PRELIMINARY STUDY FOR TECHNOLOGY ENHANCED LEARNING: COMPARATIVE STUDY OF ENGLAND AND NORTHERN CYPRUS

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ABSTRACT
The purpose of this paper is to present the preliminary study findings from an ongoing PhD study. In this paper, the researcher presents the preliminary study that was carried out with a number of schools in England and Northern Cyprus in order to identify the background or big pictures of each country in terms of available ICT tools that are being used by teachers in their teaching, trainings and Continuing Professional Development (CPD) and support that they have received and their integration stage of ICT. A survey method was employed for this preliminary study. A sample of 117 teachers out of 198 was participated to this study. The researcher of this study developed a questionnaire. A descriptive analysis of data reveals that the two countries are very different in their use of ICT and training and support that they have received.

INTRODUCTION

Information and communication Technologies (ICTs) are believed to be an important set of tools for improving teaching and learning in education and their integration in school teaching has been championed in developed countries for at least two decades (Haddad and Draxler, 2002, UNESCO, 2003; Isman et al., 2007). After the announcement of National Grid for Learning (NgFL) in 1997, schools in the UK has been started to classrooms with a range of ICTs in the belief that this would lead to benefits for learning. Many other countries have taken similar initiatives to provide ICT to schools as a means of improving the quality of education. However, the impact of these policies on learning is hard to demonstrate for a number of reasons (Pilkington, 2008). In particular, barriers to integration of instructional technologies in teaching are shifting from access to ICT to basic ICT training and once this basic ICT training are provided, then it shifts to appropriate use of instructional technology in the classroom by using suitable pedagogy to help with subject teaching and enhance student learning (ibid). However, developing countries are still in their infancy period and if technologies are used by teachers in the classroom, it is due to limited infrastructure and the basic ICT training which is high costs of access.

In Northern Cyprus, similar efforts like the UK government have been undertaken by Turkish Cypriot government but the lack of financing and understanding of the benefits of ICT in education are preventing the integration of technology into all schools. Only a few research studies have been conducted to demonstrate that educational technology, as a tool, would improve the quality of education in Northern Cyprus; those specifically related to areas such as science and maths. Northern Cyprus is a developing country where ICT is less frequently used in the secondary schools. Similar to other developing countries, Northern Cyprus is experiencing problems related to technology readiness and integration of technology. A question remains as to whether these problems can be seen simply as a development lag with all the same issues that developing countries have experienced or whether differences in specific local cultural contexts and technological advancement mean that a different set of problems and strategies for dealing with them are arising. To address this problem, the Turkish Cypriot government aims to extend the use of ICTs into schools to raise standards in teaching and thus provide students with high quality education.

In this paper, the researcher presents the preliminary study because preliminary study is most helpful to understand 'background' or 'big picture' of each selected secondary schools in two countries. An understanding of 'background' or 'big picture' is important: to justify the selection of secondary schools; to identify the infrastructure readiness of the selected two countries' secondary schools, levels of use of ICT and trainings that teachers have received; to define the population of main study more clearly and to establish hypotheses for investigation. Therefore, this preliminary study yields a research project that works well and provides the overall picture that is essential for a successful main study.

STATEMENT OF THE PROBLEM

The role of ICT widely considered as a core element in the education of students. Countries all over the world have identified the significant role of information and communication technology (ICT) in improving education (Pelgrum, 2001; Kozma & Anderson, 2002; Goodison, 2003; Kangro & Kangro, 2004; Hennessy, Ruthven, & Brindley, 2005), and have invested heavily in increasing the number of computers in schools and in the

networking of classrooms (Pelgrum, 2001). Furthermore, many researchers have predicted that the importance of educational technology in the classroom will continue to increase (Becker & Ravitz, 2001).

Within the [England] National Curriculum, students are now required to become familiar with a range of technological applications and developed the necessary skills in using these within their everyday learning environment. The UK Government has invested £5billion in schools' ICT since 1997. As a result, the UK has the highest levels of embedded technology in classrooms in the European Union with one computer for every three pupils (inside government, internet, 2009). Furthermore, educational technologies have been in use in the UK for more than two decades. As a developed country, the British government has already extended its use of ICT over many years. Despite substantial investments in ICT, there is little data about how schools are using computers and other ICTs. This problem of lack of information on ICT usage in education is not isolated in developed countries. It is more severe in least developing countries where most education data are unreliable. Buchmann and Hannum (2001) noted that there is a lack of qualitative educational research in developing countries and Fuller (cited in Buchmann and Hannum, 2001) presented that while researchers in Europe have explored factors that affect learning such as the use of ICT, developing countries have not yet charted similar research avenues.

In view of the problems identified above, this research study will investigate the problem of lack of documentation regarding the extent of ICT usage in Turkish Cypriot secondary schools. While the government initiatives indicated national commitment to ICT in education, they do not know whether existing computers in schools are being used for educational computing. Hence, the extent to which Turkish Cypriot schools are using ICT is largely unknown. Also, this study will examine the pedagogical issues in Northern Cyprus and England regarding to use of ICT in the classroom and using 'Modify Delphi Technique' a good scenarios of use of ICT in teaching will be created by both countries teachers together. Without data of this kind, there is little basis for policy formulation in the education sector. As a result, ICT equipment tend to be purchased without proper terms of reference and are distributed indiscriminately.

RESEARCH QUESTION

For this preliminary research purposes, the following questions have been formulated.

The questions for this preliminary study are as follows:

1. What technologies are being used by secondary school teachers?
2. Where do teachers generally use ICT resources for their teaching?
3. How many minutes do teachers use computers/ICTs in their teaching activities in each week?
4. What types of CPD training have teachers had?
5. What type of ICT related support do teachers have in their school?
6. What is the stage that best describes teachers' level in terms of ICT adoption/integration?

Definition of 'ICT'

Kumar (2008) defines Information and Communication Technology (ICT) as an umbrella term that applies to a range of digital communication devices and applications such as 'digital television, radio, internet, network hardware and software, videoconferencing, and distance learning' (p.1). Lever-Duffy et al. (2005), however, report that some 'educators may take a narrower view' and are likely to 'confine educational technology [ICT] primarily to computers, computer peripherals and related software used for teaching and learning' (pp. 4-5).
In this review the term 'ICT' will be applied to any computer based technologies, whether networked or standalone, including both hardware and software, which can be used for teaching and learning purposes.

Technology Readiness

The phrase 'technology readiness' describes the behavioural processes that lie behind the adoption of technological products, services (Parasuraman and Colby, 2001) and infrastructure. Technology readiness can be broken down into two components: the infrastructure readiness of the schools and the ICT readiness of teachers, i.e. their acceptance of technology (Seng and Choo, 2008).. However, in this preliminary study physical and technological infrastructure were examined.

Physical and Technological Infrastructure

Effective ICT integration in schools depends on the available sufficient physical and technological infrastructure (UNESCO, 2004). Several researchers such as Williams et al. (2000) and Pelgrum (2001) had identified that there is not enough computers in the schools which is a key problem of integrating ICT in education. According to Baskin and Williams (2006) physical infrastructure includes learning areas such as classroom, computer labs,

dedicated ICT resource rooms and libraries: in short, all of the space and furniture required for an ICT enhanced school environment. Technological infrastructure includes computers, broadband internet access and the various other technological resources used in education (Baskin and Williams, 2006). Therefore, schools need to provide at least basic physical and technological infrastructure if they want to integrate ICTs effectively into their teaching process by their teachers. In other words, the basic barriers and enablers of technology use in the schools is infrastructure: computers and other technologies, computer labs and internet access among others. Just having physical and technological infrastructures are not enough. Teachers are likely to have beliefs about teaching and learning with ICTs. Teachers' beliefs about the use of ICT might be an important aspect for the successful integration of ICT in teaching and learning. Thus, teachers must first accept the use of technologies.

Teachers Acceptance of Technology

Venkatesh et al. (2003) developed a technology acceptance model which is called 'unified theory of acceptance and use of technology (UTAUT)' by reviewing and integrating eight different models (Diffusion of Innovations, Technology, Acceptance Model, Theory of Reasoned Action, Theory of Planned Behaviour, Combined TRA & TPB, Motivational Model, PC Utilisation Model and the Social Cognitive Theory) used by former study to explain technology usage behaviour. It aims to give explanation about the user intentions to use a technology and the subsequent their usage behaviour. The study theorised four constructs that are determinants of user acceptance and usage behaviour: performance expectancy, effort expectancy, social influence, and facilitating conditions.

In this study, it is important to understand teachers' beliefs because teachers' set of beliefs is likely to determine whether teachers accept innovative changes in education such as use of ICT in the classroom. For that reason, teachers' acceptance of ICT use will be examined to determine two different countries teachers' beliefs about the use of ICT in the classroom. These factors formed the basis for questionnaire design (i.e. their age, years of experience and use of computers) and will also be taken into consideration while interviewing teachers on technology use in order to find out secondary school teachers' beliefs regarding the use of ICT.

RELATED RESEARCH

ICT has been introduced into schools during the last two decades, particularly in developed countries such as the UK. In addition to the necessary infrastructure, hardware and software, the teacher's experience in using ICT as a prerequisite to the effective use of these resources in the teaching and learning process (Balanskat, 2006).

Most studies show that teachers' enthusiasm for using ICT to support learning is increased by their own use of ICT. The study of ITU (2004) reveals that the teachers who participated in the project had more positive attitudes towards technology use than those who did not. In the UK, the British Educational and Communication Technology Agency (BECTA) evaluated the Department for Education and Skills' initiative of the first year of the Laptops for Teachers (LfT) initiative, which was launched by the Department for Education and Skills in 2002, which aimed was to launched to increase teachers' and head teachers' access to computers. The study found that teachers' positive attitudes and confidence were increased by having their own laptop computers (BECTA, 2003). The teachers who took part in the IWBs project (Higgins et al. 2005), were persuaded that using technology in lessons improved teaching and learning. However, Higgins et al. (ibid) argue that for the use of IWBs to be justified 'it must be used in ways which promote more effective learning above and beyond that which is possible when teaching with other kinds of projection technology or with ordinary white boards' (p.8).

Using technology could also help teachers to increased plan and prepare their lessons efficiently in planning and preparation of teachers' work by facilitating allowing collaboration between other teachers (Higgins, 2005). There were different opinions about efficiency savings brought about by using ICT amongst teachers, where they stating that they do not have enough time to integrate ICT into teaching (Underwood, 2006). Other studies, such as the ICT Test Bed project, suggest the opposite: that teachers using ICT can save their time in the medium and long term through reuse and collaborative sharing (Smokeh et al., 2006). This strongly suggests that there is a need to show teachers how they can use ICT to save their time.

Although a study of e-learning in the Nordic countries suggests that teachers are very positive about technology in general and believe that using ICT does not waste their time once they achieve a certain level of competence, most of teachers in the study did not report a positive impact of ICT on workload and they found that teaching time was wasted as a result of trying to use ICT in school (Ramboll Managment, 2006). In the study of ITU (2004), however, stated that technology provides more differentiated learning thus enables students to work more independently. Therefore, teachers have more time to prepare lessons that meet the needs of individual students (ibid). Another impact of ICT on teachers is that ICT provides a means of cooperation between teachers by sharing curricula and lesson plans with their colleagues, saving individual preparation time (Higgins et al.,

2005). The same result is reported by Harrison et al. (2002) and Comber et al. (2002): the use of ICT makes lesson plan preparation more effective and efficient in saving time. Teachers will also the opportunity to share and encourage good practice.

Most of the studies on the impact of ICT on teaching state that there is no infrastructure problem, particularly in developed countries, but more training is needed by teachers to support innovative pedagogy (Smokeh et al., 2006). In other words, studies state that there is not a problem with ICT in terms of putting it in place but there is a lack of support in terms of facilitating conditions and particularly training in ICT. Schools do, however, vary in the ICT resources they have available. Schools in richer and more urban areas tend to benefit from faster broadband speeds and those in more affluent areas will tend to have more modern computers than more rural and poorer areas (International Telecommunication Union, 2003, Underwood et al., 2005).

Over the last twenty five years, in the UK, the government has encouraged schools to adopt ICT as a main part of the structure of the curriculum. For that reason, UK government have launched number of initiatives to put computers and other computer technologies into schools for teachers to integrate them into their teaching. Use of ICT is considered as an important skill in this modern world as most companies in the world seek this skill this is the reason why UK government encourage schools to adopt the technology. As Michael Heseltine (1995) who was the UK Deputy Prime Minister stated:

> 'These new technologies, and the way they are used, will have a profound impact on every one of us. It will lead to real progress in helping learners throughout their lives and hence help with the vital task of keeping Britain competitive in the 21st Century.' (cited in Watson, 2001,p.252)

Also likewise in 1997 Tony Blair who was the UK Prime Minister noted:

> 'Technology has revolutionised the way we work and is now set to transform education. Children cannot be effective in tomorrow's world if they are trained in yesterday's skills. Nor should teachers be denied tools that other professionals are trained to take for granted. Standards, literacy, numeracy, subject knowledge—all will be enhanced by the Grid and the support it will give our programme for schools improvement.' (Tony Blair, UK Prime Minister, launching the National Grid for Learning, 1997, p.252)

Currently not all countries are able to benefit from the developments that technology can offer to them. Significant barriers have been identified by many researchers why some countries cannot take advantage of technological developments, including limitations in ICT infrastructure facilities, the high cost of developing infrastructure, teacher support and training process, and unaffordable internet connectivity at the higher bandwidths are some key limitations faced by a developing country such as North Cyprus. Even when the physical facilities and resources are made available to schools there may still be various problems in using ICT faced by countries, especially developing countries ones, , problems related to a resistance towards using new technology and changing the pedagogical approach.

In North Cyprus, most of the public institutions still use the traditional method of instruction in which the teacher delivers lectures and students listen passively; teachers are said to be reluctant to use ICT in their teaching (Isman et al., 2007). The reasons for the overall lack of integration of technology into Turkish Cypriot schools are mixture of access to ICT, teachers' training and beliefs on technology use and the relationship between the available technologies and preferred pedagogy. The Turkish Cypriot government provided ICT resources such as computers, overhead projectors, printers and CDs to schools but there is not enough training in how these technologies can be used in teaching. Training in North Cyprus focuses more on technical skills than on educational use. Many Turkish Cypriot teachers use ICT to support traditional learning methods, for example, students are 'passive consumers and receivers' of information which provided by teacher instead of 'active producers' of new information.

METHOD

Population and Sample

The population of the study consists of England and Northern Cyprus secondary school teachers. The sample of this study was drawn from two English and two Turkish Cypriot secondary schools. The questionnaires were distributed to 4 secondary schools teacher in England and Northern Cyprus. The sample of the study consist of 93 English and 105 Turkish, 198 in total, secondary (year 7-8-9) schools teachers working with state schools. The number of questionnaires returned was 117.

Procedure
A survey based approach has been adopted for this preliminary study to examine establish the nature of the IT resources available to teachers, its location/accessibility, and state of repair, as well as the availability of technical support, the teachers' use of ICT and the training of staff in the school.

The sections of the questionnaire were as follows:
Section 1: Personal information
Section 2: Availability and accessibility of Information and Communication technologies
Section 3: Continual Professional Development (CPD) training and competence level of teachers
Section 4: Other Comments

The personal information questions were included the name of the school, the gender, age, years of experience of the teachers, and the subject that teacher teaches. The question about the availability and accessibility of ICT were included the types of ICT tools (i.e. hardware, software and network) are being used in the school, how teachers believe about the support that they get from school in terms of maintenance and the use of ICT, where they use ICT resources, over what time (minutes) they use ICT, how they describe their particular level of ICT skill, and what type of ICT support they have in their schools. The section three CPD training questions were included the types of training teachers received, how many hours of training, their evaluation of competence level (self-assessment), and how they would describe their use of ICT level. Section four was for any other comments that teachers might wish to make.

The results of the questionnaire demonstrated the background, 'broad/big picture' within each of the schools in the two countries, explain and justify the selection of selected schools and the selection for the interviews of teachers who had the confidence and belief that they should integrate ICT more in their subject teaching, as well as some teachers who were less confident.

Data Analysis
The first step of data analysis is data coding. The data was coded into a format with numerical codes using the Microsoft Excel® program.

As advised by Mertens (1998), a fresh copy of the questionnaire was made and the responses were coded on that copy. Also, as suggested by Robson (2002), the following numerals were used to represent the options for closed items; for instance, '1' and '2' were used to represent male and female. The researcher was not get any responses for the open-ended items, thus open=ended items were not analyse

Further, descriptive statistics were used to show demographic data of the participants and also to evaluate:

- What types of ICTs were there?
- Were there enough computers in their schools?
- How many minutes or hours per week did they use ICTs?
- What types of ICT-related training and support did they have in their schools?
- How did the selected teachers evaluate their stage of adoption/integration of ICT level into their teaching practice?

numbers and percentages are used to show the results.

The results of the questionnaire were also used to select participants for the interviews. 3 teachers from each selected schools whose competence (self-rated) level was high, medium and low and who indicated in the questionnaire that they would be happy to participate in the interview process were selected to participate.

RESULTS
Findings reveal that the two countries are very different in available ICT tools to them, their use of ICTs, training and support that they have received and their stage of ICT adoption/integration.

This study found that considerable variation in the availability of ICT tools in England whereas there is not considerable variation in the availability tools in Northern Cyprus. However, there are basic ICT tools available to Turkish Cypriot teachers to use in their teaching such as computers, internet, electronic whiteboard (not interactive whiteboard) and Microsoft office programs. Table 1.1 shows marked differences between the availability of ICT tools in each countries school.

Table 1.1 Distribution of ICT tools in schools

ICT Tools	Availability %	
	Selected English secondary schools	Selected Cypriot Turkish secondary schools
Computers	94%	90%
Overhead projector	88%	58%
Printers	76%	76%
Scanner	56%	35%
Electronic whiteboard	78%	52%
Laptop	96%	9%
Camera	90%	0%
Video Camera	24%	0%
PSPs	34%	0%
Notebook	12%	0%
Mobile Phone	4%	0%
Voting system	16%	0%
MP3 Player	12%	0%
Microsoft office programs	92%	80%
Publisher	18%	0%
Video and sound editing software	18%	0%
Educational games	46%	0%
Subject specific software	26%	0%
Designing software	14%	0%
Simulations	26%	0%
Internet	100%	92%
Real smart	12%	0%
VLE	92%	0%
Intranet	92%	0%
E-portal	14%	0%
P drive	12%	0%

Teachers with these tools in each country are able to modify their teaching methods, giving them opportunities to present their lessons more effectively. Even there are not many ICT tools available to teachers in Northern Cyprus; teachers can still use available ICT tools to present their lesson more effectively.

Teachers were asked to indicate their beliefs about if there are enough computers/ICT tools to use in their schools. On the one hand, the more than half of English teachers (52%) were believed that there are enough computers/ICT tools in their schools while 38 percent of teachers were believed that there are not enough computers/ICT tools in their schools. Only 10 percent of teachers not sure if there is computers/ICT tools in their schools. On the other hand, the most Turkish Cypriot teachers (83.80%) were believed that there are not enough computers/ICT tools in their schools while 16.20 percent of teachers were not sure. Interestingly, not even one teacher was believed about there are enough ICT tools in their schools as they responded.

it might be said that selected secondary schools in England have more computers/ICT tools available in their schools than selected secondary schools in Northern Cyprus. . The bar charts, which is provided below in figure 1.1, gives clear idea about the differences between the two different countries teachers' response.

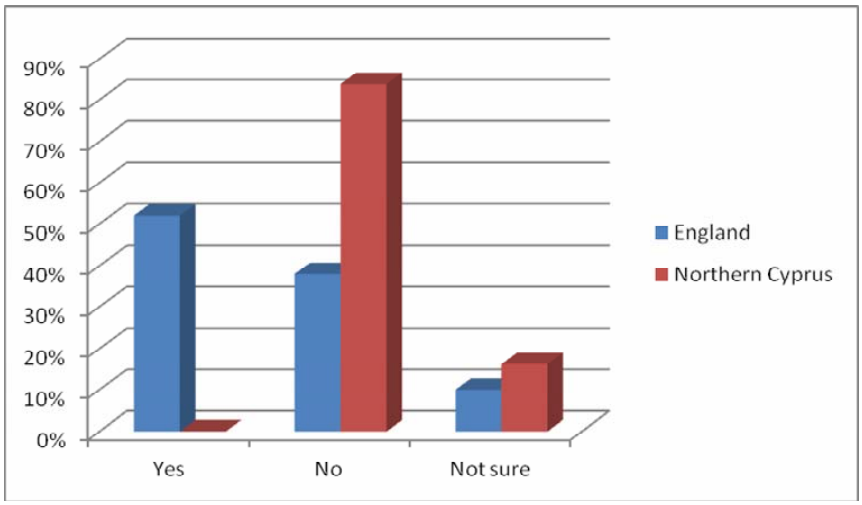

Figure 1.1 teachers beliefs about if there are enough computers in their schools (Values shown as %)

Teachers were also asked to indicate how many minutes they use ICT tools in their teaching activities in each week. Their responses were scored as follows: 0 minutes per week, less than 15 minutes per week, 15-45 minutes per week, 46-90 minutes per week and more than 90 minutes per week.

Just under half of the teachers in selected England secondary schools use ICT tools more than 90 minutes per week around 42% while there is not any teacher who does not use ICT tools in their teaching. However, around 68 percent of teachers, which means most of teachers in selected Turkish Cypriot secondary schools, do not use ICT tools in their teaching while only 5.8 percent of teachers, who are the ICT teachers, use ICT tools more than 90 minutes per week.

In the selected England schools, 26 percent of teachers use ICT tools 15 to 45 minutes per week and 22 percent of them use ICT tools 46 to 90 minutes per week while in the selected North Cyprus schools 11.6 percent of teachers use ICT tools 15 to 45 minutes per week and 4.3 percent of them use ICT tools 46 to 90 minutes per week. Around the same percent of teachers (10%) use ICT tools less than15 minutes per week in both countries.

According to these results it might be said that most English teachers in the selected secondary schools use ICT tools in their teaching whereas most Turkish Cypriot teachers in the selected secondary schools do not use ICT tools in their teaching. the reasons for lack of use of technology by Turkish Cypriot teachers could be the inadequate ICT tools and lack of trainings and supports from their schools, which is discussed as follows. For clarity, Figure 1.2 shows the two countries teachers' responses separately through bar charts.

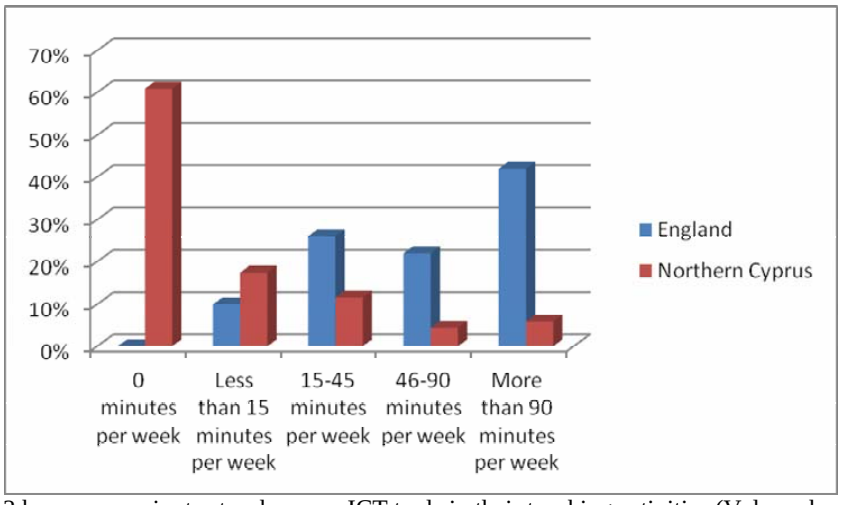

Figure 1.2 how many minutes teachers use ICT tools in their teaching activities (Values shown as %)

Teachers were also asked to declare have they ever received any ICT training. In selected England secondary schools, the most teachers around 74 percent responded that they have received ICT training and these trainings were provided by their schools as 46 percent of them responded that their schools provides them Continual Professional Development (CPD). Only 8 percent of them responded that they did not receive any ICT training at all. However, interestingly, the most teachers (61.98%) in the selected Northern Cyprus secondary schools responded that they have not received any ICT training at all and around 38.02 percent of teachers responded that they have received ICT training but it was not provided by their school. They mentioned that they have received ICT training when they were in their undergraduate program and nearly all of these teachers are ICT subject teachers. None of participated teachers in this study chose 'my school provides us with Continual Professional Development (CPD) training' option. It might be assumed that s selected Turkish Cypriot schools do not provide ICT training to their teachers as this could be depending on lack of finance problems .

This result shows that selected schools in England provide CPD to their teachers whereas this does not provide to Northern Cyprus teachers by their schools. The figure 1.3 illustrates teachers' responses to that question

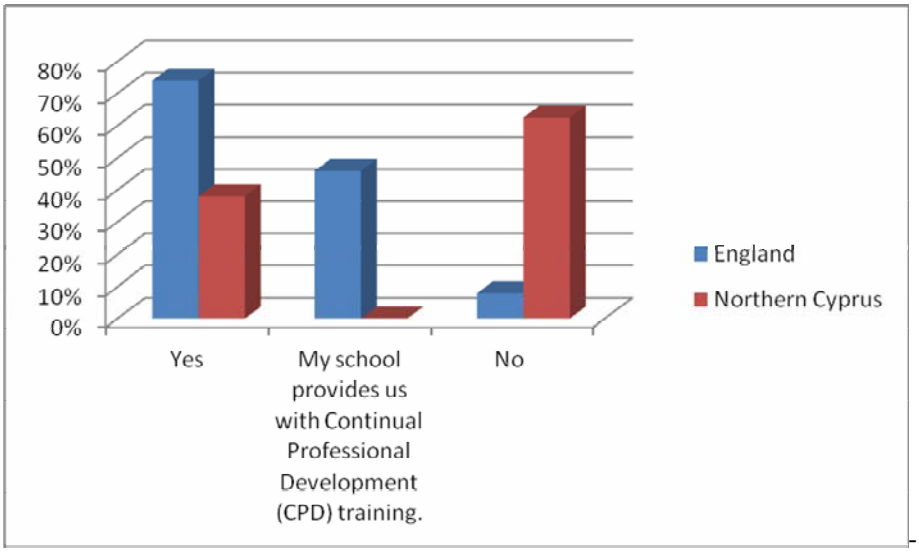

Figure 1.3 Have you ever received any ICT training? (Values shown as %)

Furthermore, there is an ICT non-teaching personnel in selected England secondary schools and teachers have support from professional ICT staff as well as they have support from their ICT skilled teaching personnel in the schools. However, according to the selected secondary schools teachers' responses, there is not any ICT non-teaching personnel s and there is not enough support from ICT skilled teaching personnel in their school. .

Teachers were also asked to determine the types of Continuing Professional Development (CPD) training that they have had. In selected England schools, 88% percent of teachers responded that they have had 'in-house training' which means training held in the school and delivered by school staff using school equipment. Around 36 percent of them responded that they have had 'external training' which means teachers travelled to a training venue outside their school and training was delivered by another service provider using their equipment. Around 26 percent of teachers responded that they have 'custom training' which means an outside expert consultant came to the school to deliver training for school staff using school equipment. There are also teachers who received two or three different training as well.

Interestingly, 4 percent of Turkish Cypriot teachers responded that they have had 'in-house training' which means training held in the school and delivered by school staff using school equipment, 23 percent of teachers responded that they have had 'custom training' which means an outside expert consultant came to the school to deliver training for school staff using school equipment, and 8 percent of them responded that they have had 'external training: I travelled to a training venue outside my school and training was delivered by another service provider using their equipment. However, there is a contradiction between Turkish Cypriot teachers' responses to previous question, which was about the training they have received from their schools, and this question. Because none of teachers tick the 'my school provides us with Continuing Professional Development (CPD) training' option in the previous question and teachers were mentioned in their questionnaire that they were

received trainings while they were in undergraduate program but 35 percent of Turkish Cypriot teachers responded that their schools provide training to them.

This result shows that almost all teachers were received one of training among three categories in selected England secondary schools whereas teachers in selected Northern Cyprus secondary schools did not received any professional development training from their schools. The figure 1.4 shows this difference.

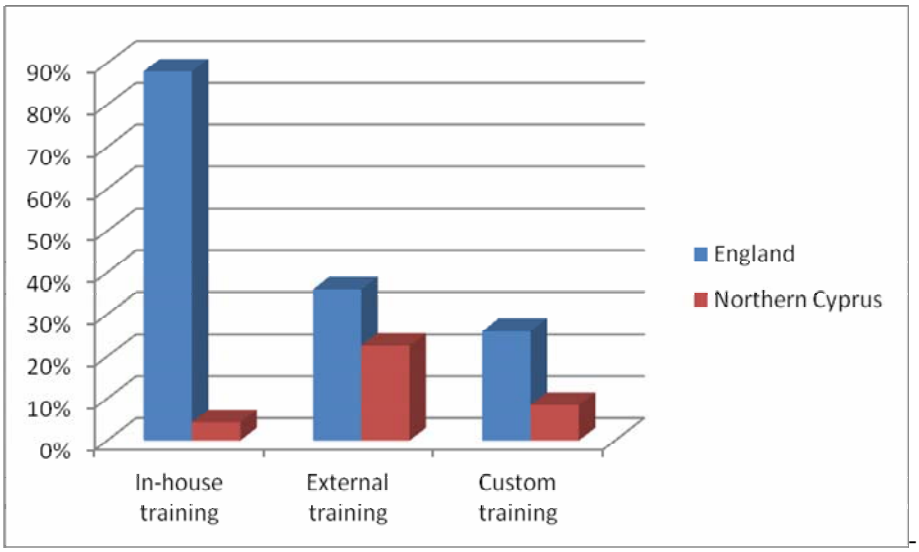

Figure 1.4 Continuing Professional Development (Values shown as %)

Teachers were finally were asked to indicate their stage of ICT adoption/integration stage level in each countries. The most teachers (42%) see themselves in stage 5 in the selected England secondary schools while the most teachers (32.39%) see themselves in stage 4 in the selected Northern Cyprus secondary school. 2 percent of English teachers and 13 percent of Turkish Cypriot teachers in the selected schools responded that they are in stage 1. 24 percent of teachers in selected England secondary school and around 10 percent of teachers in selected Northern Cyprus secondary school see themselves in stage 6. For the clarity the following figure 1.4 demonstrates the teachers' responses through the bar chart for each country. Before presenting figure 1.5, the meanings of stages were given. They are as follows:

- **Stage 1:**
  Awareness = I am aware that technology exists but have not used it for teaching. I am not confident about using computers in the classroom
- **Stage 2:**
  Learning the process = I have basic computing skills but have difficulty or lack confidence in using technology for teaching
- **Stage 3:**
  Understanding and application of the process = I am beginning to understand the process of using technology for teaching and can think of specific tasks in which it might be useful.
- **Stage 4:**
  Familiarity and confidence= I am gaining a sense of confidence in using computers for teaching and am starting to feel comfortable in using the computer in lessons for specific tasks.
- **Stage 5:**
  Adaptation to other contexts= I think about the computer as a tool to help me in teaching when planning lessons and have used a range of applications as instructional aids.
- **Stage 6:**
  Creative application to new contexts= I can apply what I know about technology in the classroom. Therefore, I am able to use it as an instructional tool and integrate it quite confidently into the curriculum including adapting examples to meet the needs of new learning situations.

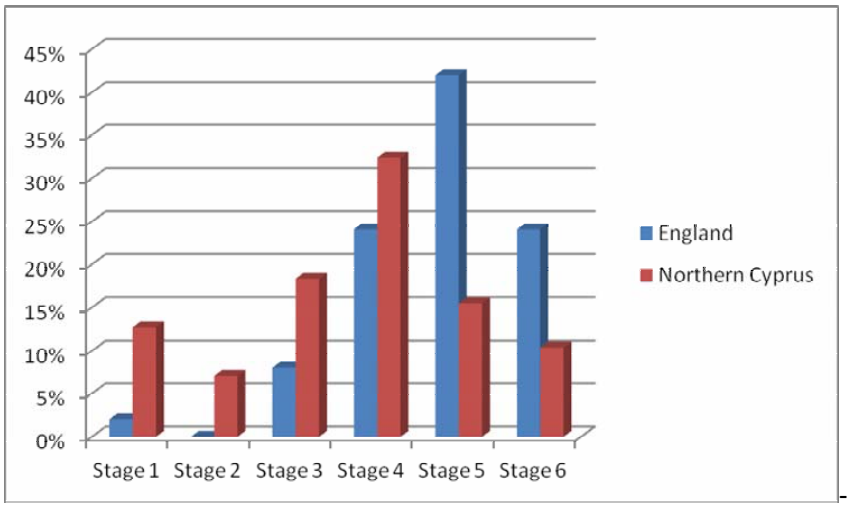

Figure 1.5 Evaluation of ICT adoption/integration in teaching (Values shown as %)

LIMITATIONS OF THE PRELIMINARY STUDY

This study is a preliminary study to present 'big/broad picture' and the researcher acknowledge the limitation of the study. As only 2 secondary schools from each country were selected for this preliminary study, it is important that further research be conducted to confirm these preliminary findings. Thus, more study need to be supplemented to this preliminary study to present a better picture of available ICT resources that are being used by teachers in their teaching, trainings and Continuing Professional Development (CPD) and support that they have received and their integration stage of ICT.

CONCLUSION

The main focus of this preliminary study was to identify the background or 'big picture' of selected England and Northern Cyprus secondary schools in terms of available ICT tools that are being used by teachers in their teaching, trainings and Continuing Professional Development (CPD) and support that they have received and their integration stage of ICT. This study reveals that the two countries are very different in available ICT tools to them, their use of ICTs, trainings, CPDs and support that they have received and their stage of ICT adoption/integration.

As a result of this preliminary study, it is found that Turkish Cypriot teachers who work for selected secondary state schools do not have enough ICT tools, trainings and supports from their schools while there are different types of ICT resources available to British teachers who work for selected secondary state schools and they normally receive support and trainings from their school. This preliminary study provided differences between two countries secondary schools which will help the researcher to use them in the actual study while comparing the two countries situation. Furthermore, according to this preliminary study the chosen schools from two countries justified and the teachers were chosen for the interview process. The actual study will be focused on the pedagogical aspects of teachers' use of ICT in their teaching. At the end of this PhD study, the best practice of ICT use in teaching will be provided.

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