

Title:

Evaluating the impact of using ICT upon student motivation and attainment in English.

Researcher:

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Research topic:

Technology-integrated pedagogical strategies; Secondary English teaching and learning.

Geographical area where research conducted:

England – Eastern region.

Educational sector of participants:

Secondary.

Abstract:

This small-scale case study examined how use of Microsoft software programs, CD ROM and the Internet (to locate and download information) and digital cameras (to create photographic storyboards) to produce a range of written assignments could support the teaching and learning of English at secondary school level.

The approach employed was based on the idea that many students see using ICT facilities as enjoyable and something of a privilege and enjoy the change that this may offer from the normal environment for the subject.

This means that the standard of presentation is often higher, as it allows students to produce work that looks more professional. In writing they benefit from the ability to edit their work immediately and to see the changes and improvements in front of them. A wider range and variety of reading materials is available which is liberating for students as they are able to select the source themselves, deciding upon its relevance, rather than having to use materials supplied by the teacher at all times. As such they have access to contemporary news and materials that are constantly changing. Websites and e mail are interactive, involving students

in not only reading but making decisions there and then about what they read, following the routes that they choose.

The study examined use of this approach in work on the theme of homelessness in conjunction with the popular novel 'Stone Cold' by Robert Swindells; the study of Macbeth and various media based work using the English and Media Centre's Picture Power II and digital cameras. The study was carried out with a middle ability year 9 group of students over a period of six months. Evidence about the impact of these forms of ICT upon students' motivation and reading and writing skills was gathered through student questionnaires, student interviews and observations. The main findings of the study were that the majority of students found using ICT for English activities helpful (in terms of planning and amending work) and interesting. Further, the very nature of ICT often lends itself to group work, which enhanced their enjoyment of the tasks. Interestingly, the nature of these tasks also enabled students to work more independently as they were sometimes away from the classroom environment and were therefore less reliant on the teacher. It would seem that for many students in this group, ICT was fundamental to the development of students ability to learn independently, thus altering the role of the classroom teacher; I found that many students were keen to involve me in what they had been doing, taking pride in their achievements and seeking reassurance from me about their success.

Findings:

Motivation: Coupled with the ability to work in pairs and small groups, I have seen a significant improvement in the motivation of the majority of the students involved in this case study. In particular, the group have been more enthusiastic to begin tasks and this enthusiasm has been sustained for their duration. My judgement as class teacher is supported by evidence from student questionnaires in which 88% of the class stated that the use of a variety of ICT this year has made their English lessons more or a lot more interesting and enjoyable than they expected. A further 86% of the group stated that ICT has helped them to produce good work that has allowed them to explore ideas and work creatively.

Writing skills: I was particularly interested to see to what extent students would read over their original draft and what form their redrafting would take: whether this would be simply making use of spell-checking facilities or whether they would alter the structure of their writing and develop their ideas. Students have benefited from being able to amend and improve their writing without the need to begin a piece of work again to produce a final draft. Again my judgement is supported by student comments such as: "You can easily erase the part that needs changing without having to write out a whole new piece of paper". Their willingness to redraft and the quality of the presentation that can be achieved using ICT has resulted in writing that is of a higher standard, and particularly in the case of boys, at least one National Curriculum level higher. In particular, I have seen a tendency for boys to write at greater length, and have seen more interesting, involving writing, possibly as a result of working in pairs and being able to share ideas. In addition, students have made effective use of the software's spell-checking facilities, with one student saying "The spellchecker gives you a choice of words for you to pick the correct one from, so you are still learning". Most students were far more likely to use a spellchecker than the dictionaries made available to them in class. This may be due to the convenience of spellcheckers being already installed into their computers. Students also appeared to be more confident in their use of spellcheckers as the choice of possible spellings is greatly reduced. With dictionaries many students are unsure of how a word might begin and are immediately put off from using them.

Spellcheckers give students confidence to make a selection but without some knowledge of spelling rules, they are not particularly useful in terms of improving their spelling in the long term.

Participants' information:

A middle ability year 9 English set of 32 students (Set 3 out of 5 in half year group) where students are working at National Curriculum levels of between 4 and 6.

Equipment and materials used:

Microsoft Word, Publisher and PowerPoint;
BBC Shakespeare 'Macbeth' CD ROM;
The English and Media Centre's Picture Power II CD ROM (networked);
Kodak 215 digital cameras (4);
Data projector;
Suite of 17 faculty based computers, all with Internet access and 2 printers.

Applied method of analysis:

Throughout the case study I kept an electronic diary that allowed me to log events and my feelings about how each lesson had gone. I made notes about how the group had worked in each lesson, their attitude towards the task, and more detailed notes about individual students who I had worked with during the lesson. In addition I noted any technical problems that had occurred and the impact that these may have had upon the students affected. The diary allowed me to look back at the group's attitude towards using ICT over the term and to see whether their enthusiasm had changed over time. I was particularly pleased to notice that for each new assignment begun using ICT there was a high level of motivation from the whole group. This was probably due to the fact that assignments alternated between being computer suite and classroom based, thus giving all students the opportunity to produce work in their preferred way at regular intervals.

At the end of each assignment carried out using ICT the group completed questionnaires asking them to respond to statements focusing upon the potential advantages and disadvantages of using ICT for each particular assignment with answers ranging from 'I strongly agree' to 'I strongly disagree'.

Towards the end of the case study a group of 6 randomly selected students took part in a recorded discussion that asked them to consider whether ICT can improve their work in English. I provided the group with a list of bullet points that they could use to structure their talk and was not in the room at the time. At all times I asked the group to be honest and not to worry about the consequences of any answers that they gave. When reflecting upon this discussion I compared the students' comments with those that I had heard in more informal, individual conversations with students and with the results of the student questionnaires.

As the group had been producing approximately half of their assignments using ICT and the remainder by hand and using more traditional methods, I was able to compare the quality of both sets of assignments. I applied the English Faculty's current marking policy, which recognises both effort and achievement, and the level descriptors within the English National

Curriculum.

Conclusion/discussion:

Motivation:

The fact that this group has not been working exclusively using ICT, but has produced assignments in two contrasting ways, means that the enthusiasm they have shown towards using the ICT facilities has not diminished over time. Instead, they have been keen to return to this way of working and still considered it to be something of a privilege.

I have noticed an improvement in the ways in which many of the group have approached new tasks. In particular, several boys who (whilst not disliking English) were often a little reluctant to begin writing, have become far more motivated. Many of the assignments have involved students working in groups. Working in this way has improved their ability to discuss and explore ideas imaginatively and creatively with some students emerging as skilful leaders with the support of their peers. The use of ICT means that work produced in pairs is clearly visible to both students (either on computer monitors or digital camera) and is more likely to be the product of both students work – paired work in the classroom can sometimes be difficult to organise as there will always be discussion about who is to do the writing and whose book it should be done in. In general, I have found all students in the group keen to make use of computers and digital cameras and they have been very good at taking turns to be the one more actively involved. The layout of our computer suite also makes group work possible as several students can sit around one computer.

One assignment was to produce photographic storyboards portraying their views of homelessness. The students planned their photographs carefully on paper before going out with digital cameras to take the photographs. Having been given permission from their parents, they went into the village to take more realistic photographs and brought in suitable props and clothing. This assignment not only challenged them to produce a storyboard based on a sensitive topic, it required maturity and the ability to work independently as a group. Storyboards were suitable for this assignment as they are quick to produce and force students to consider how character and situation can be developed through images rather than purely through writing. Also, teenagers today are incredibly good at reading images as they are surrounded by them constantly both in and out of school. A similar project could have been successfully conducted using traditional cameras, but the benefit of the digital camera was that the photographs could be evaluated immediately and retaken if necessary. We were also able to upload the images straight away, improve their appearance and crop them as required. The speed with which the entire assignment was completed gave the students a huge sense of satisfaction in their achievements.

A randomly selected group of 3 boys and 3 girls carried out a recorded discussion about the benefits of using ICT in English. I asked them to talk honestly and openly and to discuss the various software and hardware that they had used over the course of the year. One thing to emerge from this discussion was that all of these students (and the majority of the class based upon more general whole-class discussions throughout the year) felt that they achieved more both in terms of the quality and quantity of their work, when using ICT. In particular, one boy whose attendance has been poor and has failed to complete most of his written assignments this year has only completed those assignments that made use of ICT. In fact he has often

volunteered to complete this work at home if unable to do so in class. For such students, using ICT would appear to act as an incentive.

For many students the quality of presentation is very important and this is where ICT can have huge benefits. Another boy said of using Publisher that "...it motivates you to work because it looks really good". Whilst recognising that presentation is not the major factor in a piece of writing, if this is the case then the use of such software programs has obvious advantages over handwritten work.

The major problem with using ICT for this project has been the quality of the ICT equipment. The computers that we have been using are new and have the most recent versions of Microsoft software installed on them. However, there have been some of the inevitable technical problems and when these have occurred the frustration that students feel having lost their work or in being unable to complete an assignment seems to completely replace their original enthusiasm for the task. One student remarked that using ICT is "...much more fun ... only if you have a decent computer though".

Writing skills:

A creative writing task focusing upon the central character in 'Stone Cold' and his experiences of living on the street encouraged pairs of students to discuss their understanding of what this might be like. In writing the piece one student would take on the role of 'typist' whilst the other would offer ideas and check the writing of their partner. In the majority of cases the students themselves ensured that they shared both roles, although in situations where one student's keyboarding skills were superior, this happened less frequently. This paired writing allowed both students to think about what was being said and written, to see if it sounded right, something that many students rarely do, despite many teachers asking their students to read their work aloud to spot the mistakes in punctuation or grammar. For students whose keyboarding skills are weak, this may have meant that they were quite passive in the construction of the text. For this reason (as well as for that of variety and sustained motivation throughout the lesson) it was important to ensure that pairs shared both 'jobs'.

The layout of the ICT suite is particularly suitable for walking around to observe what students are writing. I often find that in my classroom my movements can disturb or distract students when they are writing individually in their books. This is not the case in the ICT suite; indeed my presence often encourages students to share their writing with me, asking for my opinion about something or simply clarifying that what they are doing is 'right' or good.

The major advantage that ICT has for students' writing is that changes can be made immediately and without the need of re-writing: the first draft thereby becoming the final draft. I have been able to point out grammatical mistakes and then work through them with the students, picking up on problems immediately and being able to give them guidance and support at the time of writing, rather than when work is handed in after the completion of the task.

Further, ICT is particularly useful for altering the sequence and structure of writing, something that students are often reluctant to do when writing by hand. To show the ease with which this can be done I have made use of a data projector, involving the whole class in the process of moving words, sentences and even whole paragraphs to explore the effect and suitability of doing so.

Recommendations:

The overall conclusion of this study is that a combination of teaching and learning methods (including those that make explicit use of ICT facilities and resources) is the most effective way of motivating students. Further, this variety enables students to utilise and develop many skills involving reading, writing, speaking and listening as well as those of ICT.

The positive aspects of using ICT within English are:

- The results of students' work can be seen immediately, which can stimulate and raise levels of motivation;
- Students are more likely to engage in redrafting, amending and improving written work more readily due to the simplicity of this task when using ICT;
- The quality of presentation can be extremely high, which develops a sense of pride in students' work.
- Depending on the number of computers/digital cameras, students often work collaboratively which encourages students to share and discuss ideas, making the task more enjoyable and often raising the level of achievement. This is particularly the case when groups contain students of differing abilities, with the achievement of weaker students being raised by their peers. Of course, it is important to ensure that both/all students participate fully in group work and that no one student does the majority of the work.

The main problems arising from students using ICT within English are:

- The tendency with some students to become more involved with the presentation of their work rather than the content;
- Lack of computers and other ICT equipment within schools and technical problems beyond the control or knowledge of the classroom teacher. Unfortunately, this often means that only those teachers who are confident in their own use of ICT take their classes to the ICT suite;
- If students are to have a permanent record of their work, print outs need to be made which can be costly. Some teachers may decide that assessment of work can be made on screen which would eliminate this problem;
- Due to the increased amount of group work there may be difficulties in assessing the achievement of individuals;
- Many students find typing difficult and frustrating, having never received any formal tuition of keyboard skills. Several members of the group have remarked upon this and their general feeling is that they would have liked to be taught how to touch type so that work is completed more quickly. I would support this sentiment as ICT is such an important communication tool and is only going to become increasingly so in the

future

- Due to the varying work rates of students, it is almost impossible for assignments to be completed by all students within a lesson or series of lessons. This makes booking computer rooms difficult and completion of tasks often has to be done in students' own time. This can be difficult if they do not have access to computers either at home or out of lesson time.

Research evaluation:

Taking part in this research project has confirmed my belief that successful, enjoyable teaching and learning should involve a variety of teaching and learning styles and situations. I have always endeavoured to vary the ways in which I teach English, often using drama and creative activities to explore ideas and texts. This has given me the opportunity to explore the potential for ICT within my teaching and to evaluate its impact upon student's motivation for the subject and their attainment, particularly in writing. I believe that the students have benefited from taking part in this case study as they have been given more opportunity to evaluate their own learning styles and to reflect upon their strengths and weaknesses in writing. Further, I have enjoyed the many conversations that we have had as a group about the work that we have done and the ICT facilities that we have used. On a more practical level, this project has allowed me to purchase interesting and useful resources for the English Faculty, which have already been used by several colleagues and many classes, and has raised their awareness and understanding of how ICT can be beneficial in our teaching across the curriculum.