

## **Basic BPRS Report on TiPS Project**

**Title:** The development of literacy and computer skills through the use of e-mail.

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**Research topic:** Technology-integrated pedagogical strategies; Secondary English as an Additional Language (EAL) teaching and learning

**Geographical area where research conducted:**

England – Eastern Region

**Educational sector participants:**

Secondary

**Abstract:**

This small-scale case-study examined how the use of e-mail (and other forms of ICT which could be integrated into the existing curriculum) could support the teaching and learning of English as an Additional Language at secondary school level. The approach employed was based on an exploration of the degree to which ICT could enhance EAL learning: that a task-based curriculum, allowing for a degree of independent learning and negotiation, with ICT fully embedded within that curriculum would further improve the literacy and computer skills of bilingual pupils. The study examined the use of this approach in work on mediated collaboration carried out with the *Speak for Yourself* Community Education class of twelve short stay, refugee and resident Year 7-10 bilingual pupils who were learning English over a period of two terms. Evidence about the use of ICT and its relationship to improved literacy and computer skills was gathered through pupil and staff evaluations and interviews. The main findings of the study were that ICT embedded within a task-based curriculum does improve computer skills. Where the tasks were carefully designed to challenge pupils' communicative competence, then all English skills (including literacy skills) were improved. However, improvement in literacy skills was very difficult to measure quantitatively. It was found that international links were developed through e-mail, and that the broader aims of the research project - through e-mail, to develop international school-based friendships, and therefore possible greater integration, mutuality, interdependence, quality, equality and global citizenship - were partially achieved.

## Findings:

### *Original aims*

The original aims of the research into pupil learning and development were as follows:

- 1 To develop literacy and computer skills through the use of e-mail.
- 2 By embedding ICT within the curriculum, to develop the aims of *Speak for Yourself*, namely:
  - to enable pupils to develop independent language learning skills in English
  - to develop literacy and computer skills
  - to encourage friendships between bilingual pupils.
- 3 Through e-mail, to develop international school-based friendships, and therefore possible greater integration, mutuality, interdependence, quality, equality and global citizenship.
- 4 To examine how pupils with special needs learn ICT skills by comparing strategies with those of the researcher.

### *Testing and refining the practical theory*

Underpinning this research was the following task based curriculum framework for EAL students:

- open-ended authentic tasks, focussing on cognitive and affective development
- closed tasks, focussing on skill development
- ‘publishable’ outcomes, which can be read or listened to by an audience of interested parties
- freedom of access to resources
- skills sharing using a variety of teaching and learning styles
- problem solving
- opportunities for choice, collaboration, decision making, negotiation
- opportunities to reflect on and evaluate the learning process
- teacher/learner consultation
- relaxed atmosphere within a structured environment
- learner independence

The project was based on the hypothesis that, by embedding ICT in the curriculum, the results would be improved. Improved literacy would occur while reading the computer display; (see for example, Snyder 1998) and there would be instant assessment by teachers, as the pupils generally have to follow a command. Improved literacy could also occur through a negotiated task-based curriculum. In a previous pilot literacy strategy project with Year 7 pupils, some tasks were integrated from the *Speak for Yourself* curriculum into the literacy teaching.

E-mail provides instant international communication, and therefore could promote a sense of belonging to a global citizenship rather than a minority group within a British secondary school. The internet provides instant access to a range of information which offers a greater choice to individuals. Through word processing, the presentation and content of pupils’ work would improve and be made accessible to a wider audience, possibly through use of a web page.

The teaching plan for the two lessons each week would be evaluated in negotiation with the other two teachers involved in delivering the course, a Community Tutor and Learning Support Assistant for Refugees, in weekly planning sessions. This would hopefully allow for greater negotiation with key members of staff and therefore ownership. All lessons would continue to focus on speaking, listening and group interaction. Ideas for e-mail links included pairing with 'keypals', through contacts with past pupils, old schools, friends and relatives, and links with specific schools in the UK or abroad with large numbers of ethnic minority heritage pupils. The purpose of communication would be authentic and problem-solving, with requests for help with tasks within the curriculum. The internet would also be used when seeking wider information about tasks.

Each pupil used e-mail to get help for carrying out tasks within the curriculum. These tasks included speaking to a relative about a recipe for a multicultural recipe booklet, and consulting by email a previous *Speak for Yourself* pupil about the induction pack for newly arrived bilingual children. Communication and tasks would therefore become more authentic. Some tasks would be produced bilingually. For each task, there would be a focus on genre, and the best way to obtain the information required through use of ICT techniques.

#### *Examining particular features of teaching and learning processes*

In the pupil and teacher evaluations, observation and reflection it became apparent that the task based curriculum, with an emphasis on negotiation and independent learning, offers a robust model for raising the communicative competence and confidence of bilingual pupils. When ICT is successfully embedded into this curriculum, using ICT as a communicative tool, then the curriculum is enhanced.

One particularly successful task was putting the redesigned booklet "The First Few Weeks: Advice for Newly Arrived Pupils" onto a web-site. This activity made the outcome more internationally 'publishable'. The pupils knew that newly arrived pupils would benefit from reading the booklet. Group discussions of the content of the booklet also helped those pupils who were not integrating well. The group spent three weeks revising this booklet, and translating it using the Alta Vista translation package. As they were unhappy with the nuances of the computer translation, they then improved the wording themselves.

A second successful task was asking previous members of *Speak for Yourself* for ideas on the content of the recipe book. The recipe book was sold on Red Nose day, and included e-mails from past pupils. The pupils enjoyed the lunch testing the recipes.

Another successful task to compare Chesterton College with previous schools attended, by e-mailing old friends and family to describe their experience. This provided an opportunity to compare schools objectively, and to realise that key pals had much in common. A prospectus for bilingual pupils, using publisher, was the final outcome.

Another light hearted task was to design the ideal house using computer-based graphics software. For the pupils who found grappling with language and integration rather overwhelming, this was found to be a more practical activity (Tina Deathridge "Literacy Through Symbol")

Another task was to prepare a *Speak for Yourself* Yearbook focussing on activities during the year. All pupils contributed through word processed writing, hand written pieces, photos or

drawings. Pupils leaving for another country were able to take the book with them as a memento. The final lesson involved all pupils and staff writing words of good wishes in yearbooks.

#### *Evaluating particular aspects of student learning and development*

All pupils felt that their literacy skills had improved, in so far as their English and communicative competence had improved through the tasks set as discussed in final interviews with me. However, it was difficult to adequately measure the improvement in literacy levels, because the National Curriculum descriptors are not precise.

All pupils felt that their computer skills were developed through the use of e-mail. However, pupils had different perceptions on what computer skills comprised, even though all pupils were involved in a concept mapping exercise about what computers meant to them. All pupils also wrote an encyclopaedia entry for their ideal key pal. For those with little experience of computers, it meant word-processing or even typing. For visiting scholar pupils, e-mailing and computing tended to be features of their everyday life, so these pupils felt that they had only partly developed their computing skills.

The broader aim of developing international school-based friendships was partly successful, and could be developed in a further project. The success of this activity depended on the choice of 'keypal'. Some pupils felt that the 'keypal', if well chosen, helped them to keep in touch with family or friends, and provided a different facet of communication, deepening the relationship. Other pupils, who linked up with previous *Speak for Yourself* participants, benefited from the relationship, even though they had not met. In the final interview, a boy said that he had felt a connection with another Japanese girl who had attended Chesterton, because she was comfortable and exited about communicating with someone from the group.

The two targeted pupils with special needs already had literacy problems. Recent arrivals in Britain, neither was able to read or write in English or their own language. The pupil with communication problems benefited more from one-to-one help than from the actual project. It became quickly apparent that the other child had extremely sophisticated bluffing strategies, indicating that she understood less than she showed. Because ICT was a quicker assessment tool than a written page, these strategies became obvious.. One pupil gleefully told me that she had received a communication from a past pupil in Brazil. In fact, it was an internet web advert. Both of these pupils were slow in picking up ICT skills. Further research clearly needs to be undertaken in this area.

In terms of my own special needs in learning ICT, I learnt a great deal from those already skilled. The pupils appeared to view ICT as a tool for communication for accessing a body of knowledge. Learning ICT was very similar to learning a language, continuing, dependent on need, often frustrating, essential, and requiring a relaxed environment. This is probably why ICT embedded so well within an EAL curriculum framework. It also led me to believe that some secondary school teachers tend to view learning English as content rather than process based which could account for problems encountered in learning is why they may have problems learning ICT skills.

Finally, pupils enjoy participating in research. Within the project, pupils were constantly asked their objective views on the course. The project allowed for positive negotiation, as should happen in any curriculum design.

## **Participants' information:**

### *Students*

*Speak for Yourself* Community Education class at Chesterton Community College, comprising twelve short-stay, refugee and resident bilingual Year 7 to 10 pupils of very mixed ability, who were learning English. Three pupils were tracked, two with special needs and one 'talented'.

### *Staff*

Sarah Adams: Community Tutor  
Richard Kirby: ICT Coordinator  
Lina Paraskeva: Bilingual Assistant for Refugees and volunteer Community Tutor  
Susan Spencer: Language and Curriculum Development Teacher for the Multicultural Education Service at Chesterton Community College (EMTAG funded).

## **Equipment and materials used:**

E-mail, word processing, web page formation, internet use, design packages and other forms of ICT which the students found useful when completing the tasks.

## **Applied method of analysis:**

The research plan was to investigate how far the development aims are met through ICT, and what those positive factors were through the following activities:

- 1 Assessment of literacy development through qualitative data: subject reports and YELLIS, CATS, SATS and GCSE results; teacher observation and reflection, with comments from the Community Tutor, the Learning Support Assistant for Refugees and the ICT teacher.
- 2 ICT skills development measured through formative assessment by 'quickie' pupil journals; one-to one teacher/pupil evaluation and subsequent target setting; final pupils' assessment of the course and their progress; parents' comments.
- 3 The value of 'keypals' researched through a questionnaire assessing pupil attitudes to e-mail friendships and how helpful they are (to be designed).
- 4 The use of a research diary to examine how pupils with special needs learn ICT skills, by comparing strategies with those of the researcher.

The actual research consisted of a case study employing multiple sources of evidence, as described below.

### *Teacher perspective*

Part of the research plan was that I would use a weekly research diary to track progression during the project, and also to focus on critical incidents. The diary would thus provide an insight into the ways pupils with special needs learn ICT best. However, researcher reflection

proved to be more effective in some cases than use of the diary. For example, one boy on the course had exceptional problems integrating into the school, living in Britain and adolescence in general, which were too time-consuming to document adequately. In this case, reflection was a continuous and intense exercise, and most incidents seemed critical.

The Community Tutor, Learning Support Teacher for Refugees, and the researcher met each week, to evaluate the previous week's work and plan activities for the next week. All staff were interviewed and tape-recorded at the end of the project, to assess whether the research aims were achieved. Staff also evaluated and redesigned the curriculum, embedding ICT, and ensuring that the pace and timing of the tasks was more relevant and authentic.

### *Student perspective*

Pupil ICT journals were kept intermittently. Informal class/teacher feedback sessions were held at the end of the weekly sessions which informed the staff planning sessions. Also due to the high teacher-pupil ratio of three staff members to twelve pupils, there were opportunities for informal evaluation, negotiation and subsequent target setting. The initial plan was to interview the three targeted pupils before and after the project, so that they could provide detailed information about the ways in which the project had supported their learning. However, the high ratio also meant that I did not have to focus solely on the three targeted pupils. As it was judged unfair (in terms of equal opportunities) to focus on these three pupils, all pupils were subsequently interviewed.

After the first term, the pupils conducted audio-taped interviews in pairs using a questionnaire to evaluate the project. At the end of the first and second terms, the pupils wrote an evaluation of the course. The pupils also wrote their own progress report. All pupils took part in group interviews with me to see how far the aims of the project were met. It was decided not to use a separate questionnaire to assess pupil attitudes to e-mail friendships, as this was covered in the small group interview.

It was intended to measure literacy development using data (subject reports and YELLIS, CATS, SATS and GCSE results), but this data was not collected due to time constraints. Also, it was realised that these measures were not comparative, nor had any benchmark scores been taken before the project, apart from a National Curriculum English level test. In a fuller survey, I would examine National Curriculum scores and subject reports. However, I feel that neither would accurately reflect literacy competencies. Interviews with English teachers and a close analysis of reports might be useful. During the course, five of the pupils prepared for the UCLES First Certificate in English, and their results will probably all showed increased language competence. Four pupils also took their Key Stage 3 English SATS test. This could be compared to the National Curriculum level originally collected in January 2001 as part of the new assessment methods for bilingual pupils, described in *A Language in Common (QCA 2000)*.

### *Independent perspective*

The main independent perspective was provided through classroom observation from co-teachers. Two other members of staff who were closely involved in teaching. The ICT co-ordinator helped with complex ICT tasks, for example putting *The First Few Weeks* on a web page and taking digital camera photos.

My mentor from the University of Cambridge Faculty of Education audio taped a lesson, wrote comments and interviewed me at the end of the lesson in a simulated recall session.

Positive evidence that I also used was largely through interactive response to task outcome. The evidence base is portfolios of students' work, displays in the school with elicited staff and pupil responses to them, pupils' work forming web pages eg advice to teachers of bilingual pupils, and responses to them.

Parents, pupils and staff continually commented on outcomes which helped to power the research project. The College Principal was involved in the project, in an *ad hoc* but important way, providing advice on critical incidents with pupil integration issues. She also commented positively on the *Speak for Yourself* recipe book and the e-mail contributions from past students.

## **Conclusion/discussion:**

### *Internal conclusions*

- ICT embedded within a strongly communicative task based curriculum aided language learning, including literacy and computer skills.
- The curriculum aims of *Speak for Yourself* were enhanced by embedding ICT within the design.
- The project was successful because of the interest and commitment of the small number of staff and pupils involved, pupils enjoyed doing research as their voice was heard. The study underlined my view that a negotiated curriculum **is** action research.
- The project was 'powered' by interested key players comments.

### *External conclusions*

The ideas and findings from this case study might be relevant to other contexts and teaching situations where there are bilingual pupils. The re-designed *Speak for Yourself* curriculum model is applicable across schools.

## **Recommendations:**

I would recommend employing this teaching approach in a similar teaching situation. However, within the curriculum there needs to be an overall focus on using ICT in the context of communicative competence and the most closely associated skills, reading and writing. The students suggested further practical activities like cooking and discussing topics, which they found valid and interesting. They enjoyed activities where the communication was interpersonal rather than task based ie. where they casually chatted with a 'keypals' about recipes and gossiped during shared lunch.

I would advise another teacher to focus on the powerful task-based model of curriculum design, which involves students through negotiation about what they enjoy and acts on their suggestions. There is great potential for this teaching approach to be employed in wider teaching situations, for example in the Key Stage 3 English curriculum. Also the curriculum

could be adapted to widen the outlook of all pupils at Chesterton Community College on culture and language.

Further issues which could be usefully researched regarding this teaching approach could include:

- The comparison of the processes of language learning and ICT skill development
  - The identification and comparison of secondary teacher attitudes to language learning and ICT literacy
  - Impact of NOF computer training for teachers
  - Analysis of special needs pupils' attitudes and comparison of those attitudes, to learning ICT and literacy
  - Assessment systems using ICT which truly test special needs pupils' literacy competencies
  - Investigation of which factors enhance the inclusion of bilingual pupils into a new school. and where ICT can support this.
- Pupil negotiation of curriculum content and process within and without research.

### **Research evaluation:**

A reasonable amount of confidence can be placed in the findings in this case due to the fact that there was a close and honest relationship between the three members of staff involved and the twelve pupils. though caution must always be exercised in extrapolation from a small case study to a wider context. The findings that an existing curriculum design model for EAL pupils can be used to design ICT tasks, was illuminating. Other illuminating findings are the possible relationship between learning a language and learning ICT skills. Attitudes to knowledge of language learning may be why some secondary teachers have problems learning ICT and identifying with the needs of bilingual pupils. Other illuminating findings were that a negotiated curriculum lends itself well to a research project and vice versa. The whole area of special needs literacy is still problematic. However comparing ICT learning strategies with literacy strategies may go some way towards illuminating the issues.

If I were to design this study again, or advise some else on carrying out a similar study, it would be possible to achieve greater confidence in the findings and illumination by interviewing the English teachers of bilingual pupils, carefully examining pre and post teacher reports in all subjects and giving effective literacy tests.

This study has contributed to my own professional development by considering through the exploration of how ICT can enhance EAL learning how deeply held successful teaching strategies for students learning a language ie negotiated task based curriculum design, language acquisition, the importance of pupil voice, can successfully be transferred to a secondary situation. By listening to the pupils, my own attitudes to acquiring ICT skills have been challenged. I have realised the importance of learning support assistants for special needs pupils and high pupils/teacher ratios (as regards my ICT skills, the importance of husband, son, friend, ICT coordinator in helping me learn). In the same way that good language learners learn, ICT learners need to need to tolerate ambiguity, take risks and develop independent learning.

In terms of making a wider contribution within the school, the potential contribution of ICT to issues of integration of bilingual pupils needs to be examined and ICT and the attitudes of secondary teachers to English as an Additional Language needs to be re-addressed. In this way, attitudes to INSET for ICT could be compared and re-examined. In terms of making a wider contribution to the school and beyond, my advice would be to incorporate truly communicative tasks into Information Communication Technology strategies for learning.