, students considered how teachers were using the available technology. While students suggested that teachers were using the laptop environment to “improve their English language teaching” (Q.12. Strongly Agree/Agree: 50%), it was evident that some teachers required more training prior to using it in their courses (Q.13. Strongly Agree/Agree: 35%).

Student data provides further evidence of their willingness and enthusiasm to utilize Blackboard as a course management system, and to exploit the most appropriate features for studying English in an online environment. Like faculty, students place a high emphasis on improving communication and collaboration with teachers and fellow students. It is evident that students firmly supported the introduction of the laptop initiative and viewed it as a reason to be attracted to studying at NUCBA. The environment is both enjoyable and stimulating, and provides a platform for effectively managing their EFL courses.

6 Conclusion

In this study, data collected from faculty and students pointed to a series of advantages for integrating the Blackboard Course Management System. These were concerned with improving course content and aiding teacher-student and student-student communication above all. Moreover, the wireless environment was seen as a progressive measure that extended access and promoted a 24/7 learning environment that could only encourage the achievement of educational objectives in the longer term. The six advantages outlined by Kontos (2002) find a strong echo in the data collected for this project:

1. *Ubiquity*: Faculty and students can have access to course information 24/7 wherever they are on the university campus.
2. *Content Sophistication*: Student projects that use laptops tend to be more detailed and engage in a higher level of presentation and complexity.
3. *Design of Student Projects and Faculty Activities*: All students have access to the same hard- and software as faculty.
4. *Shift to Learning and Teaching*: After the initial familiarisation phase, equipment issues are replaced with educational and pedagogical issues aimed at improving teaching and learning.
5. *Savings*: There is a considerable financial reduction as desktops are replaced by laptops, hardwired classrooms by wireless technology.
6. *Standardization*: Universities can minimize technical support problems and improve access to all students by introducing a standardized CMS platform, within a plug-and-play wireless environment.

Concerns from faculty focussed on the fact that introducing the wireless environment often considered technological rather than pedagogical factors in the first instance. Nevertheless, the advantages far outweighed the technological shortcomings.

The developments in wireless education and Course Management Systems around the world have been rapid. These initiatives provide ample opportunities for future research studies, especially in the area of language learning, where a concern with specific activities used in a wireless environment would be an appropriate place to pursue this work further.

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