

## Iya-ola

A Call for Ideas development project by Attic Media  
in collaboration with Futurelab

Final report



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February 2006

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## **EXECUTIVE SUMMARY**

### **Project description and aim**

Like an online exchange, the Iya-ola prototype idea provides 9 year-old children with a means of trying out their Spanish with Spanish-speaking children, whilst the Spanish children have an opportunity to practise their English.

Initially, in the home country, conversations are introduced to learners through playful computer-based adventures. In response to the learner's actions, carefully structured language is provided by the system. The learner uses this information to answer questions correctly in order to move forward. As the game progresses the language varies, and learners encounter new topics involving numbers, family members and so on.

After rehearsing this language in the game format, the learner then joins an audio-visual chat with another learner (or group of learners) in a Spanish-speaking classroom. These children have also been playing a game, identical in all ways except that it's in English. Both sides then have to help each other solve a puzzle that demands the use of the language practised at that level. Learners can converse with their Spanish or English team mates by using a number of levels of communication: at the pilot stage this will concentrate on instant IP messaging and video-conferencing.

If the game does its job effectively, eventually the language will flow between learners in the two countries without the need for a specific quiz structure to help them. The two schools will have formed a link for their joint language and culture teaching.

## **MAIN RESEARCH QUESTIONS**

Research questions were formulated to uncover some of the issues regarding the three main aspects of this project: aspects of language learning at Key Stage 2; the game; and the system of communication. More specifically these questions were:

**1. Language learning at KS2:** Are the vocabulary and the language constructs appropriate for learners at this age? Are the language constructs structured appropriately into a game environment? Do the above two issues translate into recognisable language activity (speaking, talking, reading and writing)? And finally, do learners get effective practice in their language skills?

**2. The game:** The research questions tried to find out whether the narrative scenario is right for the learners at this age; whether the look and feel is attractive for the learners; what kind of language/mental activities the game offers; and whether the game is engaging and offers the right level of challenge.

### **3. Questions about communication:**

a) Are the learners prepared for collaboration?

- b) Does the method of invoking the collaboration work?
- c) Does the system actually support collaboration? Is there symmetry in the partnerships?
- d) What is the effect of the modality of the collaborations?
- e) Is collaboration best viewed as a peer-peer or a class-class or a group-group interaction?

## **RESEARCH DESIGN SUMMARY**

### **Methodological approach**

Initial research included spending time with learners of the target age, discovering their likes and dislikes about being abroad with their parents. Year 5 pupils at Westbury Park School were involved in this stage of the project development and this gave some clues as to what kind of scenarios they would find interesting and the kinds of characters that they would identify with. Teachers with experience of linking classrooms and those with experience of video-conferencing were also consulted, to provide guidance on getting the system right for a classroom setting.

Further preliminary research was conducted with the schools initially identified as partners for the project, Muñana Primary School and Hemsill Hall Primary School and with my own children. This involved showing the children and the teachers the application and inviting them to provide comments about the characters, the situations and the settings. This proved to be a very enriching and valuable exercise and consequently changes were introduced to the first layout of the application based on the children's and teachers' initial reactions.

After a lengthy period of time, this was followed by a usability trial of the software application prior to the trials with the schools.

Finally the research process finished with the trials with the children at the two partner schools.

Identifying suitable partners with whom to establish contact was a very important issue from the beginning of the project. As finding suitable partners and forming trusting and long-term relationships is vital for projects like this one to succeed, the two schools that were initially selected for the project had already established links by participating in a Story Sack Project a couple of years before, and both schools were very keen on keeping the relationship alive. The schools were Muñana Primary School in Avila (Spain) and Hemsill Hall Primary School in Nottingham. To both participating teachers at the schools this seemed like a very exciting and real opportunity to further develop this link. Muñana Primary School was very committed to the project and the children in Year 4 were very excited at the prospect of actually being able to see and talk with British children. This ended disappointedly for the Spanish school, as the school's internet connection was not fast enough to support a video link. We needed to find a new school with a faster internet connection. Our second attempt with a school in Madrid posed further technical barriers which prevented us from running the trial, so we finally found a primary school in Barcelona - Escola Peter Pan - that we eventually ran the trial with.

**Participants in the trials:** Initially I had planned to carry out the trials with four groups of KS2 children in each school (one group per year) and their teachers, but due to the difficult technical issues we faced – which will be discussed later on the report - teachers' commitments, and schools' different rhythms, timetables and holiday patterns, we could only carry it out with one group of children from each school:

**Hempsill Hall:** 9 pupils out of their usual class, around a computer

**Escola Peter Pan:** a normal class in the computer suite, with the application running on different computers

With hindsight, I can say that the research plan had envisaged a very ambitious plan for trials that I was not able to complete mainly due to the insurmountable technical barriers we faced and also due to working in an international context.

**Methods of data collection:** a triangulation of methods seemed appropriate for this type of qualitative research, so data was collected by the following means:

1. Video recording children who were carrying out the task in both schools (we have two video recordings, one from each school).
2. Observation protocols carried out either by teacher or/and myself conducted during the activity or watching the video. I had planned to have four per school - one for each group of pupils - but as the trials were only conducted with one group, I have two.
3. Post-activity teacher's questionnaires (2).
4. Post-activity children's questionnaires (9 from the children in the school in Nottingham).

The timetable of trials was decided in collaboration with the schools and it proved extremely difficult, mainly because of an hour difference between Spain and the UK and obviously because of the different lessons and activities happening in the schools. Spanish school timetables do not allow for much flexibility. Each curriculum area has got an hour long slot which is kept the same all the year long. It is very difficult to introduce any changes as some of the teachers, for example the English teachers, are specialist and peripatetic. This means that a small change of schedule may affect several classes. In the end two trials were carried out, with the English school adjusting their schedule to fit the Spanish one.

In the first trial pupils visited the first game environment, in the second one children visited the second one.

## Calendar

1st attempted trial with Futurelab (comms failed): 14 October, 2005, 11am-1pm

2nd attempted trial with Futurelab (managed ichat, no video link): 19 October 11am-1pm

1st school trial: (telephone link - Skype): 17 November, 9am-10am

2nd school trial (telephone link - Skype): 15 December, 9am-10am

## SUMMARY OF ANALYSIS

With the information gathered from these different sources the main issues have been identified and then categorised in the following table:

<b>Usability</b>	<b>Unpredictability of internet</b>	The first time that I went to HH to carry out the usability trial with Futurelab the internet at the school was down.
	<b>Firewall issue resulting in the impossibility of establishing video link</b>	Second time to carry out the usability trial: impossible to establish video link due to firewalls, routers that schools have for protection, so communication was carried out through chat a second time.
	<b>Failing telephone line</b>	During the trials with both schools video link was not managed, but telephone link (Skype) was established, although it failed on various occasions and there was a considerable amount of noise.

	<b>Main Issues: Children</b>	<b>Main Issues: Teachers</b>
<b>Language</b>		
Are vocabulary and the language constructs appropriate for learners at this age?	In general, children did not make a lot of comments regarding language; those that did emphasised how much they enjoyed speaking in Spanish, or it was much easier than expected. One of them said that even if the language was quick, they could repeat it more than once in the revision section.	Teachers were more welcoming with comments about language. For example it was remarked that the vocabulary which is appropriate for the child at this stage should "be relevant to the child and should draw upon their own experiences. Vocabulary which they can imagine themselves using in conversations with other children and also words that are unusual or fun".
Could the language constructs be structured appropriately into a game environment?		It was also important for the teachers that "the children need to learn verbs in order to talk about different things. A string of vocabulary about different nouns is less relevant. The verbs endings about me and you and he initially though to all at the end of Year 6".
Could this translate into recognisable language activity (speaking, talking, reading and writing)?		"The fact that the children could tune in better to the utterances in the first person, as they are more familiar with them. Children found it difficult to ask questions."
Would learners get effective practice in their language skills?		The teachers found that the language constructs can be structured into a game environment but they would need to be age specific. A "simplified version is needed for Years 3 and 4 and a more challenging one at Years 5 and 6 from the point of view of language".
		"Through the game they are reading and listening to the language and interpreting

		<p>and making sense of it. The key element is when they have to make up a question from their own language and structure that in the target language to be able to say it to the children with the other version."</p> <p>Pupils have practiced: listening, speaking and reading.</p> <p>The pupils from HH were more adventurous and they asked their questions in Spanish while the children from Barcelona started off by asking the questions in Spanish instead of English.</p> <p>The pupils from Barcelona had a short session before the connection practising the language they would then be using.</p>
<p><b>Game</b></p> <p>Is the narrative scenario right for the learners at this age?</p> <p>Is the look and feel attractive for the learners?</p> <p>What kind of language/mental activities the games offers?</p>	<p>Children were very articulate when discussing and answering questions about the game, the animation and the characters. In general they liked the animations. They also liked the characters as they could identify themselves with them, either because "they kind of look like you", or "they look like cartoons", or they speak like them: "the children on it spoke as if they were really telling the information that they would if they were real".</p> <p>They also liked the story, it appealed to them because it takes "place in places we go". Quite a few of them suggested further places/environments they would like to see: school, houses, shopping centre...</p> <p>They welcomed the fact that there is progression in the level of difficulty, that it is challenging for them, it is "a brain teaser", and that they had to listen attentively.</p>	<p>Teachers noticed that children were highly motivated to try the programme out. They were very taken by the way it was presented - the style of the characters, the situation, the way you could hear real Spanish being spoken with familiar and unfamiliar words.</p> <p>One of the teachers also remarked that "the children were motivated due to the narrative containing familiar elements from their own experiences - giving them another tool with which to interpret [personal experience]".</p> <p>One of the teachers also mentioned that "it has a cartoon-type feel that the children responded to and immediately felt comfortable with, although they did want the cartoon characters to 'animate more'".</p> <p>Children look and sound motivated and they find the game challenging.</p> <p>The language the game offers is familiar to the children and it is the kind of language that is practised regularly and early on in their learning.</p> <p>Mental activities:</p> <ul style="list-style-type: none"> <li>• interpretation of what they see and hear with reference to their own experiences</li> </ul>

<p>Is the game engaging and at the right level of challenge?</p>		<ul style="list-style-type: none"> <li>• representation of elements of that when listening to children in TL</li> <li>• memory</li> </ul> <p>"The game element seems to be the same each time. I think that this might begin to bore the children after a while. Possibly a puzzle to solve might add another, more sustainable level of engagement/challenge as children in each country have parts of the solution and have to talk to complete it."</p> <p>Teachers pointed out that within stage 2 there were questions about characters whose names they didn't know and so the children couldn't answer them except by a process of elimination.</p>
<p><b>Communication</b></p> <p>Are the learners prepared for collaboration?</p> <p>Does the method of invoking the collaboration work?</p> <p>Does the system actually support collaboration? Is there symmetry in the partnerships?</p> <p>What is the effect of the modality of</p>	<p>All children found the experience of being able to speak to Spanish children fascinating: "I think it is brilliant because you can actually speak to the Spanish children, who are real"; "I think it is amazing and I like it because you get to talk to real people". Nevertheless they also remarked that it would have been better with the video link.</p>	<p>It was suggested that an initial session not using the game, but just the children meeting each other would have been useful to get over the initial excitement.</p> <p>"It would be good to include a preliminary screen in which teachers and children had to practice video-conferencing introducing each other to get them personally involved in the programme, and create some space to practise using a technology they are not used to."</p> <p>The video link did not work, so the games could not be explored as it was initially conceived.</p> <p>Teachers' comments were more carefully phrased, and mentioned that although interaction was enhanced by being able to hear each other using the telephone over internet technology, the connection was liable to fail frequently causing some frustration from both children and staff.</p> <p>"There is an element of collaboration; however the children can progress by just guessing. Perhaps the other aspect needed is some element that requires working together on a common activity."</p> <p>"Each set of children seem to have the same type of questions. The only issue is the amount of pre-learning of the language</p>

<p>the collaborations?</p> <p>Is collaboration best viewed as a peer-peer or a class-class or a group-group interaction?</p> <p>.</p>		<p>each has”</p> <p>Although the teachers agreed with the pupils about the enhancement of the activity with video, one of the teachers also saw the potential for possible embarrassment and inhibition when teachers saw each other.</p> <p>A group-to-group interaction allows support within the group and ensures no one feels that they have been put on the spot. Ideally 6-8 machines between 4-6 children in each group would be the way to manage a class.</p> <p>One of the teachers suggested that the way that questions and answers were conducted in a crossed way was difficult to understand for the children. It was also suggested that maybe this technique is too difficult for primary children.</p> <p>It was also suggested that at times children did not understand the aim of the exchange or lost interest.</p> <p>There were problems in the way the two classes detected the information. So consequently some of the questions were answered randomly.</p>
<p><b>Setting</b></p>	<p>The comments children made about the setting revolved especially around these suggestions:</p> <ul style="list-style-type: none"> <li>• do it on more than one computer</li> <li>• have a web cam</li> <li>• establish a regular time to talk to the children in Spain.</li> </ul>	<p>As with the children, teachers also made suggestions, for example:</p> <ul style="list-style-type: none"> <li>• include support materials for teachers and pupils</li> <li>• use either an interactive whiteboard or lots of machines</li> <li>• good quality sound: microphone to ensure quality of conversations, headphones.</li> </ul> <p>In order to sustain collaboration beyond the game it “could be extended to other familiar areas. Including a wider range of language... challenges where the children each have half the information... joint presentations... using the actual children. The children using the forms from the game but using themselves as subjects”.</p>



## **Problems/issues with the application**

The trials uncovered various usability, communication and language problems that would be recommended to be addressed if further work was going to be undertaken beyond the prototype version of this software. This detailed report is available in a separate document. The main issues and recommendations are summarised below.

## **Brief summary of main findings**

### **Language**

1. The vocabulary in the target language that children used during the activity was the vocabulary expected to carry out the game. The vocabulary and the constructs are appropriate to KS2, as the language practised is relevant to the child because it draws upon experiences familiar to them, and also because they can easily imagine themselves using it in conversations with other children. It was also important that children do not just produce items of vocabulary in isolation. They are asked to produce language that they can then use creatively in other contexts.

2. Children get practice in listening, reading and speaking.

### **Game**

The narrative scenario is right for the learners at this age.

The look and feel is attractive for the learners.

The kind of language/mental activities that the game offers:

- interpretation of what they see and hear with reference to their own experiences
- representation of elements of that when listening to children in TL
- development of memory skills.

### **Communication**

- The investment in time and energy to organise and conduct the trials was quite significant.
- Although both schools had an ISDN, the video link was not possible due to the firewall in the LEAs over which schools have no control.
- The schools in Spain did not have regular technical support, which this technology needs, so the trials were conducted successfully because of personal contacts. The school in Nottingham had some technical support and the teacher involved in the project is also experienced with working with technology.
- The project suffered from technical barriers from the beginning, this issue has overshadowed the rest of the research questions.
- Firewalls are at the centre of establishing video links, and that should be sorted out well before asking the schools to embark on a project like this.

## **SUMMARY OF RECOMMENDATIONS**

1. The most fundamental issue is to make sure that all the technical barriers have been sorted well ahead of establishing the link between the schools. If things do not go as planned it can be very de-motivating for children and also for the overworked committed teachers who invest extra time and effort in carrying out innovative activities. More specifically in projects that involve video linking or conferencing, as one of the teachers in the project pointed out: "most class teachers don't have that level of ICT competence and would have given up when confronted with problems we had. This would be a shame as the software has distinct possibilities and offers something fairly unique - actual interaction with peers in another country".
2. Currently there are a lot of schools-linking projects already established - try to use the application with a school you have already identified and ideally that you already have established a working relationship with.
3. Allow for a lot of preparation time prior to the video link, both with the partner school and the children in your class.
4. The teachers involved should be in touch well before the activity is carried out with the children, to arrange times and discuss any issues arising, mainly to clarify the purpose and the procedures to follow.
5. Pupils should also be well prepared in advance so that they will be able to carry out the activity without losing the intrinsic motivation that a game and the prospect of engaging in real communication with other children has when they do not see the objective of the activity.

## **PROJECT BENEFITS**

There are fantastic benefits in using the technology developed in this project at a time when schools all across Europe are embarking on school-linking projects. For example the Autonomous Community of Madrid has developed a very successful programme of School Twinning with primary schools in the East Midlands Region.

As discussed in the analysis, both children and teachers considered it fascinating and saw the benefits of learning a language and being able to use it 'for real'. It created a real motivation among children and staff to continue the communication and get to know each other better, and they intend to continue using the software beyond these trials.