

The Teacher as Learner: Developing Autonomy in an Interactive Learning Environment

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Introduction

When considering the content of this paper, I was drawn to recollect some of the issues I was facing as a materials developer in 1994 and which I described in Sinclair (1996a). At that time, I was writing a series of coursebooks for adult learners of English which aimed to break new ground in integrating the development of learner autonomy with language teaching (Sinclair 1995; Sinclair 1996b-f; Sinclair and Prowse 1996a-f). As discussed in Sinclair (1996a), challenges included how to make the 'learning to learn' sufficiently explicit without overwhelming the learner or detracting from the main business of learning the language, the wording of rubrics and instructions, and so on. I wrestled with the issues that writers face when publishers aim their materials at an audience which has been defined at only a very general level, and whose needs, therefore, have only been considered in the broadest sense. One of the greatest challenges, of course, was that of introducing the concepts of autonomy and 'learning to learn' to learners who may have had little experience of reflecting on such issues or of taking control of their own learning. An equally great, if not greater challenge, was that of informing and supporting the teachers who might not focus on developing autonomy in their teaching. To this end, detailed teachers' books explaining the rationales and theoretical perspectives for each learner

training activity, practical guidelines for implementing the activities, as well as alternative approaches, were written to accompany the materials. Sadly, despite enthusiastic reviews, the coursebooks were only moderately successful in terms of sales, and I never became an ELT millionaire. I received much positive feedback from teachers who were keen to introduce greater learner control into their teaching, but the real failure was with those teachers who were unfamiliar with the concept, or could not conceive of how such an idea could be applied to their own teaching and teaching contexts. (And I learnt that teachers almost never read teachers' books!).

Currently, I find myself once again, as part of a larger team of ELT specialists, e-learning designers and IT specialists from both the UK and China, wrestling with materials design to promote autonomy, but, instead of being concerned with how to present and integrate learner training tasks into print materials, I am working on the design of e-training materials for teachers of English in China. Thus, when embarking on the projects described in this chapter, I was mindful of the lessons learnt some years earlier. It was clear that no development could be undertaken without an extensive needs analysis and a clear understanding of how the Chinese teachers in question viewed autonomy.

In this chapter, then, I consider how teachers of English in China may be encouraged to develop greater autonomy, both as teachers and learners, through e-learning in an interactive learning environment. Using data from an extensive needs analysis research for two collaborative e-learning projects involving universities in China and the UK, I will explore the currently held perceptions of Chinese teachers of English concerning learner and teacher autonomy. I will then go on to describe the influences of the teachers' voices and the pedagogical principles informing the project work to design exemplar e-teacher training materials, and highlight some of the design features for supporting and developing autonomy.

The 'e-China' Projects

In September 2003 the University of Nottingham (UoN) started work on two Sino-UK projects, known as 'e-China', funded by the Higher Education Funding Council of England (HEFCE) and the Chinese Ministry of Education. The principal aim of the projects was to support the collaborative development of e-teacher training materials. These materials were to be exemplars of 'cutting edge' materials, rather than the development of whole courses. Significantly, the materials were to be pedagogy-led, rather than technology-led, and this has brought about the development of a number of innovative e-learning tools (freely available from <http://echinuk.org/tools/tools.php>) and extensions to the freeware Moodle Platform. (Details of the projects can be found at <http://echinuk.org/>.)

In the first project, UoN collaborated with Beijing Normal University (BNU) to provide exemplars of e-training materials for middle school teachers of English in China who had followed a three-year training programme, but did not possess a BA. The exemplar materials are intended to become part of a top-up BA course that will be accessed by middle school teachers (who teach students aged 12–18 years) throughout China under the auspices of local Study Centres. Prototype materials were piloted in November 2004. In the second project, concurrent with the first, UoN worked with Beijing Foreign Studies University (BFSU) and Beiwai Online (the university's e-learning department) to produce exemplar materials at postgraduate diploma/MA level for teachers of English in Chinese tertiary education.

The principal aims of both projects were to enable teachers to develop:

- greater knowledge, understanding and experience of alternative ways of organising English teaching and learning, particularly with regard to learner-centred methodologies and the use of new technologies;
- their own capacity for independent learning and self-directed professional development;
- greater confidence and independence as teachers.

Thus, the development of both teacher and learner autonomy through a learner-centred methodology, delivered via e-learning, constitutes a major goal of the projects. Before going on to describe some of the design features of the materials, I will explore the findings of the needs analysis.

Findings from the needs analysis

Research findings: learner and teacher autonomy in China

A needs analysis was required to explore the “target situation demands, wants, lacks and learning needs” (Hutchinson and Waters 1987) of the potential course participants. In addition, we aimed to uncover teachers’ beliefs about teaching and language learning, the use of ICT, attitudes towards teacher and learner autonomy, their current professional roles and the constraints of their learning and teaching contexts. Our needs analysis made use of a variety of instruments: questionnaires and semi-structured interviews and focus groups. Subjects were drawn from a pool of potential course participants from tertiary institutes and middle schools throughout China. Additional data

were provided by a survey of distance learning in China conducted by project partners at BFSU (e.g., Wang 2004).

The findings in this chapter relate principally to a set of in-depth interviews with 11 Chinese tertiary teachers of English, 15 middle school teachers of English, and five Chinese teacher trainers (some of whom were interviewed three times). All of the interviews, conducted in English by members of the UK project team, were audio- and/or video-recorded, and permission was granted by the interviewees to include relevant parts of the transcripts and recordings in the materials to be developed, as well as to use the findings for research dissemination. The transcripts were analysed and themes categorised using NVIVO¹.

The in-depth interviews, as well as other information (documentary evidence, teaching observations etc.) gathered from visits to Beijing, provided an interesting insight into current beliefs about and attitudes towards learner and teacher autonomy in the target population of potential course participants. To a large extent, it appears that learner autonomy is strongly linked with the enthusiasm for and growth in new technologies for learning in China. This point was further supported by Professor Gu Yue Guo, director of the Beiwai Institute of Online Learning at BFSU, in a talk at an e-tutor training event in China in 2005, which was observed by the UoN project team:

Students are getting more independent because there are more resources for learning — not just the teacher. (Gu, 2005, Beiwai Tutor Training Conference, Beijing).

This growth in interest in and use of new technologies in learning in China can be seen, then, to have contributed to both the development of and demand for greater learner independence.

Attitudes of Chinese teachers of English towards learner autonomy

The research undertaken by the academic team showed that both tertiary and middle school teachers in China perceived a need for autonomy in their own learners.

I: Do you see teacher and learner autonomy as a good thing?

T: Surely it's an important thing because learning cannot be taught all the time in the classroom. So, that's limited time and what you can have is just four years of college/university studies in China and the rest of the time you have to learn yourself. So, being a good autonomous learner will contribute to your own development, for example, to your own career and to the whole being. So, that's good. (University Teacher 3, Beijing)

They were concerned about the need for life-long learning and felt that they had a role to play in its development:

First of all, I think I teach, but I can only give them some. Otherwise, they should be in charge of their own learning. They should be responsible for their own learning, so, first of all, the teacher should make their students know how to be a good learner. (Middle School Teacher 1, Beijing)

At the same time, the teachers we interviewed generally felt that their students were not very independent, blaming their previous education experience for this:

They would like to be more...to act like an audience, to listen to you more, and they want to receive knowledge, because this is the way they have been working — ever since they came to school, like, starting from primary school, secondary school and to university. They are accustomed to that. They want to be more receptive, to receive knowledge rather than to be involved themselves. (University Teacher 1, Shanghai)

In general, we found a broadly pragmatic view of learner autonomy which seems to relate strongly to independent learning with new technologies. Support for autonomy relates mainly to providing opportunities for students to practise limited self-direction, particularly with the new technology. We found little evidence of explicit learner training and reflection on learning processes. Study skills/strategies are mentioned, but, in practice, such strategies seem to be mainly related to helping the learners learn with the new technology. There is talk of individual differences (IDs) in learners, but with school teachers teaching classes of between 40–70 pupils, it is difficult to see how learner IDs would be one of a typical teacher's daily concerns.

Surveys carried out by our academic partners at BFSU into students' and tutors' experiences of online learning provided us with further useful data. One theme from the teacher trainers related to the students' sense of loss and bewilderment when faced with learning without teacher or classroom support, and the need for adequate support systems to make up for this. According to Wang (2004), in the period from 1999 to 2004, 68 Higher Education Institutions in China were approved by the Ministry of Education to carry out the

piloting of computer-based distance education. By the end of 2002, 140 programmes in 10 disciplines had a total enrolment of 1,373,000 students. A national survey on tertiary-level web-based English education in China was conducted in early 2004 by Wang to investigate the systems of learner support and tutor support. Data were collected from institutional decision makers, tutors, and learners from eight participating institutions which had met the criterion of having run web-based distance education for over one year.

Wang's findings showed that 91.4% of the tutors perceived the students' greatest problem as "lacking qualities for autonomous learners", and 88.6% of the tutors agreed that the students lacked "English language learning strategies". The learners felt that their "heavy learning load" was their biggest obstacle to learning successfully (54.6%), but in second and third place, respectively, came "lacking autonomous learning strategies" (34.7%) and "inability of using resources effectively" (34.3%). In addition, Wang discovered that 67% of the learners preferred to participate in face-to-face tutorials, and 26% preferred to listen to or watch live lectures. Finally, her research showed that technical support was not viewed by the students as very important (presumably, they felt they were familiar enough with the new technologies). This important research provided the project team with useful insights.

Views of English teachers in China on teacher autonomy

In terms of teacher autonomy, we came across differing views from interviewees, i.e., that teacher autonomy is related to professional development, or that it is related to

freedom to act on one's own initiative in teaching. In terms of the former, it seems that teachers expect this to be more the responsibility of their superiors than of themselves. We also discovered that the latter form of teacher autonomy is not at all common, mainly because teachers are generally required to adhere to syllabus and teaching materials, and to teach towards examinations:

I can't choose learning materials. I can't choose the way of testing. I can't choose how many hours I can teach students writing or spoken...all those things are designed by the leader of our group. She or he will design a syllabus, the timetable. We will teach students according to that. (University Teacher 2, Harbin)

Some teachers resort to creative means to get around the constraints imposed on them:

Everything is just there so you have to follow, but the only freedom you can get is just in your class. Maybe you can try a different method...but inspectors and the leaders and supervisors in our school, and the headmasters, they will sit in and then after class you have to go to them and ask for advice. You know, in my school, none of the leaders are English majors — they know nothing about English, so they just ask you to follow the style of other subjects. So, I think sometimes it's funny. Also they check our lesson plan from time to time, so I've got two sets of lesson plans — one for them and one for myself. (Middle School Teacher 1, Beijing)

Generally, there was support for the concept of 'teacher autonomy' and its importance with regard to developing learner autonomy:

I: That's the learner side — what about teacher autonomy?

T: It's closely linked to student autonomy, so, if you are an autonomous teacher, you will influence your students. That's the obvious fact. And also teacher autonomy will contribute to the development of yourself. For that's a good thing and these two autonomies combined will contribute to the whole education.

(University Teacher 3, Beijing)

In practice, however, we uncovered a great deal of frustration, both from university and middle school teachers, about the constraints to their autonomy that they faced. The greatest of these seemed to be the examination-oriented syllabus and lack of time for non-examination-related activities in class:

I: What is your feeling about the constraints that operate on you?

T: It frustrates me, I think...because I have to teach so many classes and different types of classes. So, I could not be very concentrated on designing specific...the time is very limited. And the resources are very limited and you must finish the things you are supposed to do...but at the same time, they [students] must pass the exam. They must get a high score. So students really care about whether they get 90+, so that's something you must consider. If you ask a student to do a lot of things outside of the textbook, you have worries the students won't keep doing this all the time because they think you are ignoring the textbook. We have to learn this textbook. We have to be familiar with it. So,

they are distracted. So, should they trust you or should they trust the textbook?

(University Teacher 4, Beijing)

To summarise, from our needs analysis we found that the teaching contexts of the potential participants shared the following characteristics:

- they provide relative lack of freedom for teachers as professionals, but the teachers have a desire to be more flexible and innovative, and to use more learner-centred methodologies;
- there is a dominating culture of examination-oriented teaching and goals;
- the students are unused to taking responsibility for their learning and are mostly instrumentally motivated by the need to pass examinations;
- the classes tend to be rather large (40–70 students), so student IDs go unrecognised;
- amongst the teachers, there is a relative lack of experience of using new technologies for learning and teaching, but a desire to do so;
- the teachers perceive a need for greater learner and teacher autonomy;
- the teachers are not familiar with ways of promoting greater autonomy in their learners;
- the teachers feel disempowered to some extent as professionals in their contexts: they are generally able to exert control over their teaching only with regard to methodology and, to some extent, by introducing supplementary materials once the syllabus has been completed.

In addition to the above-mentioned constraints, the project team needed to take account of the fact that the new materials we were to develop would contribute to university-awarded

degrees, and so university regulations and quality control procedures had to be adhered to in terms of course design, assessment and evaluation. So, in developing the new materials, the project team had to consider the two following questions:

- Given the desire by our Chinese partners to reform teacher education, how could we develop materials that would take account of the participants' degrees of teacher autonomy?
- Given the constraints imposed by our universities' quality assurance procedures and regulations for course design and implementation, how could we devise materials which would achieve an appropriate balance between directive intervention and the promotion of autonomy?

Approach to design

When working on e-learning materials, it is necessary for the initial conceptualisation and design to be carried out by a team consisting not only of the subject specialists (applied linguists, in this case), but also technicians, e-learning designers, Flash designers, and so on. Before we could make any decisions concerning how the materials would work or look, it was necessary to find out whether our ideas were workable in terms of the functionality of the applications and technical platforms being used. Our pedagogical ideas would, in turn, be informed by our more technically-minded colleagues, and so we found that a team approach to design, using different types of expertise was essential. In addition, the materials for the BFSU project included modules designed to enable the

participants to explore themselves as people, as learners and teachers, and this area of content was provided by colleagues from the Centre for the Study of Human Relations. Thus, our team consisted of TESOL experts from the UK² and China³, Human Relations experts⁴, technical experts⁵ and media designers⁶.

Theoretical concepts

Such a team approach to design requires a good deal of time for discussion, establishing norms and agreeing action. In particular, it was vital that every member of the project, both in China and the UK, had a collective understanding and acceptance of underlying theoretical and pedagogical concepts, including those relating to teacher and learner autonomy. In addition to the findings from the needs analysis in China, it was necessary to critically explore the literature and theory relating to teacher and learner autonomy.

Teacher autonomy

Teacher autonomy — largely a Western concept — has been generally referred to as “teachers’ control over their own teaching” (Smith 2000: 89). Little (1995: 179) describes teachers with autonomy as:

having a strong sense of personal responsibility for their teaching, exercising via continuous reflection and analysis the highest possible degree of affective and cognitive control of the teaching process, and exploring the freedom that this confers.

McGrath (2000) has added to this definition of teacher autonomy the notion of “self-directed professional development”, which may include the teacher acting as researcher, and as a reflective practitioner. It is this aspect of teacher autonomy that is of particular importance to these projects. In other words, the course developers need to consider the teachers as learners on their paths of professional and personal development. It may be argued that only through experiencing some degree of control over their professional development can teachers take informed and principled decisions about managing their own teaching context, and, in turn, help their own learners develop a measure of autonomy (see, for example, Estradas 2007). Thus, the materials in development needed to consider the teacher as a learner.

Learner autonomy

One way of enabling teachers to develop greater autonomy themselves is to allow them to experience a carefully scaffolded programme which provides opportunity for developing the skills and knowledge required to enable them to develop the capacity for autonomy as learners. The definition of learner autonomy which has underpinned the development of the project materials is the so-called ‘Bergen definition’ offered by Dam:

Learner autonomy is characterized by a readiness to take charge of one's own learning in the service of one's needs and purposes. This entails a capacity and willingness to act independently and in co-operation with others, as a socially responsible person. (Dam 1995: 1).

This definition seems most relevant because it contains a number of important points. Firstly, it recognises that autonomy is a construct of capacity (Holec 1981). In other words, learner autonomy consists of the ability to make informed decisions about one's own learning; being able to do so requires a good deal of specific knowledge about oneself as a learner, the learning context, the subject matter to be learnt and learning processes. This may be termed metacognitive knowledge, or knowledge about learning. It also involves *conscious* awareness of this knowledge and *conscious* reflection on learning. For example, without a conscious awareness of strategy use, developed through reflection and experimentation, learners will not be able to transfer learning know-how to other learning situations (Wenden 1987), or to transcend the classroom (Little 1996; Cotterall this volume). Our needs analysis found that teachers and learners in the Chinese context generally had little encouragement to reflect on their learning.

Informed decision-making requires the use of a range of metacognitive strategies. Metacognitive strategies, also termed "self-management strategies" (Wenden 1991) or "indirect strategies" (Oxford 1990), involve reflection on learning: planning learning and setting goals, self-assessment and monitoring of progress, evaluating learning activities and exploiting learning resources. Again, our needs analysis indicated that, in Chinese classrooms, it was generally the teacher who made such decisions about the classroom learning, rather than the learner.

Another important point raised by the Bergen definition is the importance of willingness, or readiness, to act autonomously. A learner may have acquired a good deal of metacognitive knowledge, i.e., capacity for autonomous learning, but not always feel like taking responsibility. The willingness to take control varies from time to time, task to task, depending on a range of variables, including psychological (e.g., depression, irritation), physiological (e.g., headache), contextual factors (e.g., too much noise, not enough resources) which can influence learners at any time. To summarise, learner autonomy is a construct of capacity which is operationalised when willingness is present. Our research showed that, among the Chinese teachers, there was a general acceptance of the need for greater learner autonomy and life-long learning, and a readiness to promote learner autonomy in the classroom — up to a point, but that the constraints they faced as teachers prevented them from doing so in any systematic or sustained manner.

Also embedded in the Bergen definition is the notion of social learning and social responsibility. This reflects recent acknowledgement by researchers and practitioners in the field of the importance of sociocultural theory (or Social Development Theory) in that learner autonomy does not only relate to the individual learning in isolation. Sociocultural theory locates all human activity in a particular historical, cultural and institutional context. It states that human behaviours cannot be understood by focusing on the individual in isolation or by considering the individual only in face-to-face interactions with social agents such as parents or teachers. In other words, social interaction needs to be located within the prevailing political, cultural, and historical contexts (Vygotsky 1978, Renshaw 1992: 21). The concepts most closely associated with the sociocultural theory of learning, such as scaffolding, reciprocal teaching, and collaborative learning, highlight the social basis of learning and the interactive processes that promote development (Renshaw 1992). It was clear from our research that the teachers we talked to generally had a good understanding

of their cultural and political context and how this affected their approach to teaching and learning. It was also clear that they wanted to find ways of dealing with some of the constraints that they faced.

Intervention

The interactive processes mentioned above need, then, to be promoted in any materials aimed at developing greater learner or teacher autonomy. Indeed, the concept of autonomy adopted by the project team assumes the need for some kind of intervention in order to encourage the development of greater autonomy. It has been argued that the capacity for making informed decisions about one's own learning is not necessarily innate — or at least, seems to be schooled out of learners through the more traditional aspects of education which place learners in a subordinate position in the classroom (Holec 1981, Little 1996). Our needs analysis indicated that the latter was the case with many of the English teachers who were to be the target users of the materials.

Pedagogic principles

In response to what we learned from the needs analysis research and a consideration of the theory of autonomy, we were able to agree on the following pedagogic principles. Firstly, it was decided that metacognitive knowledge and strategies should be

developed; in addition to the general requirement of psychological and methodological preparation for autonomy, as well as practice in self-direction (as recommended by Dickinson and Carver 1980), it was felt that these were perhaps the most significant aspects of autonomy that needed to be supported by the project materials. As mentioned earlier, metacognitive knowledge needs to include the following:

- Learner factors: Participants explore themselves as learners on the programmes, e.g., their past learning experiences, beliefs about and attitudes towards learning, their learning preferences and styles, personalities, affective and physiological needs as learners.
- Contextual factors: Participants explore their learning contexts and the constraints that hinder the promotion of learner-centred methodology, autonomy and the use of ICT, e.g., student attitudes and preferences, large classes, examinations, time constraints, and consider appropriate ways of dealing with these.
- The subject matter: In these projects, the participants explore the theory and practice of learner-centred language teaching methodologies, the promotion of greater learner autonomy, and the use of new technologies in language learning and teaching.
- The learning process: Participants learn to reflect critically on their learning and teaching, develop awareness of suitable learning and professional development strategies, e.g., metacognitive, cognitive and socio-affective strategies (O'Malley and Chamot 1990), experiment with new ideas and practices and evaluate these.

Metacognitive strategies are regarded as crucial to all learning. These are strategies which involve thinking or reflecting on learning. Typically, they are the very things

that teachers do for learners, instead of encouraging their development in the learners.

Participants need to develop the ability to use the following in services of their own learning if they wish to promote the independence of their own learners:

- planning learning
- self-assessment
- short-term goal setting
- monitoring progress
- organising learning and exploiting resources
- activity evaluation.

In keeping with the sociocultural, constructivist model of autonomy adopted by the team, we also agreed that the following principles needed to be built into the materials:

- respect for individual differences
- focus on individual development
- whole-person development
- personalisation of learning
- collaborative learning
- development of a learning community
- explicitness of purpose and methodology.

In addition to the above principles, when designing our project materials, we needed to be aware of the context in which our teachers operate, their needs and the constraints they face. Given such factors, it would be wholly inappropriate to simply expect the participants to already have the capacity or readiness to become more autonomous. It is clear that the materials needed to provide substantial support and scaffolding for the development of greater teacher and learner responsibility.

Design features of the materials

The exemplar materials developed for both projects involve blended learning. In other words, although the course materials were primarily to be computer-based with online elements, including video, audio and flash animation, the trainee-teachers would also have access to support print materials, and have opportunities for face-to-face group tutorials with specially trained tutors in their local study context. I will now describe some of the major design features of the materials in development and explain how they relate to the theoretical and pedagogic principles already outlined. The features which contribute to supporting and developing autonomy include:

- rich media — to provide a compelling and experiential environment which motivates to learn through interaction;
- clear signposting and simple navigation — to provide explicitness of purpose and aid scaffolding of learning;
- student tools — to support individualised learning. These include:

The student workspace: to provide an individualised repository of the individual participant's work, reflection, tasks, assessment results and learning progress, including:

- Notebook — for personal note-taking
- Reflective Journal — for recording personal reflections on tasks, professional practice and aspects of the course
- Bibliography — to provide learning resources and store participants' own selected items;

Bulletin board — for posting outcomes, suggestions, materials for all participants to view;

Discussion groups — to provide opportunities for sharing, interaction and to develop a learning community.

Rich media

Rich media have been described as “innovative media that create an immersive environment and deeper experience online” and which must provide self-navigation and interactivity (Sunday Times 2004). The materials cover the subject matter of the courses via a blend of rich media: video recordings, audio recordings, flash animation and interactive tasks. Examples of work in progress can be seen in Figures 1 and 2 below.

Participants embarking on a methodology unit in the BNU materials for middle school teachers enter into a virtual classroom on screen. The classroom is equipped with a blackboard and a notice board, and the walls are decorated with colourful posters. This was considered a useful image as it starts from a familiar teaching context, but highlights the ways in which teachers can exercise autonomy to personalise the classroom and draw learners' attention to new ways of learning. The screen then zooms to the blackboard at the front of the classroom. For the unit on 'Teaching grammar', for example, the blackboard has chalked on it: 'Teaching Grammar!', and, when the participants click on the board, chalked comments on grammar (e.g., "Grammar is Boring!") will appear in order to provide a preview of the 'grammar teaching problems' the unit deals with (see Figure 1 below). By clicking on the arrows either side of the blackboard, the participants can move around the classroom and see posters and notice boards. The colourful poster visuals in Figure 2

below relate to each of the sections of the grammar unit, and clicking on any of these leads to a preview of that section. The participants are also able to click on the classroom notice board (not shown here) to see documents explicitly describing the aims, content and assessment requirements for the unit in question.

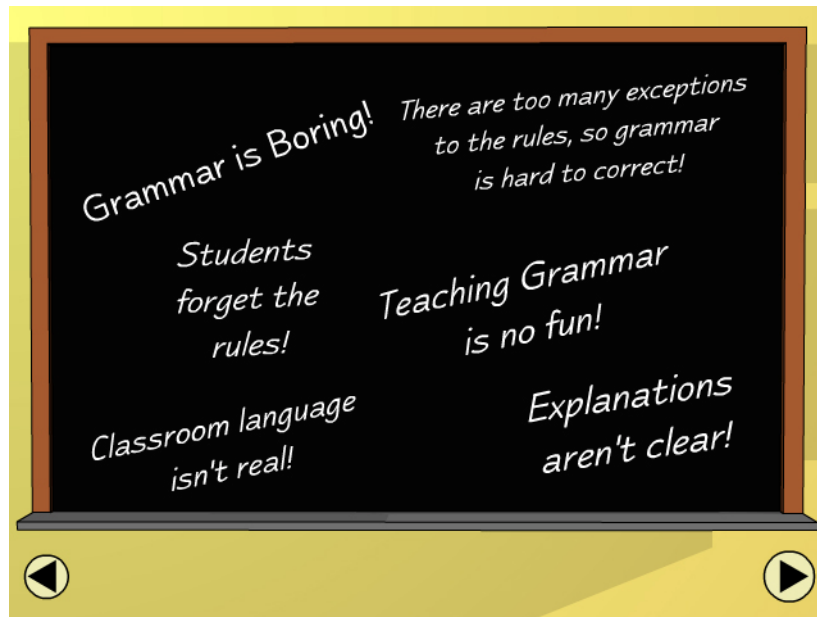


Figure 1: BNU Teaching Grammar Unit: preview of grammar teaching problems



Figure 2: BNU Teaching Grammar Unit: posters on classroom wall

In Figure 3 below we can see a screen for the Teaching Grammar unit that appears when a poster is clicked on. Here, the participants are presented with the ‘talking heads’ of six Chinese teachers we interviewed about the problems they have when teaching grammar. The participants click on each head to listen to the video clip (in the larger screen to the left), which is generally of 3–5 seconds in duration. They have the freedom to listen in any order they wish and for as many times as they wish. (In this case, the problems are summarised under each talking head, but in longer video extracts in the materials, participants have the choice of just listening, or listening and following a transcript or a summary.) The participants are then asked to ‘drag and drop’ (i.e., click on and move) the various heads to place them in a ranked order according to how important each problem is for them, personally, in their own teaching context. This ranked order is recorded on a database and when the participant moves to the next screen (or returns to it at any time in the future), the talking heads reappear in the selected order. In this ranked

screen, the participants can click on the talking heads once more to hear their suggested solutions for the problems they presented, and this then leads the participant into a range of further tasks, from which they may select, related to, for example, how to use grammar games in order to make grammar teaching less boring. Thus, the trainee teachers have been enabled to set their own agenda for working through the module. Suggested activities for each of the six problems and solutions are explained and demonstrated, then provided in a downloadable, printable form (with teachers' notes) so that the participants can select from them an activity to take into their classroom and try out.

An important part of developing autonomy is the opportunity to reflect and experiment. The participants then record their reflections on the activity in their Reflective Journal in the Student Workspace, and can compare experiences and share feedback with other members of their local study group via the Discussion Group and in tutorials. Reflecting and sharing of learning experiences is an important part of developing metacognition and, thus, critical for developing autonomy. The trainee teachers have the opportunity to experience the relevance of these activities in the context of their own learning, so that they are better placed to encourage their learners to do the same.



Figure 3: BNU Teaching Grammar Unit: teachers talking about grammar

The use of rich media has enabled the materials to provide the flexibility which allows for personalisation of learning, practice in self-direction, and opportunities for reflection and experimentation.

These materials were piloted in Beijing during March and April 2005 when 12 participants, all secondary school English teachers, volunteered to complete five weeks of online learning using materials from the projects (McGrath, Sinclair and Chen 2007). Findings from the piloting of the materials indicated that the idea of 'choice' through rich media was not always appreciated by the pilots (McGrath, Sinclair and Chen 2007). Some participants mentioned that they liked the idea of choice:

I normally browse first and pick up the things that interest me and learn these first. Sometimes I would browse first and learn in details. (Participant 5)

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I like to be given choices. I can learn what I'm interested first so that I feel very free. (Participant 6)

However, some found there was too much choice!

I think this course gives us too much freedom and too much space. I feel that I can't grasp too much in my hand. I want to have something solid, something that is practical and effective to my teaching. (Participant 4)

The same piloter resolved this dilemma by first studying all the materials in the order they were presented so as not to miss any information.

I won't select things to learn for the first time because I don't want to miss anything. I'll probably choose things to look at from the second time. (Participant 4)

The above quotes demonstrate the diversity of opinion held by the piloters, which is to be expected and respected. However, they also underline the lack of familiarity with choice in learning. Several participants, for example, mentioned that they tended to be passive in learning and needed some pressure from outside to push them to learn.

I'm a very passive person. I need pressure to force me to learn. I'm accustomed to being forced to learn. (Participant 6)

I want to be guided by experts. I can try things out and I have my own thoughts but I do need them to offer me feedback so that I feel relieved. I'm not an active person who takes initiatives to do things if not asked to. (Participant 7)

These comments underline, perhaps, the importance of clear structures and scaffolding for such participants, at least during the earlier stages of the course.

Clear signposting and simple navigation

The use of multi-media and rich media produced a complex set of materials, and it was the team's aim to provide navigation and labelling systems which were clearly marked and explained. While this should be standard for any e-learning materials, it is sadly not the case in practice, and much e-learning that the team explored was either linear and lock-step in design, so that navigation and signposting was minimal, or, in more complex designs, rather confusing to the user. Examples of the navigation buttons and icons can be seen in the figures provided above. Major functions are presented horizontally across the top of the screen, and participants have access to courses and units by clicking on a vertical menu on the left of the screen. The aim was to present a web-like environment for learning. The seahorse 'help' icon turns into a question mark when clicked and provides useful information on the different functions of the navigation tools. The clarity of the navigation and signposting provides explicitness for the participant, and the opportunity to move around the materials in a non-linear fashion, in accordance with their own needs and interests, thus supporting learner autonomy again by presenting diversity and choice.

The student tools

The student tools provide a rich variety of opportunities for the participants to pursue and organise their own learning. The Student Workspace provides the facility for the individual participant to store any interaction with their computer that they wish to keep on a database. Participants can access items whenever they wish, modify them if they are so inclined, copy them into another file, or send them to someone else. It is the major tool for developing metacognitive knowledge and strategies, as well as for assessment and evaluation. It has several components: space for note taking, i.e., the Notebook, for directed and personal reflection, i.e. the Reflective Journal, and a repository for learning resources (the Bibliography), including those provided by the tutors and those selected and stored by the participants. There are also pedagogic tools for communication, i.e., the Bulletin Board for posting of tutor announcements and learner products, and the Discussion Group for professional exchange, sharing of experience, opinions, and so on.

Since its development, the Workspace has attracted international attention from educators and developers of e-learning, for it is not simply a means of managing learning. The workspace is also the record kept of individual participants' work by the database that lies behind the system. This enables tutors to keep track of participants' progress, which is a feature of other data-based systems. However, with regard to the support of autonomy, it also provides a personalised learning experience. When an individual logs on, the system remembers them, the route through the materials they have taken, the choices they have made in relation to interactive tasks, their contributions to the Bulletin Board and Discussion Groups, how far they have progressed in the course, and so on. Significantly, these interactions can be reviewed by the participant at any time, and provide the basis for further

reflection and, thus, metacognitive development. Figure 4 below shows an example of the workspace in use:

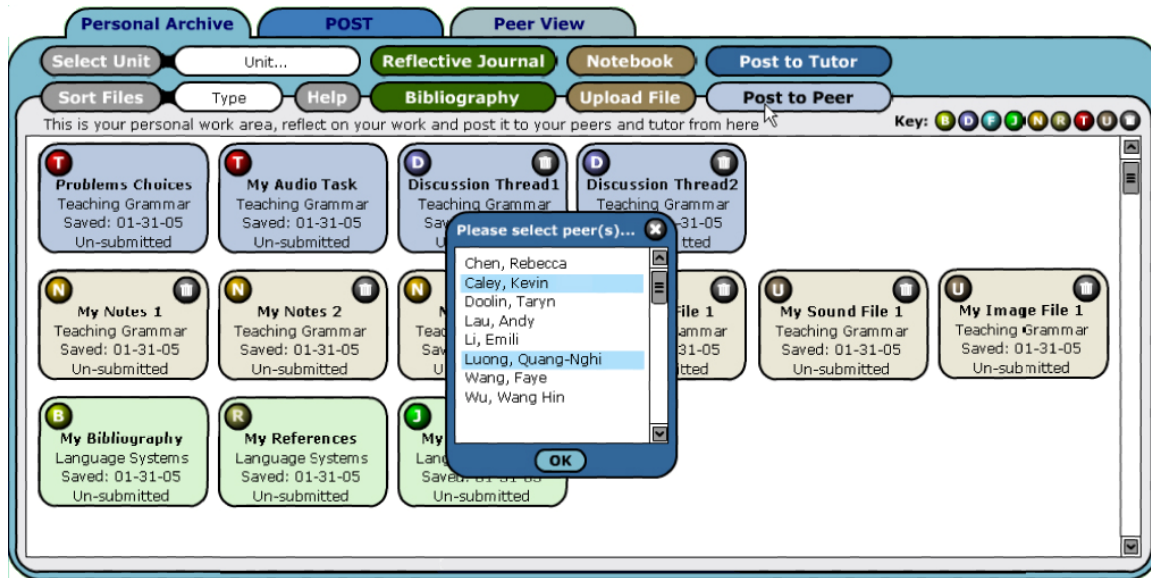


Figure 4: BNU Teaching Grammar Unit: Student Workspace — Personal Archive

When the student enters the workspace during a session, it opens up in their Personal Archive. Here, grouped within separate units, they will see their files of interaction, which they can then send to their peers or tutors for assessment. Participants are also able to access their portfolio of submitted tasks (POST) for assessment by the tutor, and see files sent by their peers (Peer View).

During the piloting of the materials, the opportunities afforded by the tools and the workspace for reflection seemed to provide some quite striking evidence of effects on participants' thinking and practice: The teachers were clearly encouraged to think about what they learned. One of the participants said: "...unlike traditional teaching, I can't stop thinking about it because it's not a 45-minute lesson. I have to think about it all month"

(Participant 6). Other participants realised that learning online made them think harder because they could not simply choose not to listen, as they might in a classroom. As another commented:

I feel this is really demanding. It is more complicated than studying in a classroom where you might choose not to listen or think. However, learning online makes people think more and learn to study on your own. (Participant 1)

Participants' written reflections revealed that their beliefs had also been challenged by activities which involved them in experimenting with new kinds of activities, recording their lessons and reflecting on the experience.

I've recorded two of my lessons and I feel they were so interesting. Students really communicated in my class! I want to record another one to see whether it's better. (Participant 8)

Some of the participants began to think critically about their practice by exploring and comparing what they had been doing in the past, and then thought of ways to make use of new ideas. Thus, reflection led to an impetus for teacher autonomy:

When I was learning the unit about grammar, I thought about my own way of teaching. I want to summarize my teaching methods first and try some of the methods introduced here. (Participant 5)

When I finished some of the tasks, I wanted to compare my thoughts with the course writers and I would copy their explanations if there is any difference. After I learned the example of “the usage of some and any”, I asked myself whether I could use similar methods in teaching other words. (Participant 1)

Discussion groups

The team believed that synchronous discussion groups would be too restrictive on the participants' preferred study schedules. (However, participants can make use of synchronous messenger services, if they wish.) Participants have access to asynchronous bulletin boards where they are encouraged by the course tasks to share ideas, experiences and reflection with other members of their study group. They have the opportunity to set up discussion groups for selected participants, so that they can work collaboratively in small or larger groups, as desired. All contributions are automatically recorded in the Workspace, and participants are able to download any parts of the discussions they want to keep. Tutors have access to these public discussion groups, but the participants are responsible for running them.

During the piloting, participants were asked to post their reflections on a video recorded lesson which exemplified learner-centred approaches to teaching. This provoked 15 postings where participants shared their conceptualisations of learner-centredness, comments on the lesson, concerns about classroom practice and suggestions. Figure 5 below provides an example:

Do you feel you learned anything from watching the lesson and answering the questions? If so, what?

How far were your own views similar to those of Dr McGrath? Do you agree with everything he said?

Do you think you will make any changes to your own teaching as a result of this activity?

I really feel I did learn a lot from this part. 1. To be a natural teacher. 2. To respect and cherish Ss' work. 3. To try to give every student proper opportunities to present himself in class.

I agree with Dr. McGrath totally. What he said made me know more clearly what to do and how to do in the future.

I will make some changes to improve my teaching and encourage my Ss from now.

But recently, a problem is troubling me: I'm trying to take more group work in class. But my Ss sit individually and it's impossible to move the desks and chairs before every class. And don't want to change a place, either. What should I do?

Figure 5: BNU: Discussion Board activity on 'learner-centred teaching'

Through participating in the discussion task, the pilots had started to find their own voices and to articulate their metacognitive awareness.

Conclusion

The development of e-learning materials for teacher education has required the Sino-UK team to consider a broad range of factors; not only have we had to clarify our theoretical concepts and philosophy with respect to language teaching and learning,

teacher education, and learner and teacher autonomy, we have also had to work within the constraints of the cultural, political and teaching contexts of the teacher-participants and overcome some of the limitations of the technical platform used. This has involved an immense amount of cross-cultural collaboration and awareness. There has been much cross-fertilisation of ideas between the various experts within the team, providing a steep learning curve for all (see Spencer-Oatey 2007 for further discussion). Most importantly, the team has had to put into practice its philosophy on learner autonomy and embed these in the e-learning materials developed. This has led to the employment of rich media, where interaction with the technology encourages the participant to reflect and develop metacognitive knowledge. It has also led to the development of new tools (see Caley 2007 for further details), such as the Student Workspace, which provide the technical functionality necessary for the support of learner autonomy within an interactive learning environment.

Clearly, some of the challenges I faced as a coursebook writer attempting to integrate learner autonomy into my materials remain a challenge for e-learning. The learners' (in this case, teachers of English) unfamiliarity with the concept of autonomy, and the lack of teacher and learner control in the learning context, still exist. However, we did find a readiness to engage with the unfamiliar, both in terms of autonomy and the use of new technology, which is encouraging. Although one needs to be cautious about the results from the piloting of the exemplar materials, feedback has demonstrated that the approaches we have taken appear to result in active participation in the learning by the participants, and an engagement with choice and self-direction which enabled them to create their own pathways through the materials, according to their own needs and preferences. The tools developed, particularly the Workspace, provide more than simply learning management, but also opportunities for participants to organise and regulate their

own learning. In addition, the materials appear to have encouraged a more critical awareness of the teachers' own roles, opinions and professional practice, as well as a willingness to experiment with new ideas and techniques, which bodes well for the development of greater teacher autonomy in the future.

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Notes

1. NudistVIVO is software for the analysis of qualitative data. It helps researchers to access, manage, shape and analyse detailed textual and/or multimedia data and provides a range of tools to help clarify the data, discover meanings and patterns and arrive at answers to questions. By performing manual tasks like classifying, sorting and arranging information, the software frees the researcher to devote more time to analysis and insight.
2. UoN: Barbara Sinclair, Ian McGrath, Tricia Hedge, Ann Smith
3. BFSU: Gu Yueguo, Wang Tong, Cao Wen, Tang Jinlan; BNU: Wang Qiang, Zeng Tiangui, Wang Guangzhou, Chen Zehang
4. UoN: Carol Hall, Eric Hall, Lindsay Cooper
5. UoN: Gordon Joyes, Kevin Caley, Paul Distant
6. UoN: Luong Quang Nghi, Colleen McCants

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