An investigation of using the computer for reading and writing in the English classroom in secondary schools in the UK

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Abstract— **This paper presents an investigation of using the computer in English teaching at the secondary school in the UK, particularly in respect of reading and writing skills. Many studies suggest that the computer brings significant possibilities for promoting the teaching of reading and writing in the English classroom. The computer can enhance the development of reading and writing [1] [2] [3] [4]. This study adopted interviews as research technique and some student teachers in a university and some English teachers in a secondary school in the UK involved this investigation. The findings of this study show that the computer can enhance students' reading and writing. However, teachers have to learn how to control the process of teaching of reading and writing with the use of the computer.**

Index Terms— computer, reading and writing, advantages, CD-ROM

I. INTRODUCTION

The computer has been increasingly used in delivering education to students at all levels and all subjects. The new information technology clearly challenges teachers' traditional teaching pedagogies. The computer is widely used in many subjects in secondary schools in the UK. Lots of teachers have used the computer in their English classrooms. This paper intends to present an investigation of the possibilities of the computer as an educational tool in English teaching and learning, in particular, reading and writing in a secondary level in the UK. This investigation explores the points of view of some student teachers and their tutor in a University and some teachers in a secondary school in the UK.

Recent research suggests that the computer has a positive role to play in enhancing the delivery of education. The use of the computer as a teaching tool can enhance teacher enthusiasm for their work. There are positive benefits to be derived from such use for both teaching and learning. However, in order to do this, teachers need to learn the relationship between the computer and the learning, and learn how students can learn with the new technology. The technology only will not improve learning. Teachers need to organize and support students in their learning in creative ways [5].

II. THEORETICAL FRAMEWORK

A. Computer use in reading

Much research has been conducted into the use of the computer in the area of English teaching and learning. Reading can be facilitated via the use of the mouse which allows for more effective scanning for a text and the engaging in skim reading. And the fact that two or more students can read texts in front of a screen can make reading less of an isolated and alien experience for many students [2].

The computer can take the texts alive to the classroom. The CD-ROM can help students to enjoy literature in new and distinct ways. The visual resources of a CD version can powerfully enrich the book and enthuse and support readers. Visual literacy is becoming as important as the ability to read textbooks, magazines and newspapers. The flexibility of the computer can aid reading in all kinds of way not least in the provision of dictionaries, the ability they offer to alter font size and the like. The conclusion seems plain. Teachers have to pay more attention to technology. It is not possible simply to ignore its possibilities [6].

B. Computer use in writing

In terms of writing, Loveless *et al*. illustrate that the computer can promote writing skills on the part for students and can help them to change the product of texts [3]. Hyland also suggests that the computer-based writing changes our writing habits and the word-processor allows students to check their spelling and grammar, cut and paste, delete and copy, import images and change every aspect of formatting, which make our texts longer, look much better and more subject to revision. It helps students to integrate texts with other materials and mix the visual and the verbal in new ways. Texts are becoming increasingly multimodal. The computer allows different kinds of writing practices and teaching approaches. Texts on the computer screen can be considered as electronic texts, which are fluid, adjustable [4].

The computer brings significant possibilities for promoting the teaching of writing. More and more teachers conduct their writing lessons in the computer room. The computer can help students to become better writers. Much writing is now produced on computers. Some software can make writing more interactive and help improve writing by feedback from both teachers and students. Students often spend much more time writing e-mail to communicate with friends or strangers from

different places, even other countries. They would pay more attention to spelling and details than their traditional classroom writing [7].

The CD-ROM and software also can offer valuable help in teaching English. Drill-and-practice software with sound and animation can be used to improve knowledge of language structures and accuracy in writing, for example, Longman's Tomorrow's Promise and Research Machines' Success Maker, which have been chosen for use by some primary and secondary schools in their English lessons to work with the integrated learning systems (ILS). Shakespeare's plays are a good sample of CD-ROM being used to support the traditional English study in the school [8].

C. Future possibilities

It is clear that the use of the computer will grow in the future. The new technology will create a more flexible education system, which can overcome current barriers of economics, distance and other disadvantages [9]. The Internet will encourage teachers and students to work together and to participate in collaboration. They can work together on developing teaching and learning strategies on the Internet [10]. In future, English teachers will be good at using technology to help students learn and they will work 'virtual' situation very well[6].

When teachers become more familiar with computer applications and software, they could develop strategies for teaching with computers and increase quantity amount of various material. The computer will lead to more open approaches to the work of individuals. Loveless *et al.* reinforce the point in describing four imaginative and contrasting roles of teachers using the technology: "*A manager of collaborative teaching and learning*", "*A director-actor*", "*A facilitator*" and "*A designer*" [3]. However, students will not be the lead players in their learning, even if their skills on computers are often more advanced than those of their teachers [11].

III. METHODOLOGY

A. Research questions

The aim of this article is to present the use of computers in teaching English, particularly, in reading and writing in secondary schools in the UK. The research questions include:

* How does the computer promote students' reading and writing in English?

* What are the implications for the role of the teacher in the use of computers?

* In what ways do teachers think the use of computers will develop in teaching English in future?

B. The participants

This research explored English teachers' opinions in the using the computer in teaching of English. Seven student teachers in a UK university involved individual interviews. They had a program in using the new technology and they had a test in using the computer in education. They used the computer in teaching English when they conducted their teaching practice in the schools for more than half a term. In addition, they also observed some English teachers at schools using the computer in their lessons. They would use more computers in teaching English in their teaching by the request of the British government. Furthermore, I also interviewed the tutor of the student teachers. He teaches the student teachers how to use the technology in English teaching. Secondly, six English teachers at a secondary school in the UK focused the group interview and offered their views in using the computer in their teaching of English.

IV. FINDINGS

A. Using the computer to promote reading and writing

There exist many good websites for teachers of English, such as 'Andrew Moore's Teaching Resource Site' and http://www.teachit.co.uk. ST2 stated that teachers could use and adapt many worksheets on the Internet. The computer gives access to many good ideas for teaching. T5 set up a co-respondent with the first national community in North America. He thought it was useful to set up relations between schools in different countries. It is helpful for students to learn English together.

Furthermore, the tutor addressed that the computer could give access to excellent resources. It could create opportunities for communication between teachers and students around the world. For instance, teachers who work in the UK can download English lessons planned by teachers in the United States, who might work on the same texts for their lessons. Or a group of students in schools in England might have Internet connections and e-mail with students at other schools from different countries and offer real contexts or audiences for written communication. Teachers like resources about English teaching on websites. Many teachers around the world set up their own websites to provide rich resources for other teachers. Student teachers also set up their websites, where they could use to share issues, problems and resources.

Some interviewees considered the computer could certainly promote reading. T1 and T2 noted that many students were more interested in reading articles on the Internet and typing texts into the computer. They could make their work visually nice. ST6 thought that it was particularly helpful for the boys, who tend to have little interest in written texts. Because it is on the computer, and they enjoy using computers, they enjoy the reading on computers.

The evidence that many students like to read texts on the computer seems undeniable. It seems entirely reasonable to expect teachers who are charged with promoting the reading skills of students to familiarise themselves with methodologies that allow them to exploit the new technologies' pedagogical possibilities.

Regarding writing on the computer, most of the student teachers thought that the computer could promote students' writing. ST2 drew attention to the work produced in such a manner is certainly of good presentational quality. The computer also affords students greater flexibility in that they can modify their work as they work things through. All of this has the potential to improve the quality of work submitted.

The tutor enthusiastically stated that the computer could help students' drafting and writing. Students could easily change structures in their writing through computers. Any mistake of students' handwriting, spelling and punctuation could be corrected. So they could produce perfect pieces of text. That could give students great benefit.

The tutor also illustrated that the computer could encourage students to work together on the same work on the computer. Students might be in the same classroom or might sit in different places around the world, write the task together, rewrite and rearrange the resources online. Sitting around the computer screen and working together could help students and teachers to talk about the writing process and to make decisions about the writing process. For example, the teacher might write a piece of text and put it on overhead projector on a smart board, then asked students to correct, modify or redraft that piece of writing, or get the students to do the same thing as a group.

Some teachers supported their views. T2 mentioned that students feel comfortable using the computer to write work. They like to use it and they do not think of it is as such hard work. Moreover, "The computer can promote different styles of writing and different formats" (T5).

Even in those instances in which the work is not of such a high standard, the student can take pride in how it looks. They can often type more quickly on the computer that they write. They can use all kinds of different functions to make different print sizes and colors to produce their documents. They can move text around, go back to change the structure, and rewrite their work easily. This is easier to do it on the computer than on the paper. All these responses support that the computer can promote students' writing. Students can also obtain support for their writing by collaboration via the Internet.

Three respondents mentioned that the computer could help students who have trouble with spelling and grammar. Computers can help students with low ability in writing to have more confidence in handling a piece of work. One student teacher and one secondary teacher both felt low ability students are much helped in their spelling and grammar by the use of the computer. Another teacher also stated that the computer could help students who have trouble with writing English. Typing their work rather than having to write it is an advantage. And again, students who are not good at spelling or grammar can use the spelling checker and grammar checker.

ST3 gave a striking example of how the computer could aid those with physical handicaps that get in the way of easily being able to satisfy the requirement of writing English, which is supported by Lankshear *et al.* that the computer can be very helpful in aiding poor writers [10]. One of her students was blind. When he typed, his computer could read back for him what he had written. He could check his spelling, improve his writing. He used the laptop which was provided by his school and by the council. In the past, that student had to go to the special school. With the help of the computer, he could go to the same school with other students. As she said, "It's helpful for writing if children have problems with writing with hands. For children who have physical disability with their hands, typing is another option" (ST3).

In terms of CD-ROM, ST7 thought the CD-ROM was very useful. She addressed that one of the advantages of CD-ROM was interactive. Students could sit in front of the computer rather than listen to you to talk about the play. She had used a CD-ROM called *Macbeth*, one of Shakespeare's plays, which was made by the BBC. It is quite interactive with reading task, play, theatre, the actors, etc. Students can watch the play, listen to the interviews, and do their own task or answer questions with resources on the computer. ST3 also used a CD-ROM with films of *James Bond*, which has three activities focusing on the analysis of scenes on the two films. She could ask students to sequence the scenes, or put their own sound to them and even put music on it.

The tutor also mentioned using the CD-ROM. He said CD-ROMs might be used for stories. Sometimes the teacher could put it on the network or the white board for the whole class to share. When students do research on CD-Rom, they have to use it and work their own.

However, if students use the computer too much, there will be some problems. One student teacher found the problem in using computers too much. ST4 pointed out that if students typed a lot of work on the computer, they got little opportunity to practice their handwriting. Their handwriting would suffer. Spelling checks and grammar checks could stop students thinking for themselves.

The tutor mentioned that the emphasis on spelling and grammar checking might take away the responsibility for spelling accuracy, grammar and punctuation accuracy from students themselves. Teachers' answers also support this finding. T2 also stated that some students used spelling checking and grammar checking to check their work, but sometimes they did not understand what the problem was.

B. Implications for the role of the teacher in the use of the computer

New teaching pedagogies

Most interviewees considered that the increasing use of the computer in the English classroom posed big challenges for teachers. The use of more computers means the need to be up to the challenge of that use. There is a

big challenge for teachers in using the computer in English classroom. As ST1 noted:

"You need think of new ways to help pupils to learn rather than pupils make their work for presentation, not only writing for homework. You should think new activities to do. You have to make new rules for computer class. You have to make stricter. Sometimes they look at the screens and don't listen to you."

ST3 supported that teachers have to think of new ways to use the computer. As previously mentioned, just typing on computers rather than the traditional handwriting does not serve much in the way of educational purpose. The challenge is to use the computer for something else other than just typing. Teachers need to think afresh on the use of the computer.

The tutor introduced a 'geographical' dimension to their use. He described how computers can break down geographical distance is very important. For example, a teacher in some place can have English lessons with some pupils in another part of the country, either chatting online or responding to their e-mail requests, even video conferencing with them. So geographically teachers can work nationally and internationally with people around the world, which is most exciting. He was concerned at the changes in teaching methods "The main change is the geographical change, which can allow teachers to work with pupils around the world. Students use e-mail as regular communication."

While, T4 drew attention to other possibilities that students could control their learning and know what they need to do. Lots of students know more about computers than teachers do. They could be experts and feel confident. The computer screen lends itself to demonstration rather than the teacher feeling compelled to keep asking questions of students. There was the suggestion that the greater interactivity the computer can lend itself to might well change the traditional relationship of teacher to teach. And several of the interviewees were excited by the prospect of the 'internationalising' of the learning situation.

Teachers' training and challenge

The National Curriculum in the UK asks teachers to use computers in the classroom. But many teachers worry about their ability with computers. There tends to be an assumption that young teachers are likely to be familiar with and skilled in the use of computers. However, some student teachers stated that they worried about their computer skills. ST1 mentioned the challenge for her. She said some students might know more than her. She should be more computer literature than students and solve problems when something is wrong. The other challenge is to think of how she would use computers in the lesson and make sure what they get is different from what they use from a book or a worksheet. ST2 stated she was not

good with computers. She could not use them very well. She desperately needed more training in their use. She recognized that her students might know a lot more than her about computers. Her control of the classroom was threatened. ST5 expressed the challenge in these terms. She said students might use more programs than she could, which would make her feel a little bit less control. She also has technical challenge and time challenge. She has to consider the entire situation and make a good plan and back up plan.

A more questioning and skeptical tone can be detected in the following student teacher's observations. This individual, while recognizing the governmental encouragement of the greater use of the new technology in the classroom and how the delivery of government ambitions demands both more training and more investment in computers in the school, nevertheless seems uncertain on the potential of the computer as a tool in the desire to enhance English teaching. ST7 noticed that the government asked them to use the computer in the schools, but he did not feel there is sufficient training. Schools still need money to buy computers. The whole curriculum also has to be rewritten in some ways. Teachers need more training and more resources. She observed some teachers more often just used the word processor to type out in their English lessons, not as a teaching tool.

Most teachers, whatever their status, supported the view that they need more training in the use of the computer. In addition, teachers should be more confident in using the computer. T1 asserted that teachers should be confident with the technology, making sure they are fully utilizing the computer in improving English skills. T5 noted that they should use technology, but they need more training. They should have application and management training, and actually they do not have this training. The government does not put enough money into training teachers. He has to buy his own computer and software which is very expensive. He has to train himself. It should not be like that, he complained. Teacher 6 expressed her concern: "We should have skills and feel confidence. But I don't feel confidence. We do need to feel confidence."

The new technology changes the role of teachers in some ways and in ways similar to the responses of the interviewees [3]. Forsyth also suggests that the computer does not replace teachers and teachers may need to do more work to be up to the challenges and opportunities they offer. It is a big challenge for teachers to use computers in English lessons. They do need to be more adept in their use. A key limiting factor in the success of the computer as a pedagogical tool in the teaching of English is the teachers themselves, their competence in utilizing the possibility of the new technology [12].

C.   *Future development of computer use in English class*

Most student teachers of English certainly think that the computer will be a pervasive feature of the teaching

scene. ST1 stated that because the British government wants to use lots of computers, the future of the computer in school is assured. Every student would have a computer within the foreseeable future. It might be the case that student would just connect with the school website, do the work and send the work by e-mail. They may even work together around the world by means of videoconferencing. ST2 suggested that there would be more computer rooms in the classroom. Teachers can use computers for different students, have them doing different things at different times. The classroom will be a much more diversified locus of activities. ST3 mentioned the use of laptops: "All teachers will have laptops to do all the work, to plan the lessons, to do marking and to keep their records. The laptop will replace a lot of day-to-day thing the teachers have to do."

ST4 also remarked that lots of students would have laptops. Furthermore, she mentioned that more homework would be put on the Internet. Students can access it at home. If students have been away, they can log on to the Internet to get work to do. ST5 gave an example possibly more fully realized in future. English will have more opportunity to use computers. Every student will have a computer at the school. They can do their homework on their own computers either at school or at home and send e-mail to their teachers. The tutor expressed his hope that:

"There will be voice-activated computers, so people don't have to type any more… . If the school doesn't have a kind of course, such as A-level, students can get taught by some other schools which have the course on the Internet."

Although computers will be used a lot in future, some student teachers think the computer will not replace teachers. ST2 stated:

"I hope it won't replace teachers. Computers should be as a tool for teaching English. Don't forget why they are there and why they are invented."

ST6 also believed that computers would not replace teachers. Virtual teaching has its place. But it will not do for the whole time. The teacher will continue to have an indispensable role to play in the schooling of young people.

More experienced teachers also felt the computer is here to stay and will indeed feature more and more in the education of the young – including the teaching of English. T1 stated that there would be more use of the Internet for comprehension, selection, scanning skills, and videoconference for speaking and listening. T2 suggested that all the lessons would be set up on computers. More interactive resources will be used more in future. They will have white boards and the Internet board. Students will hand in work in disk or in e-mail. But she also believed that computers could not replace teachers. However, T6 thought school might save on teachers because students can be taught on the Internet if teachers are away. They can have any subject online.

According to the respondents, as more and more interactive websites and CD-ROMs come out, computers will become more important and will become more a feature in the English classroom. It will be the norm in the future. The optimism (if that is what it is) of the teachers on the future of the computer is reflected in the writings of researchers. They look to a future where the new technology promotes students learning for themselves, being independent learners, adept researchers. English teachers will have a role to play in delivering on those ambitions [6] [9] [10].

V. DISCUSSION

There is a belief that is widely shared the use of the computer in the English lesson has certain positive benefits. Students enjoy using computers and their learning is enhanced through the use of the computer. The findings from this study show that computers can promote students' reading and writing. The ability of the computer to allow students' work to look better, be saved, be correctly spelled and in accordance with grammatical requirements, are all thought to generate greater confidence in the final product. Access to the Internet and the utilization of the CD-ROM generate materials and possibilities of interacting with materials that makes for a richer learning experience. There is recognition of how the computer might transform the very nature of schooling. Education online is seen to now be an adjunct to traditional schooling. Nevertheless, there was a sense that teachers will still be at the heart of the educative process, even in the age of the computer as part of the normal furniture of the school. Both teachers and learners enjoy the possibility of being the beneficiaries of the new technology.

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