Findings from the evaluation of the WUN UK/Sino eChina Initiative

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ABSTRACT

This paper presents the evaluation of a World Universities Network (WUN) eChina project: a Sino-UK collaborative e-learning initiative. The first phase of the project focused on module development, whilst the second phase focused on trialing and evaluation of these modules. The Universities of Bristol and Southampton carried out a needs analysis and evaluation of the 2005 trial in Northern China. Eighty-seven in-service teachers from six schools located in Beijing, Huairou and Shenyang participated. The paper provides feedback on the processes and experiences encountered in the project by both the development team and the participants involved in running and participating in the trial.

Keywords

Evaluation, eChina, in-service teaching training

INTRODUCTION

eChina (http://www.echinaprogramme.org/) is a Sino-UK collaborative e-learning initiative funded in the UK by HEFCE and in China via the Ministry of Education through the collaborating universities. It is a component of the Sino-UK Collaborative Programme in Higher Education. The target was in-service teachers in China. The project focused on collaboratively developing e-learning materials at master's level in methodology, educational psychology and educational technology for in-service teachers from secondary schools in China. Partners included four WUN universities from UK and a Chinese university: University of Bristol, University of Manchester, University of Sheffield, University of Southampton and Beijing Normal University in China. It aimed to develop high quality exemplars of e-learning practice and a greater understanding of cross cultural practice, which included the establishment of an effective and agreed model of e-learning suitable for the Chinese context. The Sino-UK partnership agreed a model of e-learning , developed e-learning courses based on the model, and established an effective working relationship for continued collaboration. The first phase of the project focused on course materials development. Sample units of three modules were developed – Educational Psychology and Modern Pedagogy by University of Manchester and Beijing Normal University, Educational technology by developers from University of Sheffield and Beijing Normal University. The second phase of the project focused on the trial of these modules, which took place during November 2004 to May 2005. Two trials took place, one with in-service teachers in Fujian in November 2004, followed by the formal, pilot, with in-service teachers in northern China during March-May, 2005; it is this the pilot that is reported here. Each module included both units in Chinese and units in English. The materials were transferred to online format and were trialed initially in a Virtual Learning Environment (VLE), WebCL developed within BNU, and finally delivered via Moodle an open source VLE (http://moodle.org/) in the 2005 pilot.

A needs analysis and evaluation of the 2005 trial was carried out. The evaluation identified the needs and expectations of learners participating in the WUN project and investigated their experience of learning with the modules. The evaluation activities included questionnaire surveys, focus groups, individual interviews and observation. The objectives and evaluation methodology were designed to support the project development. There was regular consultation on the use of the instruments and evaluation questions; the evaluation model aimed to reflect a participatory ethos to research (Greenwood and Levin 1998).

METHODOLOGY

The study approach was designed to produce a broad survey of developments across the institutions involved in the WUN eChina project, coupled with a detailed picture of the activities and the associated emergent issues. The approach included both qualitative and quantitative research methodologies, providing an analysis of user needs through questionnaires and data related to user experiences gathered through interviews and focus groups. The evaluation team included Chinese researchers both in the UK and China. The employment of Chinese researchers aimed to provide an approach to evaluation that was sensitive to the cultural context and responsive

to the cultural and language subtleties to ensure authentic interpretation and meaning of results. This approach was essential to the design of evaluation instruments, data collection and fieldwork. Two key principles guided the evaluation design: *Utilisation-focussed formative evaluation (*Patton (2002) argues that evaluations should be judged against how well they help people to do things. This evaluation was set to provide proactive and developmental feedback and recommendations into the project development) and *Participatory evaluation* (Greenwood and Levin define participatory evaluation as evaluation that 'aims to create a learning process for the participants that will help them in their effort to reach desired goals' (1998). This evaluation was designed to involve as many stakeholders as possible to provide a full picture of the project as well as provide ownership of the process. The participants in the evaluation included the developers, management, tutors, learners and potential learners). A range of qualitative and quantitative research methods was adopted in this evaluation. An analysis of users' needs and expectations was conducted in order to identify user needs and expectations which in turn informed the development of the modules and materials. This was achieved via a survey and a series of observations and group interviews with both the end users and the developers. The outcomes included the identification of learners' basic skills and literacies, an understanding of learning needs and expectations and issues which might act as barriers to the use of the materials. A series of focus groups discussions was carried out to explore the implementation and use of the modules in practice, working with a sample of teachers who took part in the pilot. Each person participating in the focus groups also completed a short questionnaire with a mixture of closed and open questions aimed at identifying background information about the learners. The questionnaire complemented the output from the focus group and provided additional information from each individual participant's perspective. A further focus group was held with Chinese developers to explore their experience of the developmental process and collaboration with UK partners. The views of UK developers were recorded at project management meetings and during visits to China. Three interviews were conducted with representatives from the Chinese management team at Beijing Normal University.

Needs analysis with participants of the Beijing/Shenyang pilot

A survey of participants was carried out to analysis student needs and expectations in April 2005 with participants in the Beijing /Shenyang pilot. The WUN eChina pilot ran for a six week period from 21st March to 30th April 2005. In total 87 in-service teachers from 6 schools located in Beijing, Huairou and Shenyang participated in the pilot. The participants were equally divided into three groups, each assigned one of the three modules (module 1: Educational Psychology, module 2: Modern Pedagogy, module 3: Educational Technology) at the beginning of the pilot. 82 or 94.25% of the 87 in-service teachers taking part in the pilot completed the questionnaires. Nearly all of the participants reported that they were qualified teachers of English. They reported an average of 9.1 years teaching experience with 45% of them having 10 years or more teaching experience. Half of the participants were teachers from the senior secondary sector, nearly 30% were from the junior secondary sector, and less than 20% were from the primary sector. All of them held a first degree or above; all who responded to this question reported an English level of Professional English test band 4 or CET band 6[1]. 95% of the participants reported being under 40 (inclusive) years old. The age profile and teaching experience suggests the participants entered their teaching career in their 20s and have continued with teaching as a career.

Access to a computer, internet and printer

All respondents reported being able to access a computer at home or at work; about 80% of the participants reported being able to access a computer both at home and at work, however over 30% of the participants reported sharing computer with others, which might cause inconvenience in following the module studying. On average 7.34 hours was anticipated to be spent on study per week. 58.5% of the respondents reported having Internet access both at home and at work, the rest had access either at home or at work. Over 70% of the participants reported having ISDN/broadband Internet connections. However, on the second visit we found that their Internet connections were not very reliable in the Shenyang school site. A good number of URL links were blocked by local (educational) authorities and some of the participants were accommodated in the areas where Internet access was provided (and controlled) by the school or local educational system. Most of the participants reported they had limited access to printers at work or at home. It was therefore difficult for participants to print any paper copies of the course materials.

Computer skills and use of computers in teaching

The participants were familiar with text editing and presentation applications (e.g. Word and PowerPoint), internet, search engines and email. Some of them were also familiar with spreadsheets and using instant online live communication, such as chat rooms. However, fewer were familiar with online databases and catalogues,

VLEs or database applications. More than half of the participants reported using a computer between 1 to 4 hours a day, above 30% reported using a computer less than 1 hour a day, less than 10% using computer more than 4 hours a day, or less than 1-2 hours a week. Books remained the most frequently used resource for teaching, while 23.2% of the participants were using a computer lab frequently in teaching. Most of the participants reported they could use a computer for teaching at their school. However, nearly half of them experienced problems using a computer in their teaching. Equipment shortages and failure, and poor quality of the equipment were major issues, followed by time limitations or heavy workloads. Most of the participants used the computer for creating courseware and displaying or presenting the content, some used it for information research. There were also teachers creating activities involving students using information technology. The students reported that their school had provided computer skills training and training in the use of computers for teaching. Schools provided access to computers, and allowed time off for teachers to receive training. However, more than half of the participants reported that support and training was insufficient, they believed they required more support and further training including training in pedagogy and educational theories applied in courseware design.

Online or distance learning course

Over a quarter of the participants reported having attended some kind of online distance learning course. About 15% of the participants all from the Beijing area reported having attended 'Intel Future Educational Training'[2]. Two had experienced online learning which was available from a BNU affiliated secondary school education website. However, there were not any participants who had experience of learning online with a VLE.

The main reasons for participating in the WUN eChina modules

To improve the quality of their teaching, self-improvement, which they believe can be achieved through online learning, these were the key factors which most motivated the teachers to participate in studying these modules.When asked for more specific reasons the participants reported that they wanted to 'learn new methods to improve the quality of teaching', self-improvement, to improve their online learning skills, their level of English, and their computer skills. Other reasons included communication and exchanging experience and opinions with other teachers, flexibility with time, and interest in this independent and flexible learning. There were also participants who reported being motivated by personal interests and the qualification. In contrast to those with intrinsic motivation, there were also a number of the participants who reported that they were required to learn these modules by the school authority.

Concerns about following the WUN eChina modules

The major concerns expressed in advance about following the modules of study were time limitations and heavy workloads. The participants worried that the limited time available to them and heavy workload at school might not allow them to spend as much time as they needed on the learning, the overall time might be too short to allow them have a full understanding of the learning material. Another concern was how relevant and helpful the modules could be to their teaching practice, and some of them were worried about sufficiency of amount and of the relevance of learning resources. There were also concerns about the level of difficulty of the programme in terms of the English language. The materials were not designed for use in English. English versions of the materials were used with Chinese English teachers in order to enable UK colleagues to participate in the learning and engage with the students. Concerns were expressed about the content, the lack of experience of online learning and whether their computer skills were adequate enough to follow the programme. The participants were also worried about the effectiveness of online learning versus face-to-face learning, they were particulary concerned about effectiveness of communication and getting feedback on time. Other issues included the availability of the equipment, technical support and whether they would be able to gain certificate

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[2] "Intel Teach to the Future , a program launched in January 2000, is a worldwide effort to help teachers integrate technology into instruction and enhance student learning. The scope of this program represents the industry's recognition that all the educational technology in classrooms today is worth nothing if teachers don't know how to use it effectively. Computers aren't magic, teachers are" said Dr. Craig Barrett, Intel CEO. To-date, over 1.5 Million Teachers have been trained in Intel® Teach to the Future in over 33 Countries across the world, with support from Governments. By end of 2003, the program was implemented in 22 provinces and trained over 200,000 teachers in China. With strong government support, Intel will train another 500,000 teachers during the next three years, according to the Strategic Cooperative Agreement signed between China MOE and Intel on Aug. 28, 2003 " (http://www.intel.com/community/china/education.htm)

after completing the modules. It should be noted that the concerns of the teachers may have reflected the way in which their school introduced them to the aims and objectives of the project

Training and support needed in following the modules
The participants reported that they needed training in network technology and computing skills, online learning methods and English Language. They expected that the modules they were going to study to provide rich teaching resources and some relevant and useful URL of online resources, some case studies they could apply in the classroom and in particular, in the subject area of their teaching, and they hoped that their school could provide some time off, or flexibility of working time, to support their learning.   The references to specific resoucres for their subject teaching would appear to reflect a misunderstanding of the nature of the modules which were never intended to provide subject specific resources. From the tutors, they expected timely feedback, good guidance and would also like to have regular face-to-face tutorials. The participants also expressed their enthusiasm for more and continued learning opportunities such as this.

Background experience
The context in which the pilot was run was complicated and challenging. The five schools were quite different from each other in terms of access to resources and training opportunities. Those located in Beijing, particularly the secondary school affiliated to BNU were excellently equipped, while those out of Beijing, including the fee-paying school, were not so well equipped. How to target online courses to those who most need it and who also have access to adequate resources is an issue for further study. Nearly all the participants were qualified teachers on average under thirty-five years old and averaging over nine years experience in teaching. This suggests that the majority of the participants graduated from teacher training universities where 'educational psychology' and 'pedagogy' were compulsory modules, or they had taken some kind of training in these two modules to gain the qualification. It also suggests that they had gone directly into teaching after graduating from the teacher training universities and were therefore quite experienced at the time they joined WUN eChina learning modules. However, talking with the participants revealed that the theories on educational psychology and pedagogy they once had studied did not seem to be very relevant to their later teaching practice nor play any role in guiding or directing their classroom practice. As a result, they, on the one hand wanted the theory to inform their practice, and on the other hand, were not convinced that the theories they were going to learn would be relevant or helpful. Relevance of the modules to their practice was one of the major concerns of the teachers, and the challenge was increased by the complexity/diversity of the background of the participants. Nearly 20% of the participants, those from the primary school sector, might seek / need theories and case studies that were different from the modules provided - as the programme was originally designed for in-service teachers from secondary schools. Nearly all of the participants were English teachers with a first degree in English.

Experience of learning through elearning
There was clearly a need for these learners to adjust to the expectations for collaborative learning embedded in the WUN materials. Using chat room facilities for group members to socialise with each other and provide emotional support might help form the sense of group presence and better collaboration. A few participants had some online learning experience but not with a VLE, clearly there was a need for a thorough induction programme on using the VLE and adapting to the pedagogic model. The participants voiced their concern about workloads, time limitations, the study load and the short period of time that the pilot was running for. One of the strengths of online learning is considered to be its flexibility, but despite this students reported that it was hard to keep their studies high on their list of priorities. To many of the participants this kind of learning was a first time experience. They felt that, given more time, they may be able to adapt more constructively to this approach. However, the pilot ran for only about six weeks, and this was not long enough for them to develop the necessary skills, nor to benefit from their learning as much as they expected. However, these modules provided them with an opportunity to learn and engage with practitioners in other organisations. There may be a need to negotiate with participating schools for staff support in terms of time, equipment support and other issues. The most important reason the participants gave for taking part in this learning was their motivation in improving the quality of teaching, but the modules that participants were assigned to did not necessarily meet this need; which could have a very negative impact on their engagement with the modules they were studying. There was also an expectation / hope that the module content was something they could directly or indirectly transfer to classroom teaching. Teachers were keen to find new resources to use with their students. Those teachers who were required by the school authorities to learn these modules were not well motivated and were resistant to taking part in the pilot, they perceived the programme as a distraction from their teaching. There was a reasonable concern among the participants about whether online learning could be as effective as face-to-face learning, and whether they would get enough time, support and feedback from tutors. Despite being presented as an online learning course, participants asked if there could be more face-to-face sessions. There

was a need for a higher level of direct and synchronous tutorial support. Video conference sessions could provide a means of building a closer relationship with tutors and meeting this need.

Focus groups with learners

Course content and structure

Most respondents viewed the modules as rich in content and resources. The materials that embedded case studies and video clips were considered particularly useful since they provided teachers with good examples and resources which they could apply in their own teaching and classroom activities. Video clips also appeared to be more vivid, interesting and easy to follow. The participants called for more relevant case studies and multimedia learning materials. Quite a few participants also reported that the course provided a good number of useful online teaching and learning resources, including URLs which have contributed to widening their views, inspiring and enriching their teaching ideas. There were mixed views towards whether or not the materials were relevant to their teaching practice among the participants. Those who regarded the materials as relevant and useful intended to connect ideas with their professional and classroom practice, holding a view that in spite of different background and context of the materials, they were still useful in encouraging them to reflect on their own practice and discover the differences. As one teacher stated:

> *"From my point, being useful or not should not only be reckoned by connecting immediately with classroom practice; the materials enable me to think about my practice and this process is a kind of self-improvement."*

However, it was also perceived that some of the content was too theoretical, dealing with purely academic concepts and notions that were 'away from our concerns of everyday teaching'; again there appears to have been an misunderstanding that the modules were designed to provide resources for subject specific teaching. A number of participants expressed their expectation on subject-relevant ideas and materials, which they considered to be more practical. Some of the modules (e.g. Educational Technology) were perceived as being well-structured by having the materials divided into learning sections. It was considered that this division of materials made the content clearer to the participants and saved their time in navigation. However, it was reported that the aims and objectives of each unit were not clear enough. There was some confusion amongst respondents about what they needed to do in each unit. This caused problems, in the words: *'I don't really know what to do next'; 'I feel a bit blind sometimes'*. More clearly stated learning objectives and some hints about the tasks in Chinese were suggested. The participants also preferred those modules that stated objectives, learning outcomes and task outcomes from the outset rather than intergrated within the content.

Learning and the online environment

The induction was deemed useful by most of respondents, with nearly 80 percent of the learners participating in the focus groups rating the induction 7 or above on a 0-10 (low-high) Likert scale. It helped participants finding their way around the course on the VLE and reduced their nervousness to some extent. However, they expressed their dissatisfaction that the assessment process was not fully explained in the induction and that caused a feeling of uncertainty and a lack of purpose to their study. The participants would have preferred some form of summative accreditation for their study. The participants wanted the assessment criteria to be made explicit from the outset they were open to new and innovative forms of assessment. It was evident that the focus of the course on collaboration and communication was gradually understood by participants as the pilot progressed. Some participants enjoyed the discussion forum by stating that they were able to voice their opinions and learn from each other through communication and exchanging ideas with teachers who are not only those from their own school. However, the way of learning and the approaches taken to completing tasks that required them to 'reflect' and/or 'critically analyse' were perceived as new and unfamiliar to them, these learners suggested they were use to a learning style which focused on memorising and recall of factual knowledge. There was no strong evidence to indicate how much benefit there was from this way of learning. Some respondents felt that some of the participants' and tutor's contributions seem too superficial without much thought behind them. They were of the opinion that such contributions could not add to their own understanding or encourage them to respond; in fact they could even deter them. However, a significant theme emerging through the focus groups was that participants appreciated the face-to-face discussion with their colleagues. They would appear to prefer synchronous rather than asynchronous communication. Although an online chat room was set up, its function was limited by the small number of participants who were online at the same time, and the limitations of the function within Moodle. It was therefore suggested that a better and more structured archive for tracing back in the discussion forum was required. Also, it was evident from the discussion above that more support was needed to guide participants in using and contributing to online discussions. Some participants found reading from the screen difficult but a printer was not always available for them, which made the study more time-consuming. Several participants called for the materials to be available on a CD (which some course designers did do later)

or for the distribution of some printed handouts, in addition to being on the website. This may reflect a preference for being able to work offline and not incur internet charges, particularly as some of the participants were not be able to study in their work place due to their work commitments and priorities. The flexibility and convenience of e-learning was recognized as advantageous and appreciated by these in-service teachers. It was evident that some participants had found it difficult to manage their study time with their workload pressures and classroom demands. It was claimed that there was insufficient time to study the materials and a longer period of time to complete the modules was required. Alternatively, taking this course during their summer or winter vacation would have been preferable to six weeks during their term time as offered in the pilot. It was reported that the tasks usually took longer than the suggested timings and this inhibited the learners from reaching a 'sense of achievement'.

Language Issues

Language was still a major barrier to completing the learning tasks in time and respondents were of the opinion that the course designers had not adequately considered their actual level of proficiency in English. Many participants stated that they had difficulties in following the English part of the content, which significantly slowed down the learning process and added to the time they spent studying. A Chinese-English bilingual glossary was suggested to facilitate and speed up their study. Again it should be noted that the use of English in the pilot was for the benefit of English colleagues who were keen to engage with the participants and pilot the materials. The modules are designed to be used in Chinese, the use of English was therefore a concern about the conduct of the pilot and not integral to the design of the e-learning modules.

The support of the e-tutor

When participants were asked about the support required from tutors and whether this was seen to be adequate or appropriate they indicated that there were differences among modules concerning the support of the e-tutor. More positive views came out for the modules 'Educational Technology' and 'Modern Pedagogy' compared with the module 'Educational Psychology'. Participants who had received written feedback from e-tutors on their assignments were 'inspired' by their comments and were also 'encouraged' when the e-tutor responded specifically to their forum postings. One participant described her feeling as:

> 'Although we are thousands of miles away from each other, we are close in the way we communicated. I enjoy this feeling very much and this is very encouraging for my study. '

More suggestions and advice given by tutors for their assignments were expected and clearer requirements for the assignment and instructions in advance were perceived to be helpful. It was evident that the participants in the focus groups had expected that e-tutors would direct and guide forum discussions, summarise the discussions at different stages, moderate, facilitate and extend discussions with well-informed posting and provide examples of how participants can learn effectively online. This reflected the striking differences in the approach to learning between the course focus and Chinese tradition, where learners expect more direction from the teacher. One teacher expressed this by saying:

> 'Sometimes we felt blind in the discussion - what to say, how to say it. If tutors can set up a set of specific topics and we talk around them, it might make discussion more purposeful and productive. '

It was anticipated that there would be more interaction with e-tutor participation in the forum discussions. It was also suggested by some participants that tutors could set up some specific time in a discussion forum or chat room to answer their questions online as a supplementary method of tutorial support and communication.

Interview with BNU Management Representatives

Three individual interviews with Chinese managers of the project took place at the end of April 2004 in Beijing. The interviewees were from the School of Continuing Education and Teacher Training of Beijing Normal University (BNU) who were taking responsibility for management and administration of the project. The focus of the interviews was on overall perceptions of the project, its value and issues about roles and organization, as well as consideration of potential future activities in this area including mainstreaming of the project and possible future areas of research. Two interviews were conducted in English and one was in Chinese, with translation into English.

Roles of project members within institutions

Roles and responsibilities were reported as not being well defined in the project. One interviewee felt her role was something between administrator and project manager, or even both, because she seems to have been 'doing everything for the project – from upper managerial level to detailed coordination and organization.'

Another interviewee perceived himself as a very key person in the project in China, yet he maintained that his privileges were quite different from those of his British counterpart because, 'for me every decision - even small little things - I have to ask for permission.' He admitted that this was one of the barriers inhibiting him from doing work well. The project had a high profile in both the university and schools, it was said to have a 'strong background' having been initiated by the government, involved several different schools and many subject experts. One interviewee expressed the opinion that it received more emphasis at school level because she could not feel any direct support coming from the university. However, it was also reported that different people from different levels within the project have different views towards it.

Reasons for being involved in the project

A variety of reasons was given for being involved in the project. A senior manager talked about this from an institutional rather than a personal perspective. For the university, he claimed, it was a good opportunity to gain experience of developing a new international collaborative e-learning course and to explore the models most suited to the Chinese context. Furthermore, BNU is an experimental site for e-learning, which helped them to win the bid from the government. In the school, they were looking forward to developing some e-learning materials for in-service teachers. One interviewee commented that the ways in which the BNU people were involved were a kind of 'typical Chinese style involvement'. Most of them were told to do the job by the institution rather than working on their own initiative, although some of them were self-motivated including this particular interviewee.

Cross-institutional collaboration

Cross-institutional collaboration was highly valued by the interviewees. This was a complex project with many institutions working directly together. It has provided the opportunity for each side to get to know each other well and build a strong foundation for future collaboration. It was also stated that the project helped people within the institution and across the institutions to build up good collaborative relationships, even friendship. There was a high level of personal commitment and enthusiasm for the project and the collaborative partnerships it produced.

Project impact -Dissemination/ use of the project findings

There were several different ways of disseminating the project findings, according to the interviewees – workshop, word of mouth, reports to the Ministry of Education (MoE), internal publications and discussion within the university. The different means of disseminating the project findings were regarded as having multiple effects. It was reported in the interview, for example, that eChina articles in the books published in BNU enabled more people to get to know about the project and also help the developers reflect on their own experience. However, participants felt there was a need for more official publications and dissemination of project findings.

Benefits of becoming involved in the project

EChina was seen as having provided a very good opportunity for the university staff in both countries to get to know each other, share ideas and resources for developing online courses in the Chinese context and engage in intercultural collaboration. Personally, all interviewees felt they had gained experience of different aspects to different extents by participating in the project, which was helpful for their career development. One interviewee actually declared that, 'eChina made my life more meaningful!' Mutual understanding was emphasized by an interviewee who stated that 'we also have a long history in distance education like the U.K … we are not going to give up all of our standards. Rather, we want the U.K. Universities to get to know the reality of distance education in China and find ways of being compatible with U.K. standards in such a project.' The opportunity to learn from the practice of both traditions was seen as a key strength of the project.

Timing of eChina relative to the organization and future interests in e-learning

The timing of the project for their organization was seen as just right by two interviewees, who gave evidence that Ministry of Education had attached increasing attention and importance to e-learning. Another interviewee admitted that, as someone working inside the project, it is very difficult for him to see this. He assumed that e-learning was experiencing a period of 'cooling down' after the blind enthusiasm at the very beginning. However, there is agreement among the interviewees that the school was very keen on continuing the eChina project and similar e-learning projects through collaboration with overseas universities.

E-learning barriers and drivers and strategies for changing culture

Limited resources were regarded as the most significant barrier to the project implementation. These resources include both personnel and finance. People involved found it difficult to manage their time spent working on the

project within their overall workload, particularly when their work was not remunerated and recognized. It was pointed out that it is a long-term project so that those people who wanted to see more immediate effects might feel frustrated. As one interviewee said ' Some of the managers and participants feel they have put too much into the project and they are wondering if it was worth it because it takes such a long time to see the effect.' The financial system and organizational culture were seen as other major barriers. One interviewee expressed strong dissatisfaction with difficulties caused by the institution, which did not give any guarantee of payment to those who contributed their time and effort to the project. There was no contract signed between the institution and individual participants until one year after the project started which was perceived as inhibiting project implementation. Most participants were self-motivated because of their enthusiasm for e-learning, including two of those interviewed. On the other hand, there seems to have been a gap between their expectations and the actual progress of the project due to the infrequent support from the institution, which de-motivated them to some extent. Another barrier mentioned by the interviewees was there is an unresolved problem as to whether a Master's degree, in China, can be obtained from a purely on-line course. A decision about this has yet to be made at policy level.

CONCLUSION

The most important lesson was that goal setting should be realistic, since overly ambitious goals at the beginning of eChina inhibited the implementation of the project. An interviewee recommended 'smaller and more do-able goals'. There was belief held by interviewees that there are some global pedagogical principles underlying online learning. One interviewee 'I believe there are common things we can share and communicate, not just knowledge, but ways of thinking and emotions. We are so pleased to have had this opportunity. So I think we should try our best to continue.'

There are nearly 11 million in-service teachers in primary, junior secondary and regular senior secondary schools in China. A key driver for change is the government's educational reform of the curriculum, with its emphasis on shifting the focus of teaching and learning in China from a teacher-centred model to a model of student-centred learning. However, it is clear from the evaluation that there is a wide range of different backgrounds and needs amongst in-service teachers. There are also some shared themes that emerge from the pilot, the participants were keen to engage with theory that directly addressed their professional practice and address real classroom issues. They were critical of a perceived theory to practice divide and advocated more practice orientated forms of knowledge. The evaluation suggests that e-learning processes and materials need to be sensitive and responsive to the local social-cultural / political context and tailored to meet the needs of specific groups. There is a need for differentiated guidance on how to learn and teach in digital environments.

One route to increasing the scalability of e-learning material is to produce materials that are rich in imaginative pedagogical activities and processes, as well as resources, that are innovative, flexible and adaptable; materials that enable tutors to adapt and edit in response to the needs of a target audience. It is therefore necessary to work with users, analyse their needs, and adapt the material accordingly. This was the approach adopted in the development and piloting of these modules; tutors had the flexibility to change the learning material and activity in response to their interaction with the groups. The evaluation of the pilot reinforces the assumption that one cannot assume a 'one size fits all' model will work in a country as diverse as China. Perhaps the principles 'open source' material could be adapted and inform the design and dissemination of e-learning material. There is a need to produce genuinely flexible material that tutors, students and organisations can adapt and tailor to the specific needs of the learners and their context.

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