Flying Over the Boundary

Constructing an Unlimited, Active and Appealing Learning Environment via the Application of ICT

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1. Introduction

With the rapid development of computer technology in recent years, the use of computers has spread to cover different fields and different needs. No matter where we turn, we are barraged with evidence that computer technology is affecting every aspect of our lives. Apparently, computers are indispensable in the modern world today as a powerful tool. For example, E-mail and the Internet make it possible for people all over the world to communicate with each other, and to have easy and unrestricted access to every kind of information. As a result, computer technology, especially information and communication technology (ICT) has greatly influenced education and is perceived as an affective tool facilitating the process of teaching and learning. Undoubtedly, it offers more effective and attractive possibilities to the educational system. Therefore, ICT promises to revolutionize conventional education, including the school management and teaching methodologies. Thus, the application of ICT has been a trend and a main effort in schools around the world for years.

In this essay, I would like to discuss the valuable experience I have learnt from this international exchange programme with British educational authorities and schools. First of all, I would like to begin with the present application of ICT in UK's educational system. Furthermore, I would like to discuss the advantages and improvement with the use of ICT from an inspection of a curricular academic teacher, particularly from a viewpoint of a language/English teacher. Secondly, some suggestions would be made for the application of ICT in Taiwan, which are based on my observation in UK and current education system and teaching and learning

environment in Taiwan are also taken into consideration.

2.　The Application of ICT in education in UK

Information and communication technology (ICT) has been considered as an important medium by UK educational authorities to prepare pupils to participate in this changing world in which information and activities are increasingly transmitted via developing technology.　By employing ICT tools, Pupils would be able to explore and exchange ideas and experiences from a wide range of culture and countries.　Therefore, UK government has made a lot of efforts to improve and increase the application of ICT in their education.　For instance, the government appointed some schools as technology specialist schools, such as Monkfield Park Primary School and Selly Park Technology College for Girls we visited during this trip.　These schools indeed have outstanding performance in ICT no matter in the equipment or in students' ICT ability.　Another example is that training courses of ICT ability for teachers are well-organised and offered very often.　Furthermore, the UK government has modified their national curriculum, in which they added more details and instructions of ICT teaching.　The government's strategy to encourage the application of ICT in teaching and learning is making an important contribution to ICT in schools.　An official report has shown that 98% of schools are now connected to the Internet.　On average, there is one computer used mainly for curriculum purposes for every 9.8 pupils and the number of administration and management machines in schools also increased a lot.　In the following paragraph, I would like to state the current employment of ICT in UK's curriculum and schools from my observation.

2.1 ICT in the National Curriculum

In UK's National Curriculum, they anticipate students to acquire different knowledge, skills and understanding of ICT in different key stages.　Through working with a range of information, investigating different uses of ICT and exploring with ICT tools in different key stages, students would get different abilities of ICT by the end of each key stage.　During key stage 1, students start to use ICT to develop their ideas and record their own work.　In this stage, they would be familiar with hardware and some software.　In key stage 2, students develop their research skills by deciding what information they get is appropriate for their work.　They use a wider range of ICT tools and information sources.　During key stage 3, pupils have a better understanding of how ICT can help they work even in other subjects.　They become more independent users of ICT tools and information sources.　During key stage 4,

pupils can use a wide range of ICT application independently and effectively much of the time.   What's more, they can work with others to carry out a project.

In addition to the ICT curriculum mentioned above, students are given opportunities to apply and develop their ICT capability through the use of ICT tools to support their learning in all subjects.   Across the whole curriculum, pupils are provided with tasks, which allow them to find things out from a variety of resources and to select and analyse the information in order to meet their needs.   Also, they can develop their capability of using ICT to review, refine and modify their works in all subjects. During our visit, we have witnessed that all schools had successfully applied ICT to many subjects, such as English, mathematics, geography, and science.   They also combine ICT with some subjects beyond our expectation, including design and technology, art and design and physical education.

UK government's initiatives have contributed to improvements' in pupils' achievements in ICT and the improvements in the quality of teaching in ICT.   In the next paragraph, I want to talk about how ICT changes the traditional learning into an active and vibrant learning activity in UK.   Further, I would like to discuss the improvement and advantages from the perspective of an academic teacher focusing on the teaching and learning process.

2.2 The improvement and change that ICT has made

During our visit, we did see how ICT could help to enhance teaching and learning and how it would contribute to extend the scope of learning.   First of all, ICT has changed the atmosphere in classrooms.   The application of ICT in classroom provides a powerful and effective means of presenting material.   It can bring active text-based resources by combing photographs, animations, video and sound on a simple platform.   That will motivate students, stimulate students' understanding and ability to respond and sometimes create a 'real life' atmosphere, all of which are crucial in the process of learning any subject.   Students enjoy hands-on experience, learning by doing and interacting and using realistic contexts.   Moreover, ICT creates a more interactive environment, in which learners can be the centre of a classroom.   Therefore, it contributes significantly to learning and is conducive to good teaching.   For example, interactive smartboards are applied commonly in both primary and secondary schools in UK.   Teachers can present their teaching material on the board, and which could include animations, sounds, graphics and texts. Students enjoy the context very much and interactive willingly and actively in

classroom.   From this, we can see how ICT turns a passive learning process into an active involvement and into a very interesting activity.   ICT is able to create an atmosphere of great engagement and dedication of learning.

Second, ICT provides individual support and it fosters individual targets.   ICT allows students to learn at their own pace with different needs.   It can record students' learning process and help them to refine and modify while trying to accomplish the assigned tasks.   As students gain in confidence and become more familiar with the tasks, ICT would help them to maintain interest and motivation through its novelty and authenticity, challenge and fun.   In addition, it assists students who miss vital work.   Students can make up afterwards by themselves.   For instance, many schools have their own intranet, which includes learning platform, and teachers' teaching materials.   Therefore, it is clear that ICT is able to promotes and assist independent learning.   In this way, the application of ICT would improve students' achievement; thus lessen pupils' frustration and raise pupils' self-esteem and sense of achievement.

Moreover, as mentioned earlier, the application of ICT will promote independent learning.   Hence, it would help students to achieve autonomy, which we may say the final goal of education.   Autonomous learning means learners acquire the capacity to conduct his own learning programme and progressively become their own teacher and construct and evaluate their programme by themselves.   It is concerned with bringing students to the point of taking responsibility for their learning, and it includes learning how to learn first, and then controlling their own learning.   The aim is to hand the responsibility for learning over to the learner instead of them relying on teachers. While students learn via ICT, they actually take the responsibility of learning gradually.   For example, they control the time and the pace; they construct their own work and modify through active discussion with the peers and teachers.   ICT provides a tool and an environment through which learners could autonomously develop their knowledge.

Still another advantage of applying ICT in education is the unrestricted learning scope that students can reach via ICT tools.   In this global village, it is insufficient for students only to learn in the classroom, in their own schools or just within their own cultures and countries.   Students can access to a wide variety of information via employing ICT and enrich their learning.   In the meantime, schools, teachers and students can seek for help from the local communities and other organisations. Further, schools and students may establish their partnerships and acquire a more international view.   In this way, the process of learning would have no limitation

and would be full of variety and more possibilities.

3. Future development and suggestions for employing ICT in education in Taiwan

As stated above, ICT has a significant effect on education and we do see the improvement the ICT had made during this visit trip to UK. Actually, Taiwan has been famous for its advanced computer technology, and our government has also put a lot of efforts to increase the use of ICT across the curriculum. In this passage, I would like to bring up some suggestions and possible directions for future development from the perspective of an English teacher.

As the number of computers installed in schools continues to grow, though it could be regarded as an improvement of ICT equipment, there is mounting pressure on teachers, especially academic teachers. They need to be not only computer literate but also to acquire the necessary skills to teach their own subjects by using computers. At present, teachers in Taiwan are provided with abundant training courses about the basic computer skills. They can choose a wide range of courses offered by educational and private organisations. However, subject-specific training is relatively insufficient. Not only do few courses exist, but the trainers are also lacking. Therefore, even teachers have the basic computer skills, they still don't have very clear idea how to present their material and combine ICT with their teaching. What's worse, they may lack confidence when applying ICT in their teaching. As a result, there are great numbers of classrooms around the country where ICT has no impact at all.

In my point of view, the training courses for teacher should first include the necessary ICT skills and further should include the subject-relevant courses. For example, teachers can be taught how to exploit MS PowerPoint for project work. First of all, they need to know how to set up and stage project work. And then, teachers should learn the individual skill of using MS PowerPoint to present their teaching material. Finally, teachers have to learn how to incorporate the skills within the project process. There is another important point to be taken into consideration. Skills and knowledge are best acquired if they are presented and practiced through relevant contexts. That is, the trainers should have participants produce material which is relevant to their subjects and can be used by their students instead of an irrelevant task.

Besides the subject-relevant training courses, schools should have a strong and immediate technical supporting group. When teachers encounter some technical problems, they won't feel anxious and don't know how to solve the problems. With the professional and immediate assistance, teachers won't feel dreadful and risky to apply ICT in their teaching. Likewise, forming alliances or groups within schools or across schools for the specific subject would be of much benefit. In this way, teachers of the same subject can share their teaching materials and experiences. By doing so, teachers can lessen their workload and would get teaching materials and experience from others as well.

In conclusion, I believe that with the proper training not only including ICT skills but also subject-relevant skills, teachers would be well-equipped for the application of ICT in their teaching in accordance with the modern world. Also, with a powerful backup, teachers would be very confident and delighted to construct a more appealing learning environment for their students, in which students would learn more actively, willingly, happily and efficiently. And in the walled classroom, students would be able to fly over the boundary and contact and learn in the infinite world.

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