From Parrots to Puppet Masters - an Online Role-playing Tool To Foster Language Acquisition

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A PROBLEM IN LANGUAGE EDUCATION

The need to educate a large and varied population in English as the *lingua franca* in SE Asia has given rise to a number of problems, which are in a general sense also faced in the teaching and learning of other types of knowledge and skills.

One of the most serious problems is the unhappy force-fed pedagogy in which many teachers and students find themselves trapped. The teaching and learning practices based on 'teaching to the exam', common in many Hong Kong public and private institutions, are becoming increasingly suspect, but because of the need for the face validity that norm-referenced standardized assessment promises, these practices continue. Internet technology, which could potentially resolve this situation, is instead often forced to serve the same outmoded and dehumanizing educational models. While this problem is most keenly felt at primary (!) and secondary levels, even tertiary education is not free of it.

One of the most serious shortcomings of these practices is that they habitually result in students merely learning how to parrot formulae. Students frequently do not learn how to apply to real world situations the formulae they are compelled to memorize at school. In the case of language learning – sometimes through no fault of the teachers, who are often themselves victims of the pressure to teach for short-term gains – this may consist of drilling 'set phrases', which are made to substitute for grammatical and communicative competence in the language (for details of the 'fossilization' in language production that arises from current educational practices, see Milton, 2001). The information that is passed on to students is often a legacy of several generations of pedagogy, and, in addition to becoming quickly outmoded, is often degraded in the process of transmission (e.g., the 'set phrases' taught at school may not be relevant to real world communication).

Regardless of how one accounts for problems in language education, there are clearly serious deficiencies in the quantity and quality of English courses (even in relatively prosperous regions such as Hong Kong). This is true whether the courses are based on brick (i.e., face-to-face) or 'click' (i.e., online) models.

ONE PROPOSAL FOR DEALING WITH THE PROBLEM

The author was commissioned by the College of Life Long Learning (CL3), HKUST, to produce online 'workplace English' courses for professionals, and 'bridging' courses for secondary school-leavers who have been out of school for a number of years and who wish to enroll in tertiary courses. Both groups are mainly Cantonese-speakers at a wide range of English proficiency levels, who require a broad array of receptive and productive English skills.

It was not immediately apparent how current multimedia technologies could be employed to develop and deliver high-level interactive online language learning content. Despite the Web's potential to provide courses on demand, most content delivery systems still offer an unsatisfactory range of activity types and learning options for dynamic language learning. It was determined that the overall design principals of a system for the creation and online delivery of language courses should at least aim at addressing some of the major logistic problems in education, by

- appealing to a wide range of learner proficiencies and interests;
- motivating low-proficiency students, who often suffer from low self-esteem, to engage in high-level interaction;
- providing quality, individualized instruction to a large number of varied learners 'on the fly';
- ensuring a coherent, planned and progressive curriculum, and the transmission of core information, while also providing opportunities for self-discovery, problem solving, collaboration, creativity and the pursuing of individual learning paths (in short, aiming at the type of quality assurance outlined by Alley and Jansak, 2001);
- freeing and enabling the teacher to act more often as a mentor, and less often as a pedagogue;
- allowing materials developers and instructors – who often have limited technical knowledge and resources – to create engaging and meaningful communicative, collaborative and problem solving activities;
- integrating intrinsic, criterion-referenced and performance-oriented formative assessment into the learning process, thereby minimizing the need for extrinsic, norm-referenced summative assessment;
- providing quicker and more reliable reporting to the instructor (and allowing for easier grading), and also more effective and quicker feedback to learners; and
- allowing assessment of the content by the students (e.g., through online surveys).

It was also of course important that the system allow for the specific pedagogical needs of language courses. This meant implementing opportunities for students, who may have little perceived need or chance to use the target language in their daily lives, to gain accuracy and fluency in all skill areas. This includes authentic listening and speaking activities (e.g., a mechanism for listening to and recording simulated telephone conversations for study and assessment), as well as writing and reading activities (e.g., vocabulary acquisition aided by an online lexical database, and access

to a range of online reference tools, such as dictionaries, encyclopedias and thesauruses).

While Internet technologies potentially allow for a highly interactive educational model (e.g., through retrieval of online data, as well as interaction among students and with the instructor), there is often a tension in the institutional need for high-throughput (often, in online delivery, this is couched in terms of 'scalability'). In the absence of reliable, affordable and easily implemented Artificial Intelligence systems for language acquisition by human beings (e.g., natural language parsing), this dilemma requires the careful preparation of objectively scored activities – ideally aimed at 'higher-order' outcomes (e.g., Haladyna, 1997), as well as the development of collaborative activities that make minimal demands on instructor input, monitoring and feedback. Equally important, the activities, content and technologies must fit the learners' needs and learning styles, which in this case are extremely varied.

Several currently available course delivery systems were evaluated, and while all permit information delivery and assessment, none applied the particular mechanisms for language learning suggested above. Also, most systems leave much to be desired in the ease with which content can be authored, the degree to which individual learners can be accommodated, and social interaction encouraged. Internet technologies continue to make available new expanded forms of communication that take time to be integrated into existing course delivery systems, and most of these systems do not allow easy incorporation of new technologies.

It was decided that database-driven Internet technologies have matured to the extent that it is feasible to develop an original, customizable Web-based delivery system tailored to specific needs, which can be used to create and deliver interactive online content and to manage online courses.

Other parameters set for this system were that it must allow courses to be undertaken through a series of sequenced activities and units, though with a high degree of flexibility in the sequencing (i.e., learners are generally expected to complete a 'unit' within a set period, but may elect a different sequence than that recommended). It must allow for branching so that more able learners (or learners with different academic or job-related needs) can pursue different learning paths and activities within the same course. It must, furthermore, allow the creation of both objective, automatically-graded as well as open-ended activities, which are common to most learning 'platforms' and which are useful, for example, in reading and listening comprehension, essay submission, etc. Less conventionally, it must allow sequenced access by learners (via 'Voice over Internet Protocol' – *VOIP* technologies) to asynchronous voice discussion Web boards. The remainder of this paper illustrates yet another, even less conventional activity type implemented in an online English course currently driven by this system, viz, a tool that learners can use to create and post role-plays on the Web.

ONLINE ROLE-PLAYS

Education is an admirable thing. But it is well to remember from time to time that nothing that is worth knowing can be taught. – Oscar Wilde

While not necessarily negating the role of the instructor, most academics accept that 'higher' levels of learning, such as 'critical thinking', are the preferred outcomes of the educational process. There is constant concern about whether universities are producing students capable of achieving the higher order learning outcomes listed in Bloom's taxonomy of educational objectives (i.e., recall → comprehension → application → analysis → synthesis → evaluation). The term often used by linguists to describe advanced communicative proficiency is 'pragmatic competence', which includes the ability to critically evaluate what is said or written and to respond in a culturally appropriate manner (the 'language culture' may be defined by international social, academic or professional norms).

One way such outcomes are being encouraged is through role-playing activities, whether face-to-face or at a distance. These are being used in almost every discipline, including such unlikely subjects as Accounting (e.g., Atrill et al, 1994). Many online projects have emerged that use 'virtual worlds' and personally assigned avatars for educational role-playing (see, for example, the MUD interface at http://imaginaryrealities.imaginary.com:8080/index.shtml). The benefits of role-playing for generalized educational settings are detailed in Jones (1985), and specifically for language learning in, e.g., Ladousse (1987); Crookall and Oxford (1990); and Bambrough (1994).

The course delivery system described above incorporates a role-playing activity that makes it possible for students easily to manipulate animated characters on screen, assign them gestures and body language, develop narrative lines and write dialogue that is synthesized and 'spoken' by the characters, whose mouths move synchronously with the dialogue. This 'scripting tool' (see Figure 1) encourages language learners to use idiomatic grammar, appropriate vocabulary, sentence stress etc. Students are supplied copious amounts of authentic, comprehensible input for this activity. They can listen while the text they wrote is read back to them, and thus hear standard pronunciation (they can also select any material on the site for synthesis). The learners recognize that the synthesized stress, rhythm and intonation are not entirely human, but they report finding the relatively high accuracy in pronunciation useful. This activity has the benefit of allowing students to compose written text while practicing spoken communication (they can also directly practice spoken English on the voice discussion boards).

Scarcella and Crookall (1990) review research to show how simulation facilitates second language acquisition by giving students the opportunity to try out new language in a safe environment. Three learning theories which they discuss claim that learners acquire language when:

- they are exposed to large quantities of comprehensible input through being engaged in genuine communication as part of the roles assigned to characters,
- they are actively involved in worthwhile, absorbing interaction, which tends to make students forget they are learning a new language, and
- they experience positive feelings and attitudes.

These studies claim that the simulation of 'real-life' problems helps students develop their critical thinking and problem-solving skills. Role-playing would certainly appear to be useful to the extent to which we view language as a vehicle for the realization of interpersonal relations and social transactions.
The role-playing activity in this system allows students to practice and demonstrate 'higher-order' linguistic skills such as the pragmatic devices necessary for developing a narration, resolving a conflict, conducting a negotiation, etc., while also being a useful vehicle for practice in basic grammar, vocabulary and conversational language devices. Students who are normally shy to speak spontaneously in a classroom because of concern about their imperfect English say they appreciate the opportunity to practice using language in this context. The activity gives students the opportunity to express cultural values and to be creative, while also developing practical scenarios for business and social communication. Another serendipitous benefit of the activity is that it appears to give students who have limited technology fluency more confidence in the use of computer applications. Incidentally, it also appears less prone to plagiarism: students seem less inclined to copy holophrastically from other sources when they are scripting for the digital puppets.

The activity was designed to make it possible for students to work collaboratively at a distance, and while role-playing may be an ideal participatory exercise in active learning, this ideal may not be fully realizable for students who find it difficult to schedule online meetings in order to co-design plays. Most students who have taken the course to this point are professionals looking to improve their English, and they have chosen to use this activity to design individually written, rather than collaboratively written role-plays. The students nevertheless still socialize through the public 'production' of their plays and through classmates' feedback, as well as in the virtual relationships between the animated characters. Several of the higher-order outcomes that are claimed for team-based role-playing activities are also possible from individual role-plays, such as increased confidence in language production, heightened discriminatory skills, and the sheer fun that comes form the act of personal expression and creation. Some collaborative elements are retained even when the students do not work together: in addition to commenting on and grading each others' plays (by assigning 'stars'), many students have spontaneously carried on narrative lines from other students' plays.

The students are given considerable language input and practice before each role-play activity (which are assigned once in each unit, or sometimes in alternative units). A thematic context is developed in each unit, and relevant grammar and lexis is provided through a variety of interesting and interactive activities – including via (licensed) popular songs streamed from our server. This language input is very

different than that normally made available in the classroom, and is based on extensive research into the language learning difficulties of the students. The students are also encouraged to use a 'concordancing tool' (see Johns and King, 1991) to look up authentic usage in relevant corpora of online texts. The students' instructors give encouraging and detailed feedback after each role-play, which the students can re-write. The purpose and structure of the role-plays is made clear to the students, otherwise the benefits of such communicative methods may not be perceived by those students who are used to conventional lecture and essay assignment methods (see Li, 1999).

Figures 1, 2 and 3 illustrate how a play is written, how it is accessed by peers, and what it looks like when enacted in the 'theater'.

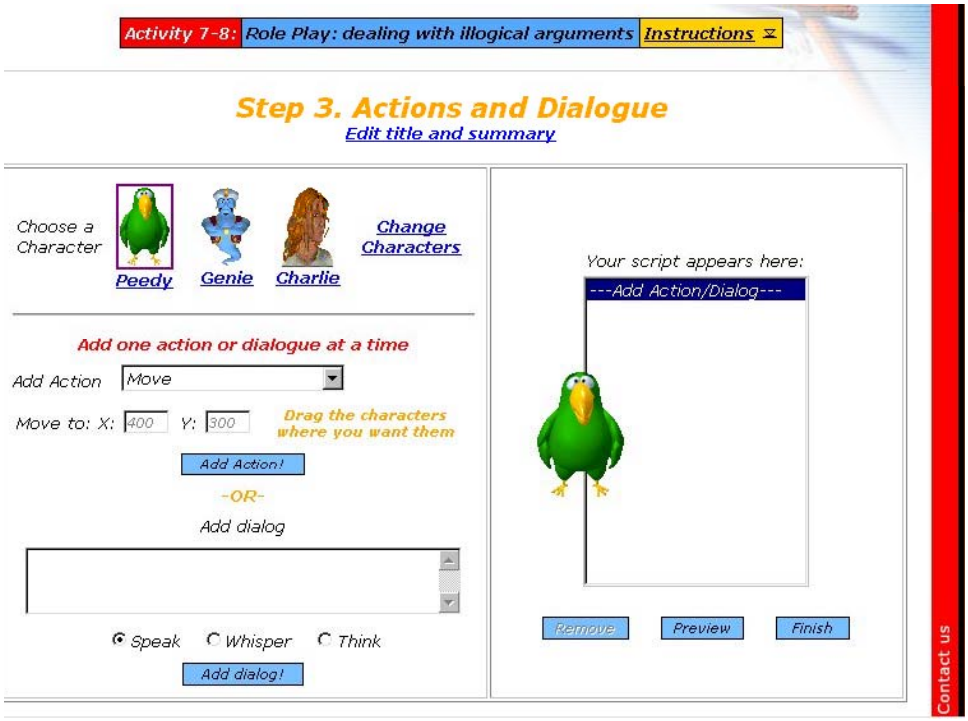

Figure 1: A web form to allow the creation and publishing of plays on the Web.

Figure 2: A list of role-plays written by students for a unit on an online English course. The plays are rated (1-5 stars) and commented on by fellow students and the instructor.

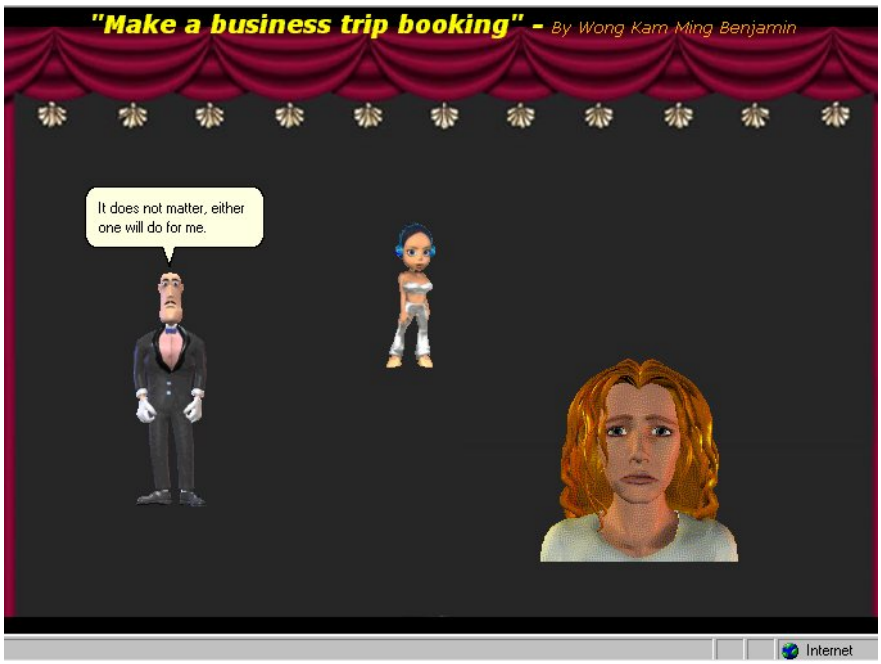

Figure 3: A role-play using 'MS agents' and employing synthesized speech. Students assign behaviors and dialogue to the animations according to criteria such as theme, vocabulary, and grammar.

CONCLUSION

The system outlined in this paper allows language teachers and materials writers to take advantage of recent advances in Internet technology (e.g., multimedia, text retrieval, and database support) to deliver instruction and encourage participatory learning for 'higher-order' outcomes. The online English course developed on this system seeks to address the cognitive and affective language-learning needs of particular learners. One modality the system makes possible is the pairing of computer animation and speech technology in order, for example, to encourage language learners to experiment with manipulating the second language in social or business contexts, according to their own particular goals. The role-playing exercise described in this paper is the most popular activity in the online English course: 98% of students found it 'very interesting'.

Our overriding and continuing goal in the development of this system and the courses it supports is to pursue responsible innovation driven by our students' needs.

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END NOTE

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