

The Use of ICTs in Teaching English during the COVID 19 Pandemic Situation: Tlemcen Faculty of Science as a Case Study

استخدام تكنولوجيا المعلومات والاتصالات في تدريس اللغة الإنجليزية أثناء جائحة COVID 19:

كلية العلوم بتلمسان كدراسة حالة

Fazilet ALACHAHER

redbenz13@gmail.com

Maghnia University Center (Algérie)

Reçu le:03 /09/2022 Accepté le:07 /12 /2022 Publié le:10/01/2023



ABSTRACT:

ملخص البحث

Many changes occurred as a direct outcome of the use of the information and communication technologies (ICTs). In fact, ICTs enhanced the experience of learning since they provided features that were not present previously and started to spread outward. The enclosed paper tries to analyze the necessity of multimedia technology in teaching English at Tlemcen Faculty of Science and also brings out issues facing its use. More precisely, the study intends to examine the degree of students' engagement in learning the language via ICTs' use and perceive teachers' motivational spirit of integrating such technology. Following the importance of the study and its objectives, a self-designed structured questionnaire was administered to 20 teachers and 40 students. For the sake of collecting data, quantitative and qualitative instruments were administered. Results revealed that ICTs integration fostered the learners' autonomous capacity to take in charge their learning capacities.

Keywords: COVID19, Digital strategies, ICTs, Technology.

عززت تكنولوجيا المعلومات والاتصالات تجربة التعلم لأنها قدمت ميزات لم تكن موجودة من قبل وبدأت في الانتشار إلى الخارج. تحاول الورقة المرفقة تحليل ضرورة تكنولوجيا الوسائط المتعددة في تدريس اللغة الإنجليزية في كلية العلوم بتلمسان، كما تبرز المشكلات التي تواجه استخدامها. بتعبير أدق، تعتزم الدراسة فحص درجة مشاركة الطلاب في تعلم اللغة عبر استخدام تكنولوجيا المعلومات والاتصالات وإدراك روح التحفيز لدى المعلمين لدمج هذه التكنولوجيا. بعد أهمية الدراسة وأهدافها، تم تصميم استبيان منظم ذاتيًا على 20 معلمًا و 40 طالبًا. من أجل جمع البيانات، تم إدارة الأدوات الكمية والنوعية. كشفت النتائج أن تكامل تكنولوجيا المعلومات والاتصالات عزز قدرة المتعلمين المستقلة على تحمل مسؤولية قدراتهم التعليمية.

الكلمات المفتاحية: كوفيد 19، الاستراتيجيات الرقمية، تكنولوجيا المعلومات والاتصالات، التكنولوجيا

1. INTRODUCTION

The Algerian society crossed actually several reforms, according to the socio-economic needs of the country as well as those of science and technology. The LMD teaching system has worked for a long period but in our recent times, it has shown its limits. Following the recommendations of the National Committee of Educational Reform, a ten-year strategy plan was adopted to develop the sector from 2004 till 2021. Its main objective has been the development and implementation of an overall reform of the educational sector.

The Algerian university teachers were urged to cope with the necessity of distance teaching instead of onsite or face-to-face teaching to meet current circumstances under the Coronavirus pandemic. By enforcing the new COVID 19 health status, the integration of ICT into foreign language teaching including cross-curricular teaching units included mandatory foreign language and ICT courses.

In order to realize online education, both teachers and learners have found themselves confronted with technological information and communication facilities that will not only enhance the learning environment but also prepare future generations for permanent connection to the digital world. The enclosed paper aims to investigate much on examining the implementation and integration of ICTs by our Algerian educational system from the perspective of an integrationist approach unveiling the impact of technology use in technical studies' departments within the faculty of science. It comes to explore whether ICTs are effective instruments to contribute in the distance teaching/learning process.

To guide the research study, the following research questions are formulated:

RQ1: To what extent can the use of ICTs contribute in motivating students from the department of technical sciences at the faculty of science- Tlemcen?

RQ2: To what extent are ST students motivated to adopt the use of ICTs?

RQ3: How can teachers overcome with all obstacles to implement the ICTs' use and boost their learners enhancing communication skills?

These questions pave the way to some assumptions about the nature and efficiency of using ICT. The researcher seeks to determine the main factors that can smooth the progress of technology integration. The following hypotheses are set to answer the above research questions:

H_{a1}: ICTs can have a significant impact and contribute in motivating the students' learning process.

H_{a2}: ICTs show that the proliferation of the new-tech largely affects behaviourally and linguistically learners specialised in scientific field.

H_{a3}: It is assumed that some teachers with positive attitudes play the most important role in implementing new language learning strategies with targeted instruments and also the lack of pedagogical training may demotivate and disappoint other teachers from the new-tech environment.

The current study mainly consists of two parts. First, a theoretical part that includes literary concepts, definitions, and importance of information and communication techniques in the distance education/learning process along with a practical part that deals with the complete fieldwork of study and data analysis.

2. REVIEW OF THE RELATED LITERATURE

In literature, the information and communication technology (ICT) has been characterized as having the potential to enable national development. However, ICT has been conceptualized mostly as a monolithic and homogeneous entity (Bryderup, & Kowalski, 2002, p.475). To a great extent, the ambiguous findings and diverse opinions on the role of ICT in national development can be attributed to this limited focus. From activities to operations, from research to development,

from health services to amusement, from education to governance, ICT has become an essential component of basic life.

2.1. The Importance of the Information and Communication Technology

The information and communication technology (ICT) is a main stream in higher education. It plays a very substantial role in enhancing English teaching. It is considered a must to survive our modern digital era. The technological advance in teaching with ICTs have created high hopes among many teachers, administrators, researchers, and policy makers, who believe that the digital devices offer great promise as instructional tools for literacy education (Baylor, & Ritchie, 2002 p.410). The use of ICTs actually brings advantages to both teachers and students. Teachers may try to assist teaching by using information and communication technology to create a more meaningful learning environment, or to create better interaction between teachers and students (Padurean, 2009, p.99). In the context of teaching English as a foreign language (EFL), teachers can integrate ICTs into their EFL classrooms. Several online learning resources are available that they may take for lessons, such as YouTube or websites (Çakir, 2006, p.68).

Bhatia (2011) highlighted that virtual classrooms share many characteristics with physical classrooms but without the same limitations (p.125). They allow interaction between students and teachers through several media, including oral communication, texts, video conversation, audio chat and PowerPoint presentations. Depending on the particular virtual classroom platform used, students and teachers may also share content via whiteboards, break-out virtual rooms, shared web browsing, feedback and even the sharing of applications; different online tools (Creemers, 2002, p.345). The advantage of virtual classes is that they can be accessed in different places and at different times. As students are increasingly considered to be digital natives and prefer to interact and socialize online, virtual classrooms may be an especially effective way to engage them in education (Creemers, 2002, p.347).

ICTs can be a medium for teaching and learning. This can act as the medium through which teacher and learners can learn (Kozma, 2003, p.261) Here in order to introduce and understand the need of ICTs in educational institutions, teachers or students undergoing teacher education must first comprehend and be at ease with ICT use. They must be given opportunities for acquisition of new knowledge. This can be made possible by promoting ICT-based training programs introduced in their curriculum.

Moreover, learners can use the information and communication technology to advance in their education, for example, by using a computer and a projector in displaying materials. ICTs can bring a realistic experience to students by presenting it to them in the original way that uses their language to communicate. Teachers may use audiovisual materials to facilitate and stimulate target language. (Çakir, 2006, p. 71)

In addition, it facilitates finding original sources, like articles from international journals, and students can easily follow in front of their computers and connect to the internet network. By doing that, students can be autonomous learners and the use of approaches can be encouraged as well. All in all, Yunus and Salehi (2012) claimed that the use of information and communication technologies in the didactic process improves the quality of education and provide both teachers and learners with more learning and teaching supports (p.66).

2.2. The Situation of the Information and Communication Technology within the Algerian Educational System

The newly implemented LMD system was to meet the Algerian expectations and to be in a perfect coherence with the new guidelines and global trends of the higher education. The LMD system is currently witnessing significant shift and this is illustrated by the rapid growth of imposed ICT in all departments. The higher education sector has not been spared by this technological advance, which makes the learning process very flexible for distance learning, e-learning and virtual learning. ICT has, in fact, become an important resource among the main

resources of development and growth of countries that are characterized by global competitive advantages.

In many countries, ICT has helped in improving the quality of education. It has the ability to address illiteracy and improve the quality of education in all sectors through multimedia capabilities such as simulations and models (Albirini, 2006, p.389). ICT can give learners access to concepts that they previously could not grasp. The acquisition of ICT skills in educational institutions helps knowledge sharing, thereby multiplying educational opportunities (Fisher, 2006, p.109). Integrating ICT literacy will be crucial as it means harnessing technology to perform learning skills. It must encompass the use of ICT to manage complexity and solve problems by thinking critically, creatively, and systematically towards the goal of acquiring thinking and problem-solving skills. For university students, this can be used for making assignments, collecting data, documentation, and conducting research.

3. RESEARCH METHOD

From the practical side, the study design has the concept of a case study focusing on a sample of a particular population and it explores the participants' perception concerning ICT use frequency, challenges and perspectives in the teaching/learning process. The detailed coming steps in research will focus much on the selected participants, instruments of research, main procedure and data analysis.

3.1.The Participants

The study design has been set to elicit responses from both ST students and their teachers. The study sample involved 40 L3 learners from the department of Physics at the faculty of science-Tlemcen and 20 teachers. The students participated voluntarily in the study. All participants have experienced virtual classes and the teaching curriculum is selected by the teachers of English as a foreign language.

3.2. The Research Instruments

A mixed method approach has been adopted using qualitative and quantitative data to analyze and discuss the findings of the present case study. For the aim of this study, attitudinal statements were employed to find out what people think, covering attitudes, opinions, beliefs, interests and values (Dawson, 2003, pp. 106-107). To answer the three research questions of this study, two survey questionnaires were designed for data collection. They consisted of ten questions, open and closed ended questions, to obtain the students' experiences and teachers' attitudes towards learning through virtual classes as well as to investigate the role of virtual classes in enhancing the use of the English language.

3.3.Procedure

After being allowed to conduct the research study at the faculty of science in Tlemcen, the questionnaire was delivered by the end of the first semester. The objective of the study has been explained and participants had enough time to go through the different items of the questionnaire. Teachers had enough time during the survey. The process was in fact, time consuming especially while sanitary conditions were not enough appropriate to deal with all the research procedures.

3.4. Data Analysis

A preliminary data analysis has enabled in testing the hypotheses and offering an overview of the research. Quantitative and qualitative type of data were collected and prepared before analysis according to Cohen and Manion (2007) who suggested first to prepare data for analysis by cleaning to draw out errors made by the participants. This operation required completeness of answers, accuracy and uniformity steps. The data derived from this questionnaire were quantitative. Tabulations, graphs and histogram have been drawn to illustrate the gathered data. The questionnaire embodied closed-ended questions to collect qualitative data reporting frequency

records. Questions like “how often” and “how many” have been used to measure the score and frequency in section one.

4. RESULTS

The questionnaire included items that aimed to obtain students’ attitudes towards virtual classroom learning as well as to allow the participants to mention the preference of the online and the onsite teaching and then the advantages and disadvantages of virtual classes from their experiences.

Fig. 1 Students’ Attitude towards Virtual Classes

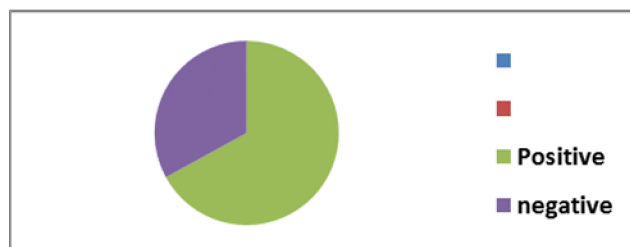
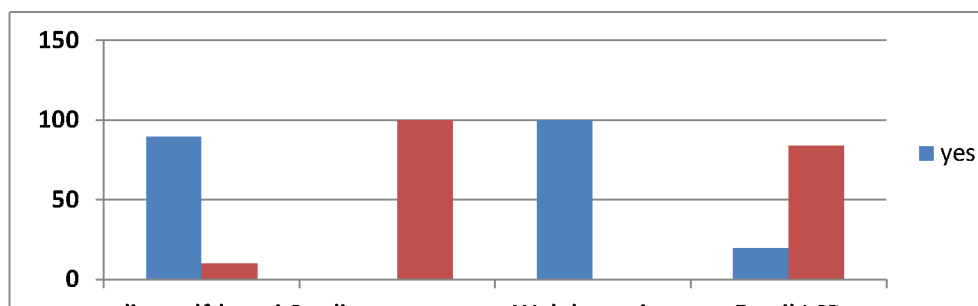


Figure 1 shows that 67% of students’ responses towards their experiences in virtual classes were positive. Through students’ experiences with ST virtual classes, 33% percent of students indicated that students preferred face-to-face classes in their learning.

The research showed that only the ST students had ICT infrastructure to support teaching and learning. All of them had electricity and telephone accesses. However, the surveyed departments had computing resources to support administrative purposes, but computers to conduct in-service training to develop ICT skills in students were insufficient. Results based on a questionnaire feedback from students in ST departments are displayed in graphs below.

Figure 2 describes, hereby, the extent of the use of ICTs by the students of the Faculty of Science for various facets of teaching and learning. The results show that more than 50% of the students explored the web for learning. However, the survey shows the absence of online assessments.

Fig. 2 Nature and Purpose of ICT Use



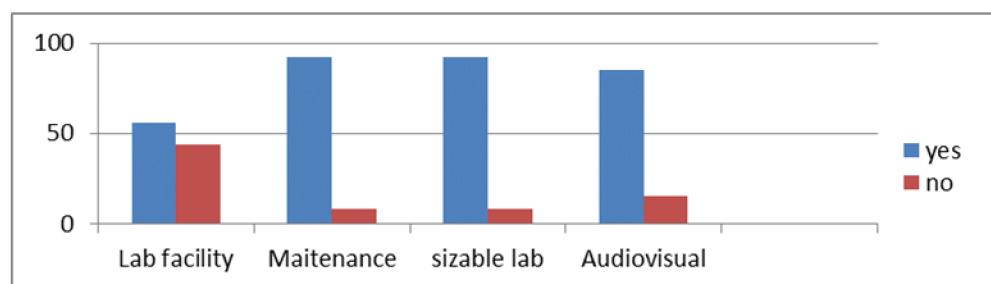
Most of the respondents’ collected data for studying from the Internet. There has been no room for online assessment in their institution. Web browsing was found common among all the respondents. All the respondents depended on web pages for updating their knowledge. The study did not find any internal interaction among teachers, students, or among teachers and students using emails. The respondents said that they communicated with their teachers through mobile phones. Most of science and physics students alleged that they felt highly confident when using internet. The inferences, drawn from the feedback, show that web browsing ranked first among all the respondents using Internet facility. On the whole, the study found that more than 90% of the students had effectively used ICT for acquisition of knowledge in their learning course.

Web browsing was usually done outside the campus. Most of the respondents found browsing from their home and Internet cafés. Few of the respondents responded that they utilized Internet

facility from their institutions. Thus, the socioeconomic environment of students has been found to play a significant role in their educational achievements. The study perceived that students have developed ICT skills that they used in learning such as word processing, presentation, and mediated communication.

The findings of the study show that the ICT has not been included as a core course at the level of the faculty. However, fundamentals of computer knowledge were included in the curriculum. All the respondents said that ICT was not included as a compulsory core course. For understanding the success of ICT program in an institution, questions regarding the laboratory facilities, maintenance of computers, sizable class/lab, and availability of audio-visual and electronic support facilities were raised. One has then to refer to Figure 3 for the study findings.

Fig.3 ICT Facilities available in both Departments



The experience from the study strengthens the opinion that there is a need for chalking out a curriculum including ICT. Laboratory helps in developing scientific temper. Virtual laboratory can be developed using ICT. Out of all the facilities available in their institutes, students responded that only audiovisual facility was sufficient. Charts and posters which are used as teaching aids in power point presentations during their courses are prepared by the students outside the institutions. Various skills of using new technology such as presentation of the content of seminars using power point or demonstrating content through flash or sending assignment papers to moderators still need to be introduced and practised during the teaching sessions.

The study showed that the respondents have gained minimum ICT skills from the faculty. Table 1 below displays the learners' use of ICTs and their attitudes towards its integration in classrooms. Only some departments had ICT infrastructure to support teaching and learning. All of them had electricity and telephone accesses. Results based on a questionnaire feedback from students in the ST department are given below.

Table 1. ICT Use and Attitudes

ICT Beliefs and Attitudes	S A	A	UN	D	S D
-It is important to find different ways to use computer in the classroom.	52,88%	14,42 %		1,49 %	/
-Using a computer in classrooms becomes compulsory.	38,80%	7,46%		40,29	1,49 %
-Performing the use of technology tools is a needs and teacher's professional goal to accomplish.	52,23%	23,88 %	1,49 %	5,97 %	1,49 %
-ICT use is compulsory in planning technology based activities	68,65%	10,44 %	2,98 %	8,95 %	/

-ICT incites students to focus more on learning.	22,83%	46,26 %	13,46 %	4,47 %	2,98 %
-ICT enables students to understand and recall information more easily.	43,28%	41,79 %	4,47 %	4,47 %	/

SA: Strongly Agree, A: Agree, Un: Undecided, D: disagree, SD: Strongly Disagree

What has been noticed are the strong responses from participants: 68.65% % of the informants were motivated to find different ways to use the computer in classroom instruction. More than half of the respondents did not consider the use of computer as a priority. 68,65% believed that teachers should consider their students' interests, background experiences and preferences before planning ICT based activities. Table1 reveals that 52,23 % of the respondents had a desire to improve their technology skills and knowledge as part of their professional development. Nearly 80 % of the students considered that ICTs incited learners to concentrate more on learning by trying harder. Almost 85,07 % believed that ICTs helped them to easily recall information. To conclude, the results obtained revealed positive perceptions about technology integration in classes. However, the faculty of science under research study had actually computing resources to support administrative purposes, but computers to conduct in-service training to develop ICT skills in students were insufficient.

This study has been also an exploration of teachers' perception of technology tools, the conditions and the frequency of their integration to enhance pedagogy, and the various barriers encountered by teachers while using technology in classrooms. According to research findings, most participants had positive perceptions about ICT. They strongly agreed on the utility of technology infusion in classrooms. Most of them approved the technology role in improving learning notably processing and recall information more easily. However, due to access difficulties, many ICTs are integrated as a personal initiative rather than as a curricular requirement.

The objective of the study was to find out the degree of ICT use within the selected faculty. Specifically, it identified how the faculty under study used ICTs performing the students' level and efficiency to build the digital society, which helps in producing ICTs' expert teachers.

5. DISCUSSION

The research work was basically to investigate the students' ability to enhance the use of modern technology in the Algerian universities. The purpose of both the use of computer use and learning English has been analysed to raise the learners' autonomy towards a spirit of research together with language development.

This study attempted to depict some strategies in the use of technology. The application of ICTs has the potential to allocate opportunities for learning broadly across the teaching force. The study found that teacher education institutions are no longer strictly utilizing ICT. Measures are to be taken to improve the quality of teaching and support to students, opening up new avenues for professional development of our future teachers.

Therefore, the conclusions are based on a limited survey in selected departments with regard to the prestigious Tlemcenian infrastructures. Briefly, the main suggestions based on the survey results are:

- Teacher training should encompass ICT skills along with a full understanding and complete mastery of ICTs as pedagogical tools.
- Teacher education institutions should be ensured with financial and human resources with training for successful incorporation of ICTs.
- It is also necessary to extend a stronger understanding of future learning needs and future environments for ICT skills.
- A constructive atmosphere must be established to provide an occasion for all stakeholders to form a part of the information society. Instead of focussing on cost, efforts should be taken to promote broadband, computers, and Internet access.
- Progress and planning is still needed in providing attractive learning content and learning technologies.

This process can fully improve students' ideation and practical language skills, which is helpful to ensure and fulfil an effective outcome of teaching and learning. Barring a few problem areas multimedia technology can be used effectively in classrooms with proper computer knowledge on the part of teachers, overcoming the finance problems in setting up the infrastructure and not allowing the teachers to become technophobes.

6. CONCLUSION

There is no doubt that improving the level of education and skills development is a strategic factor for countries aspiring to achieve excellence in a world characterized by intense competition. Given the role played by the university in the training of responsible executives at the service of our society, everything depends on the teacher. Therefore, the product quality of university teaching and learning depends on the nature of the interactions, which results from the availability of the teacher and an adequate technological potential.

Notionally, the Algerian universities could offer opportunities to learners in updating the main program in learning the English language. This research study has been restricted in some ways to encourage ICT use and integration in classes. In fact, this is quite crucial to enhance the language learning.

Last but not least, it is hoped that the set of observations, suggestions and conclusions would help students overcome difficulties in the use of technology in learning the English language and raise teachers' awareness of the whole situation of teaching English in different universities.

7. BIBLIOGRAPHY

- Albirini, A. (2006.) Teachers' attitudes towards information and communication technologies. *Computers & Education*, 47, 373–398.
- Baylor, A. L., & Ritchie, D. (2002). What factors facilitate teacher skill, teacher morale, and perceived student learning in technology using classrooms? *Computers & Education*, 39, 395–414.
- Bhatia, M S, et al. (2011). 'Role of ICT in Teaching of Social Studies', *Indian Streams Research Journal*, 6, 123-133.
- Bryderup, I. M., & Kowalski, K. (2002). The role of local authorities in the integration of ICT in learning. *Journal of Computer Assisted Learning*, 18, 470–479.
- Çakir, I. (2006). The use of video as an audio-visual material in foreign language teaching classroom. *The Turkish Online Journal of Educational Technology*, 5, 67-72.
- Cohen, D., & Manion, H. (2001). Learning policy: When state education reform works. New Haven, CT: Yale University Press.

- Creemers, B. P. M. (2002). From school effectiveness and school improvement to effective school improvement: Background, theoretical analysis, and outline of the empirical study. *Educational Research and Evaluation*, 8, 343–362.
- Dawson, C., & Rakes, G. C. (2003). The use of performance indicators in a school improvement policy: The theoretical and empirical context. *Evaluation & Research in Education*, 18, 102–120.
- Dexter, S., Anderson, R. E., & Becker, H. J. (1999). Teachers' Views of Computers as Catalysts for Changes in their Teaching Practice. *Journal of Research on Computing in Education*, 31, 221–239.
- Fisher, T, et al. (2006). Teachers Learning with Digital Technologies: A Review of Research and Projects, *Future lab Report Series*, No. 14, http://www.futurelab.org.uk/lab_series.html
- Kozma, R. (Ed.). (2003). Technology, innovation and educational change: A global perspective. *Information Society for Technology in Education [ISTE] Publications*. V15, 244-290
- Padurean, A. (2009). Foreign Language Teaching via ICT. *Revista de Informatică Socială*, 7 (12), P.97-100
- Yunus, D. and Salehi, N. (2012). Teachers' perceptions of the effectiveness of ICT-Competence Training. *Computers & Education*, 43, 63–79.

7. Appendices

Dear colleagues,

Thank you for accepting to answer to the present questionnaire. We would very much appreciate your candid response to questions included in the enclosed survey which may help to carry this study about The Use of ICTs in Teaching English during the COVID 19 Pandemic Situation: Tlemcen Faculty of Science as a Case Study. Your assistance in completing the following items is highly appreciated. All the information provided by you is of great importance for the study of our targeted objective. Thank you!

Appendix A Questionnaire for teachers

1. Are you? Male Female

How old are you?

2. Do you use frequently teach via virtual classes?

a. Yes ☐ No ☐

3. Since when have you been recruited?.....

4. If you are newly recruited, did you benefit from a one year ICT training?

a. Yes ☐ No ☐

5. Did you benefit from any training session on ICT and the use of a special Platform ?

a. Yes ☐ No ☐

If yes, how many sessions?.....

6. In case you have benefited from one or two ICT training sessions, were the training sessions more of a theoretical nature or a practical nature?

a. Theoretical ☐ Practical ☐

7. While using the platform nowadays during the Corona pandemic, do you face any difficulties? If you face any would you mention some?

a. Many ☐

b. Few ☐

c. Some ☐

8. If you have faced any would you please state some of those difficulties.....
.....

Any further comments and suggestions.....

Appendix B Questionnaire for Students

Are you? Male Female

How old are you?

1. Do you learn frequently via virtual classes?

a. Yes ☐ No ☐

2. What is your opinion about the virtual classes teaching?.....

3. Did you benefit from any ICT training?

a. Yes ☐ No ☐

4. Do you know how to use the Platform of the Faculty ?

a. Yes ☐ No ☐

5. While using the platform nowadays during the Corona pandemic, do you face any difficulties?

d. Many ☐

e. Few ☐

f. Some ☐

6. If you have faced any would you please state some of those difficulties.....
.....Any further comments and suggestions.....

Appendix C Students' Engagement and Attitudes towards ICT Use

SA: Strongly Agree, A: Agree, Un: Undecided, D: disagree, SD: Strongly Disagree

ICT Beliefs and Attitudes	S A	A	UN	D	S D
-It is important to find different ways to use computer in the classroom.					
-Using a computer in classrooms is a priority.					
-Learning how to use technology tools is a needs and teacher's professional goal to accomplish.					
-ICT use is compulsory in planning technology based activities					
-ICT incites students to focus more on learning and try harder.					
-ICT enables students to understand and recall information more easily.					