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New Tools for English Language Teaching

1. Introduction

The Sino-UK eLearning Programme (eChina~UK) is a collaborative e-learning initiative, funded in the UK by the Higher Education Funding Council for England (HEFCE) and supported by the Chinese Ministry of Education (MoE). The course materials created at the University of Nottingham belong to two of the four development projects. These centred around the internationalisation of courses and course materials in English-language learning for those individuals teaching English as a foreign language. A fifth project looked at learning in China. The development of materials has involved long-distance collaboration with Chinese partners, in Nottingham's case with partners in Beijing Normal University (BNU), Beijing Foreign Studies University (BFSU) and with an outsource contractor (Huaxia Dadi, also in Beijing). This material was developed in such a way as to cater for the expansion of users from small numbers (as prevalent in the UK) to large class sizes, as experienced in China: already, there are 2.3 million distance learners registered with Chinese Universities (Kang & Song, in Press). The creation of material by all members of the eChina~UK programme has been led by the pedagogy, with the technical development tools being manipulated to fit the needs of the teachers and writers, rather than the more traditional approach of using available tools to show how a course could be developed, and then the material developers having to fit to a strict template. Ready-made tools were adopted for some aspects of the courseware development, e.g. the VLE, Moodle, in the case of the University of Nottingham. Other aspects required new construction tools, e.g. the various formats of the Flash / XML video tool ('Interactive Movie Player, or 'IMP') utilised in the University of Nottingham material, which enabled rapid creation of video items without the need to understand Flash, but did require a basic understanding of html coding.

One remit was that the course material was to be learner-orientated, not tutor-led, while the material produced had to reflect the cultural environments of both the UK and Chinese learning communities. One of a number of problems with working in China was the awareness that the relevant institutes could not afford the expensive tools that were available in order to create a worthwhile learning experience: this isn't, of course, a problem restricted to China, as the problem is a global one, with universities pulling in their money belts to extract the most out of products with as minimal a cost as is possible. We just cannot afford the expensive VLEs and software products AND have our own development teams as well (which one needs even to use these software products). It also became apparent that some of the pedagogic tools we required just did not exist. Both these factors led to the development of a suite of 'free' tools, either as freeware materials or as open source. It is hoped that this shift in emphasis would therefore enable a more student-friendly approach to online tools.

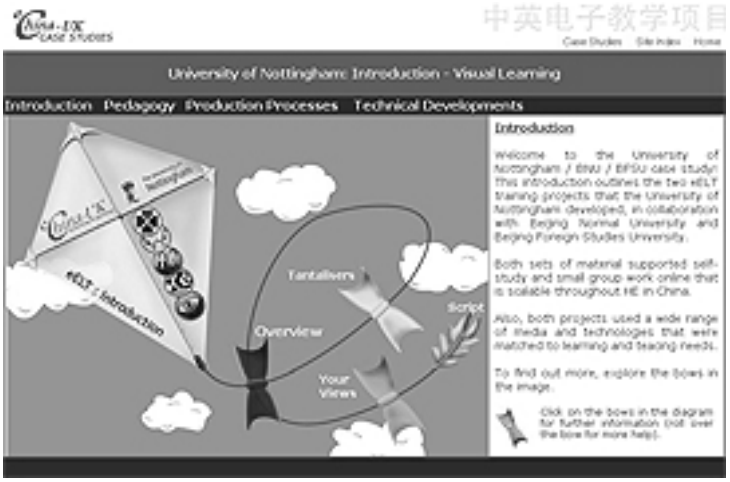
2. Development stages

The University of Nottingham's involvement in the eChina~UK programme has evolved through three stages. Initially (2003-2005), there were two development projects alongside an overarching 'research' project. The development projects involved the creation of example pieces of courseware material for:

- a BA ('secondary level') in eELT, in collaboration with BNU - in this case, the team at the University of Nottingham developed all the courseware, chose the VLE to be used and had overall control of the developments. Courses were created covering 'The Chinese New Curriculum' and 'Teaching Grammar', with scripts created for 'Teaching Pronunciation' and 'Teaching Vocabulary'. It was during this project that we realised that we needed a course-specific 'archive and submission program' for the e-learners (this became known as the '**Workspace'**), while the **Audio Recorder** (AR) has its origins, in a more complicated form, in the 'Teaching Pronunciation' unit.
- an MA ('tertiary level') in eELT, where the collaboration was much more equal, with the BFSU developers, Beiwai Online, being the hands-on staff to develop the University of Nottingham's rapid prototypes into something functioning, aesthetically pleasing and graphically engaging.

Having created all these materials, members of the eChina~UK programme felt that it was important to disseminate not just our findings from the collaboration, but to also provide a resource that would act as a repository of information on how the collaboration developed (what papers were produced, etc.). Stage 2 (2005 - 2006, and continuing) therefore involved the creation of the eChina~UK Programme Disseminator (URL: http://www.echinauk.org/). This site allows us to share our experiences on this international, intercultural collaboration with all those interested. It attempts to make transparent the challenges and successes involved and provides examples (or 'case studies') of particular items in the courseware. This site provides access to the open-source tools described in this paper, not only in terms of providing greater detail, but also in terms of downloading for your own use. Disseminator 2 is now under discussion and will bring in new material from the projects, as well as new tools.

Figure 1. An example page from the eChina~UK Programme (University of Nottingham) case studies.
URL for the eChina~UK disseminator: http://www.echinauk.org/



Stage 3 (2006 - 2007) has seen the creation of a course site specifically aimed at e-tutors, providing advice on various aspects of working online with students. Currently, this site (known as the 'eEducator') focuses on English language teacher education, but it is planned to incorporate other areas, such as science, history, etc. One of the major innovations - to be made available through the disseminator 2 site - is the inclusion of a **Learning Activity Analysis Tool** (or 'LAAT'), a set of web pages that allows 'a tutor to review the learning activity system and thus mediate the designed learning experience of the online learners' (Joyes & Wang, in press). The eEducator has also encouraged the development of another open source piece of software, the **Video-Interactive Player** ('VIP'), which encourages the development of discussion groups around a video set up by the tutor or one of the students.

3. The University of Nottingham's contribution to the eChina~UK tool set: 1. Conceptualisation and development.

Why were these tools created (and at which point?)

Early in the process of developing the material for the two projects, we realised that a major contribution which we could make was in the development of a 'personalised space', known ultimately as the 'Workspace'. Originally described as an 'e-portfolio', we soon realised that the analogy was incorrect, for what we were developing was a tool that would be used within a course, and would enable the student to keep their material online all in one place, course-by-course, module-by-module. It is thus different from the 'e-portfolio' model, which is a lifetime achievement archive, rather than something that can be used for a specific learning activity with a course, and which is thus not as useful for the immediate needs of a student. The 'Workspace' model is something that is still not available elsewhere, although some VLE developers are recognising the need, if not the specific functionality of such a course-specific 'one-stop-shop'. We also realised that, for it to function properly, the Workspace needed to include specific, pedagogically-labelled features that facilitated the student's online learning experience, such as a reflective journal and a notebook.

The second 'innovation' was the 'Audio Recorder' (AR). Although sound-recorders are generally available with Windows operating systems, these usually create wav files, not the higher quality MP3 files, which are not only smaller than wavs, but also better able to pick up intonation, something important in language practice and in the recognition of tones and dialects. We also realised that such a tool would be useful not just for language learning, but also in other fields such as language and dialect evolution. We felt that we needed an MP3-recorder that could be integrated with the Workspace as well as work in standalone mode, enabling the student to practise their own language exploration, as well as allowing them to upload the material for assessment (be it peer- or tutor-) and discussion. The AR uses a Flash interface, which is suitable for 98% of all PCs and is also available to Mac users (see 'Flash 8', Adobe, 2006). A number of these features are different from the characteristics of other sound-recorders, particularly as the 'save' facility for the Workspace (for example) is built into the system, facilitating the pedagogic use of the tools and ease of transfer of files to an online facility. Because of the development process, the AR is most compatible with Internet Explorer, but we are investigating new approaches to develop a cross-browser version, which will also include capturing video from webcam.

Lastly, we were keen to have a way of exploring videos, whether they be through personal analysis, through comments by the tutors or through general discussions that highlight (and pinpoint) items in the video for specific discussion. Although such a tool *is* available, it is not freeware and is costly to purchase and upkeep, while, practically, the software is difficult to use and lacks some of the issues that we wanted to tackle. This led to the design of the VIP.

Technical aspects of the tools development

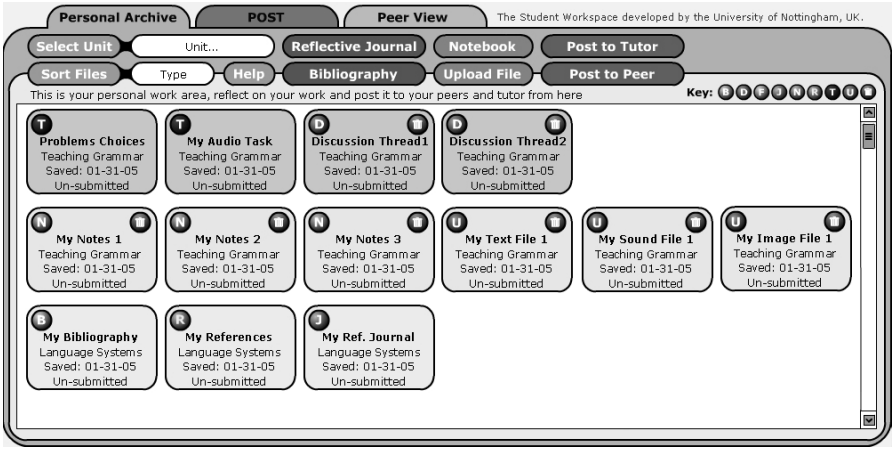
The user interface was developed in Flash (authoring versions 7 for the Workspace and AR, and 8 for the VIP, all readable using player 9), with PHP scripting allowing the files to be saved to a mySQL database (all these details are available online at the eChina~UK Programme website). The Workspace is also integrated into Moodle, thus providing access to a variety of functionalities which that VLE can offer alongside the Workspace's own features.

4. University of Nottingham's contribution to the eChina~UK tool set: 2. How do these tools help students in a way that is different from previous tools?

1. Workspace

The Workspace has been developed with the needs of both undergraduate and Masters degree level students in mind. Reflective and critical writing, bibliographic referencing and peer review are common components of HE courses. The Workspace is based on the premise that if online courses expect learners to carry out these activities, then support tools should be made accessible to the learners as part of the online learning environment, rather than learners having to provide these themselves (as is the general case currently). This tool fully exploits the potential to store and share information on the Web to create a personalised learning experience – a key pedagogic need identified within the project.

Figure 2. An example view of the Workspace, as seen during use by a student. Note the various function buttons and pedagogic file types. Buttons allow access to – B (Bibliography), D (Discussion Thread), F (Feedback from Tutor / Peer), R (Reflective Journal), N (Notebook), Rf (Reference List, as submitted), T (Task Item), U (Uploaded File), and the waste bin.



The tool's additional features include the inclusion of a free, basic bibliographic referencing system and the integration of an audio-recorder. This tool functions primarily as a personal archive of work by automatically storing online interactions, although the function of saving to the Workspace will need implementation by the courseware developer (through use of an API and with guidance in the help files). It also supports online sharing of work with peers and tutors.

This has now widely been described as 'a one-stop-shop' for the student whilst on their course. Like most of our tools, the Workspace has been developed from the pedagogic, rather than technological, perspective. It includes technological 'innovations' such as the separation of the reflective journal from the notebook, the ability to look at files in the same manner as a windows folder (unusual in VLEs) and the separation of those files into the various 'units' of a course / module. Additionally, it provides one site in which the student can view their discussions and other work, get reviews from their peers and feedback from their tutors. Furthermore, as a default, it rests the submission of electronic files from the tutor / administrator to the student, enabling them to choose which files they want to have assessed (possibly with guidance from the tutor). This tool is available as a module for use in the open source VLE Moodle. The Workspace possesses three views, depending upon who is entering it:-

1. A 'student' view (see Figure 2), which can be viewed through
   the 'Archive' (a private area for the student that holds all files available to the him / her in each unit),
   the 'POST' (Portfolio Of Submitted Tasks: this shows the files submitted to either the tutor or peers) or
   the 'Peer View' (files that the student's peers have sent for reviewing)
2. A 'tutor' view, allowing the tutor to see the tasks and files submitted by each student.
   Note: the tutor can *only* see those files / tasks actively submitted by the student – reminders can be sent out if something the tutor has requested be submitted hasn't been
3. An 'administrator' view, allowing an administrator to turn on / off selected functionality in order to tailor the Workspace for particular learner / tutor needs.

2. Audio Recorder

The Audio Recorder is a simple sound-recorder, but creates MP3 files, instead of the more normal wav files. This is the first free tool in the area that saves the MP3 files to a web server. Initially, this tool was developed to support online foreign language trainee teachers to practise pronunciation and share their best recordings with their peers and their online tutor. However, it soon became clear that a means of sharing audio files would enhance the learning process in general. For example, audio feedback on assignments could be given to learners by their tutors in order to support formative and summative feedback. Currently, there are two versions of the Audio Recorder, or, rather, two states – a standalone version that saves files in the way typical of other sound recorders, and another, more specialised version that is integrated into the Workspace for direct use in the student's online work (see 'Workspace', above). Therefore, the Audio Recorder as it now exists can be used by the student to test their own language skills, as well as share their sound-files with other students and their tutor either through discussion or through review / assessment.

Figure 3. The Audio Recorder

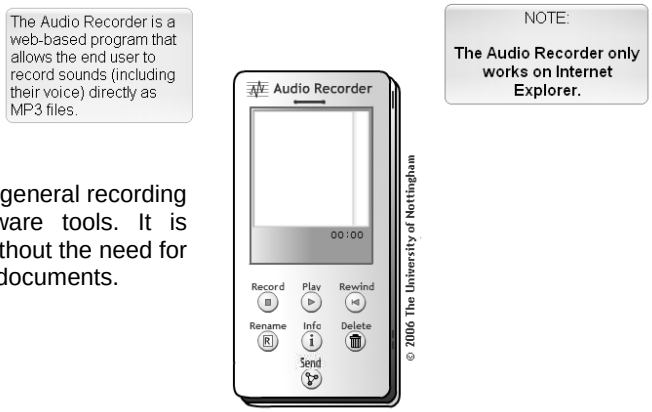


Figure 3a. Setup. The buttons have been designed on general recording principles available in other sound-recording software tools. It is therefore hoped that the tool is intuitive in its format, without the need for verbose instructions, and thus the need for translation documents.

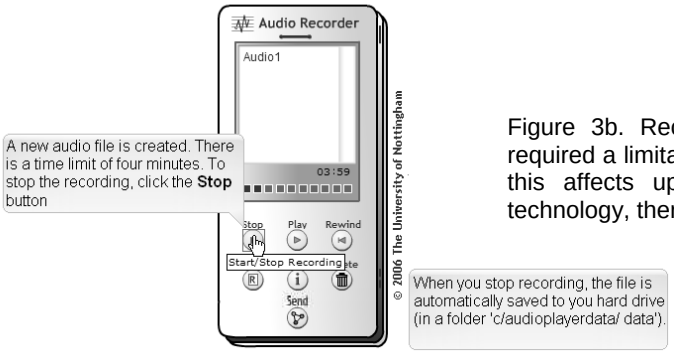


Figure 3b. Recording. The ultimate file size of an MP3 has required a limitation in the amount of time allowed in recording, as this affects uploading and storage. As always with current technology, there are compromises to make!

Figure 3c. Playback. Just follow the normal rules! The Audio Recorder plays only MP3s.

3. Video-Interactive Player

Current plans revolve around the development of an open-source 'Video-Interactive Player' that will incorporate critical analysis of videos with associated comments attached by the tutors and discussions by students and tutor(s) pinpointing episodes within the video. Although commercial 'video-with discussion' formats are available, our version would differ in that it would -

- allow the generation of discussions through an associated forum which also allows direct highlighting of specific 'episodes' in the video by the students, so that by clicking a link in the 'message' one can go directly to the episode being analysed;
- allow the addition of 'comments' and further resources through a user who is given group administration rights, be they a tutor or designated student, rather than administrative personnel (as is currently the case with such products as Lesson Lab and ICE);
- allow a discussion revolving around a particular topic, but utilising a search of different videos, and thus allowing the use of multiple-video discussions based on a theme;
- be available as a module for use in the open source VLE Moodle.

The idea of the tool came from the development of a project pilot, where a VCD of an English class in China combined with an online discussion was used to support reflection on classroom practice. This was enthusiastically received, but it became clear that an online approach would not only be more scalable, but would

also allow the making of links direct to the video by participants in a discussion. It is hoped that a first stage form of this software will be made available in 2007.

Figure 4. Discussion Group View (conceptualisation)

Summary

These tools have been developed as a consequence of a number of factors involved with the programme. Firstly, Hefce (the Higher Education Funding Council of England) expressly wanted innovative developments within the projects. They provided resources to enable this, including additional funding when the need arose. Secondly, the team that was put together at Nottingham had the vision and skills that enabled them to identify and create from scratch technological solutions to address particular pedagogic issues not currently considered among most learning communities - professional and academic alike: this came about because concept and development followed a pedagogic route, rather than one based on technological capabilities. Finally, the team wanted to produce open source tools that would be of benefit to the teaching community, rather than be tied up in the commercial exploitation of the tools. This is something that HEFCE fully endorse, and was possibly one reason why further funding was achieved. In conclusion, we now have -or are developing- a suite of non-commercial, open source tools that can be used by the academic learning community as a whole. While these tools are not supported by a development team, there is a disseminator support forum, where users (including the development team) can voice opinions and suggestions. At least one of these tools (the workspace) will be available for use on Moodle, while all the tools so far available are available as standalones, or as tools incorporated into the Workspace: it is hoped that the tools will be widely used. Readers of this paper are invited to visit the eChina~UK website to explore how the tools were developed, to download the tools, and to contribute to discussions on how these tools are currently being used in the community as well as to suggest further developments (eChina~UK disseminator URL: http://www.echinauk.org/).

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