Studies on Teaching and Learning

HONG KONG BAPTIST UNIVERSITY
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Teaching Development Grants Scheme

The University initiated the Teaching Development Grants scheme in the 1994–1995 academic year with funding from internal sources and later supplemented by funds received from the University Grants Committee (UGC) to enhance the quality of teaching and learning. All staff members who are involved in aspects related to teaching and learning are encouraged to apply and submission of proposals may focus on:

1. new and/or experimental approaches to syllabus design for teaching and learning enhancement;
2. the development of video, audio or computer software which enhances teaching;
3. the development of other new materials for use in teaching;
4. the incorporation of educational technology into classroom, laboratory, studio, and/or fieldwork learning experiences for students;
5. designing programmes in which there are new approaches to student participation in the teaching/learning process;
6. designing student assessment framework and the use of assessment results to enhance teaching and learning;
7. monitoring and review mechanisms to enhance programme delivery;
8. the development of new teaching approach or materials for the “3+3+4” curriculum;
9. the design of teaching and learning processes and evaluation mechanism that would assist in the implementation of outcome-based learning; and
10. other possibilities.

Teaching Development Grants must not be used to fund research activities. However, some measures of didactic processes and outcomes measurement based on experimental teaching may be included.

All academic staff members (including staff whose duties involve aspects of teaching and learning) are invited to submit proposals for funding from the Teaching Development Grants in support of new approaches for the enhancement of quality in teaching and learning.

Applications are forwarded to the Teaching Development Grants Panel for vetting via the Academic Quality Support Section of the Academic Registry.
Editorial

Investigating university teaching and student learning as well as communicating the results to the academic community is an essential part of the scholarship of teaching and learning. Contributing to this scholarship of teaching and learning, the present volume of papers aims to share with the readers the teaching development initiatives taken by academics at Hong Kong Baptist University in their attempts to enhance their teaching and their students' learning.

This collection of readings comprises 17 papers arising from projects funded by the Teaching Development Grants of the University in the past decade. Upon completion of their Teaching Development Grants projects, colleagues submitted their final reports to be considered for publications. Two independent referees reviewed the reports and this volume includes the first batch of those accepted for publication. The papers are based on projects undertaken within 17 departments/divisions across four faculties/schools – Arts, Chinese Medicine, Science and Social Sciences. While each paper has its specific objective, scope, and methodology, all of them address significant issues relevant to teaching and learning. These papers touch on a wide range of pedagogies, depict their implementation, and shed light on their impact on learning outcomes. The types of pedagogies include: the involvement of students in problem-based learning and reflection activities (chapters 1 & 2), the development of authentic learning and experiences (chapters 3 to 5), and the utilization of different forms of media and information and telecommunication technology such as videos and animated slides (chapters 6 to 9), computer software (chapter 10), web-based learning (chapters 11 to 16), and Mobile Response System (chapter 17). This wide spectrum of pedagogies echoes the holistic approach to broad-based and creativity-inspiring education adopted by the University.

It is hoped that readers of this volume will be inspired to take further initiatives for advancing the scholarship of teaching and learning.

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Application of Problem-based Learning for “Physical Education and Recreation Management” Courses

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Abstract
The purpose of this project was to implement a “Problem-based Learning (PBL)” approach for three undergraduate major courses of the Bachelor of Arts (Honours) in “Physical Education and Recreation Management” programme, with a view to improving students’ learning outcomes. For each course, one-third of the class time was allocated to PBL. Students worked on problems as group projects and, under guidance, gathered further information which they used to solve the problems. Then they presented their resolutions in class. One important goal of this project is to conduct formative and summative evaluations of the applications of PBL for the courses, to produce a VCD to illustrate the steps for PBL, to show samples of class presentations as well as video records of students’ reactions to PBL. The production and the contents of the VCD are not included in this report.

Key words
Problem-based learning, physical education, recreation management

Introduction
The PBL approach, which has its origins in reforms to medical education at McMaster University in Canada in 1966 (Savin-Baden & Major, 2004), has progressed from the medical field to health-related fields, and later to other professional preparation programmes. At the college level, widespread introduction of PBL curricula took place at the University of Delaware in the late 1990s (Duch, Groh, & Allen, 2001). The PBL approach has been adopted around the world as a philosophy and method for teaching and learning. PBL continues to be used in diverse ways across different subjects and disciplines worldwide (Savin-Baden, 2003).

PBL is a student-centered pedagogical strategy that poses real-world situations and provides resources, guidance, instruction, and opportunities for reflection. The students work with problems in a
manner that fosters reasoning and the application of knowledge (Mauffette, Kandlbinder, & Soucisse, 2004). Walton and Matthews (1989) presented three broad areas of differentiation for PBL to be recognised: essential PBL characteristics that comprised curricula organized around problems rather than disciplines, an integrated curriculum and an emphasis on cognitive skills; conditions that facilitated PBL such as small group tutorial instruction, and active learning; and outcomes that were facilitated by PBL such as the development of skills and motivation, together with the development of the ability to be life-long learners.

Teachers have suggested that the PBL approach has long-term benefits for students including:
- developing their problem-solving and self-directed learning skills (Williams, 2001)
- making students more self-motivated in their learning (Norman & Schmidt, 2000).

Researchers have reported cases of successful applications in higher education teaching (see review articles, Gijbels, Dochy, Van den Bossche, & Segers, 2005; Tavakol & Reicherter, 2003; Ward & Lee, 2002) and sport science courses (Duncan, Lyons, & Al-Nakeeb, 2007; Jones & Turner, 2006; Martin, West, & Bill, 2008).

### Aims and Objectives

The Project Objectives are to:

1. Explore the feasibility of incorporating PBL in two sport science-related courses and a physical education theory course;
2. Determine the degree of students' receptiveness of PBL and the self-directed learning approach;
3. Document whether the PBL approach facilitates learning.

Possible Project Outcomes are:

1. Convenors of the participating courses will be able to assess the effectiveness of using PBL approach in their courses;
2. Positive results from this project will encourage other courses to adopt a PBL approach when appropriate.

With the coordinated effort from the diversified trial courses, the findings of the study will provide valuable information for future modification and improvement of our teaching methods.

Student learning outcomes include:

1. Students will develop independent and critical reasoning thinking abilities;
2. Students will acquire self-directed learning skills;
3. Students will experience different learning and teaching approaches;
4. Students will be more interested and capable in self-directed learning;
5. Students will be more interested in learning.

### Methodology

A half-time project assistant was hired to help search for web information and print media about local and overseas programmes to help construct problems relating to the three courses: Prevention and Care of Sports Injuries, Nutrition for Health...
Fitness and Theory & Practice in Physical Education & Recreation. The assistant also helped collate information and developed the PBL approaches on a WebCT platform.

Lecturers met regularly to discuss strategies in implementing PBL methods such as lecture-based case, case-based lecture, case method, problem-based etc. For each course, approximately one-third of the class time was allocated to the PBL approach during which group tutorials were held. Students were presented with cases/problems and were guided in their search for further information needed to solve the problems. After the groups developed their initial understanding of the problems, the students were divided up and independently researched the learning issues they previously identified. The learning issues included clarification of the group’s learning goals and helping group members work toward a set of shared objectives. These objectives also provided lecturers with a basis to monitor the group’s progress and to remind members when they were getting off course, or to ask if they needed to revise their goals. In the problem follow-up phase, the students reconvened to share what they learned and they were asked to reflect on the problem-solving process. Students kept journals to describe and reflect on their learning processes, for example, the difficulties they came across and the strategies they adopted to overcome these difficulties.

For each participating course, one to three lessons were video taped and analyzed by the teaching panel with a view to improving the processes. These videotapes could help students to reflect on their learning processes and help them to learn from each other. As well, the videotapes could become a valuable asset for future users of PBL approach.

Project Evaluation

The progress, the effectiveness, and the efficiency of the PBL approach were monitored and evaluated during the semester and at the end of the semester. The formative evaluations sought to identify teaching and learning problems early in the semester. Individual and focus group interviews and survey questionnaires were used to collect the evaluative data. With feedback from the evaluation, weaknesses were identified and immediate change was made to improve the process to enhance learning. Aspects of evaluation included: students’ interest in learning; attainment of knowledge; ability in self-directed learning; strengths and weaknesses of the approach; difficulties experienced by the students and project assistant and their recommendations for improvement; and overall value to the students. This survey format followed those adopted by Catlaw (1999).

At the end of the semester, a summative evaluation was conducted to assess the overall performance of each course using PBL approach. This was achieved by conducting a quantitative survey and independent interviews with students. Findings from these assessments would
indicate whether the adoption of PBL produced the intended outcomes, and whether the course lecturers should continue or discontinue the approach or modify it. The knowledge and experience obtained from this exercise serves to provide useful information for future intended users of the PBL approach.

Results/Findings

Part I: Application of PBL for “Nutrition for Health Fitness” PERM Course

This was a major elective course. Thirty students enrolled in this course in the 2nd term, 2002-2003. Five topics were identified by students for group project presentations. They were: (1) nutrition for the elderly; (2) nutrition for pregnant women; (3) nutrition for body builders; (4) nutrition for elite athletes; and (5) nutrition for underweight adults. Each group was told to make a presentation for 30 minutes in class in English and their presentations would be video-taped. A project assistant helped with information searching on the web for these specific presentation topics. The information was then put onto WebCT so that students could get access. Students were also told to be creative and interactive in presentations as well as to focus more on the questions and answering session so that all class members could actively participate. A 30-minute class session was allocated for group discussions. The lecturer also gave them ideas to identify their specific problems/cases.

After the presentations, students filled in the summative evaluation form about PBL being applied in the course. Responses were gauged by 1-5 Likert scale ranging from Strongly Disagree (a score of 1) to Strongly Agree (a score of 5). The followings show the mean values for the responses.

1. This learning style is new to me.
   Mean (SD) 3.42 (.84)

2. This learning style prompts me for higher motivation for self-learning.
   Mean (SD) 4.11 (.46)

3. Lecturer has given me enough background subject knowledge that help me to deal with the subject problem.
   Mean (SD) 3.74 (.56)

4. From the group project process/presentation, I have obtained useful information.
   Mean (SD) 4.42 (.51)

5. This learning style helps me to communicate better within the group.
   Mean (SD) 4.16 (.77)

6. This learning style makes me learn more about the course than the traditional lecturing style.
   Mean (SD) 4.05 (.62)

7. I learn problem-solving skills from this project.
   Mean (SD) 3.79 (.63)

8. Searching on the web is time consuming.
   Mean (SD) 3.47 (1.17)
9. Searching on the web is easier than looking for reference books. 
   Mean (SD) 3.58 (.84)

10. This learning style is time-saving. 
   Mean (SD) 3.26 (.73)

11. I prefer this learning style than the traditional lecturing learning style. 
   Mean (SD) 3.79 (.63)

In the survey, a student was asked to list three strengths or things liked as well as three weaknesses or things disliked about PBL. For dislikes, the student was asked to provide suggestions to help in improving the performance of this learning approach. In terms of strengths about PBL, students indicated that they have:

- Higher motivation for learning;
- Learned problem-solving and self learning skills;
- More opportunities to be trained for organization and presentation skills;
- Become more interested in the course with PBL than traditional learning approach;
- Applied what is being learnt with the case study problems;
- Engaged in interactive learning which is more stimulating;
- Participated in group work and learned to work with others;
- Developed broader thinking framework;
- Obtained more new information;
- Been provided with opportunities to improve their critical thinking skills;
- Been exposed to thought provoking problems;
- Applied information and knowledge in the real world situation.

The main difficulty experienced by most students was the large investment in time for completing the project. In a paradoxical sense, students also felt that as the group project could promote cooperation and they could learn to work with other classmates as well they preferred to have longer time for preparation. A more constructive comment was that content of the group project (Powerpoint slides) could have been discussed with the lecturer so that students felt more confident that they would be able to deliver correct information. Another comment was that they hoped to have more guidelines for conducting the project.

Part 2: Application of PBL for “Theory & Practice in PE & Recreation” PERM Course

This is a major required course for 1st term, 2nd year students. Thirty-two students enrolled in the class. Students identified an area for group project. They held meetings with group members and had a scheduled meeting with the lecturer for a progress report. Students divided their labor and each was often assigned to review one area of literature about specific theory. Then they discussed approaches to tackle the problem, by either conducting interviews, or distributing surveys, in
which they wrote down discussions in a journal. Then each group gave a 30-minute class presentation in English. A formative evaluation was conducted mid-semester to obtain feedback and suggestions from students and a summative evaluation was conducted upon completion of the project.

In general, about half of the class preferred PBL while the other half preferred traditional teaching and learning approach. It seems that students with better academic standing, more fluency in spoken English and better ability for independent work preferred the PBL approach in learning, while those with poorer spoken English, or non-independent workers, preferred a more traditional teaching and learning approach.

**Part 3:**
*Application of PBL for “Prevention & Care of Sports Injuries” PERM Course*

PBL has been shown to be successfully implemented in clinical disciplines of higher education such as medicine, dentistry, nursing, physiotherapy, and occupational therapy. In this project, PBL was tested for a sport science course, which is a major required course for 2nd term of 2nd year students. Students were taught to apply the steps of a systematic approach in evaluating cases of sport injuries. The steps were to ask questions about: (1) patient’s past injury history, (2) patient’s current injury history – when, where, which body part being injured, and (3) pain site and degree of pain. The next step was to determine the types of injury involved, such as muscles, joint, or soft tissue. The following step was to conduct functional tests specific to the types of injury involved. The last step was to go through a process of elimination, to pinpoint the clinical evaluation of what type of sport injury has occurred.

The lecturer of this course decided to implement PBL for clinical evaluation of sport injury cases during laboratory examination. Before examination, students practiced on examining cases of sport injury. During the evaluation, students randomly picked on a card that specified a type of sport injury. Then students had to follow the systematic steps in clinical evaluation of problem-solving to identify final analysis of type of sport injury sustained. Summative feedback by interviewing students was obtained.

As PBL was applied in examination situations, students felt the time and psychological (being very nervous) pressure in applying systemic steps in evaluation. A few students mentioned about having sudden mind blank due to extreme duress under a face-to-face oral examination situation, of which they had no prior experience.

**Discussion**

In the survey conducted by *Nutrition for Health Fitness* class, results indicated positive outcomes specifically for four areas (mean score > 4 in 1-5 Likert Scale): (1) obtaining useful information from presentations; (2) helping better communications within the
group; (3) prompting higher motivation for learning; and (4) learning more than traditional method. Positive comments were obtained for the application of PBL in 2 courses: Nutrition & Health and Theory & Practice in PE & Recreation. Both courses involve class presentation of group projects. The most encouraging feedback was that students felt higher motivations in learning and obtained more information from PBL than from the traditional mode of learning. However, students also gave negative comments about facing much greater workload in completing the group project.

From the taped VCD illustration of segments of group presentation, it was concluded that students did a good job of resolving their problems. All three lecturers agreed that a high quality outcome of learning had been demonstrated by the students.

The implications of this project for future pedagogic practice are:

• PBL can be applied to teaching PERM courses;
• PBL can facilitate students’ learning involving case studies and group work;
• More time and guidance should be given to students at the beginning of term for them to prepare for PBL approach of learning;
• Lower weighting of grading on presentations may alleviate students’ stress in getting good grade/completing the assignment.

Enhancement on Teaching and Learning

From our experiences in this project, we find a number of advantages in applying PBL in teaching:

• By taking a role of learning facilitator for students, we give students freedom to explore areas of subject matter that hold more interest for them.
• The PBL approach can provide students with real-world cases for analysis, which increases students’ intrinsic interest in the course.
• Students have opportunities to be exposed to vast arrays of web information under the facilitation of the course lecturers.
• Students may be reluctant to do group projects at the beginning but they subsequently realize the value and benefits of group projects as they learn about and appreciate the importance of team work in resolving difficult problems.
• Students have increased ability to identify problems related to recreation and physical education.
• Students become more creative in problem solving.
• Some students become more active learners as their self-learning ability and motivation increase. The PBL approach can help students develop their critical thinking and ability to solve problems independently.
• Students have deeper understanding of the theories through the application
of theories to solving real problems related to recreation and physical education. They find that they have learned and understood more through solving problems than from the traditional approach.

- The approach requires students to read more materials and read widely.
- As students have to gather information and materials by themselves, some of them discovered a broader range of knowledge through the exercise which traditional learning might not provide. They also acquired some research skills through the exercise.
- As students are involved in team work, they learn how to build an effective team and they acquire experience in dealing with interpersonal conflicts, improve interpersonal skills and are able to appreciate individual differences.
- As class discussion is an important component in PBL, this can generate more interaction and sharing of ideas amongst students.

From the students’ feedback, the following advantages in applying PBL in learning are identified:

- Students take an active role in learning by having higher motivation.
- Students get information and subject knowledge, not from direct instruction, but from information searching, organization and analyzing.
- Students can learn by applying theories to practice in real-world situations.
- When solving problems with a group, students gain experience in sharing ideas and cooperating with others.

Limitations/Difficulties

All three lecturers are receptive to PBL. However, the main limitation is that students have a heavy workload with a schedule of 19 units in a term. Students cannot afford to allocate a larger proportion of learning time for a course that adopts PBL. Although students view PBL as a newer approach which could motivate them to be more independent in learning, some of them may not be willing to invest time and effort to solve problems. In particular, those with poorer study skills and/or low motivation in learning, were generally less confident in adopting the self-learning approach. Another difficulty that students have to face is their proficiency in spoken English. They prefer to deliver presentations in Cantonese.

The following are the difficulties encountered by the students when we implemented PBL for the three courses:

- Some students preferred to learn the knowledge and get the answers to the questions/problems from the teachers and books rather than from an active learning approach.
- Searching for relevant materials and solving problems independently were difficult tasks for some students whose ability was not high.
- Reading articles was a difficult task for some students, in particular for those students with low English proficiency.
They found it difficult to understand the readings but they did not consult their lecturer when they had difficulties.

- More time and effort had to be invested but students thought they did not have the time because of the heavy workload.
- Students were very competitive with each other. They tried to do well even with tasks that carried a small percentage of marks. They spent more time than expected in the assignments and ended up putting a lot of pressure on themselves. They found that the workload was heavy.
- More time was needed than expected for students to complete the tasks independently.
- Some students had difficulties in self-learning. They might need extra attention and guidance from the lecturer. However, they were reluctant to approach the lecturer.
- Some students lacked interpersonal skills and could not handle interpersonal conflicts. They had difficulties in working with (assigned) teams and therefore they were frustrated.

**Conclusion**

We have achieved a certain degree of success in implementing PBL for two out of three PERM courses. The PBL approach in learning is particularly helpful for students to gain real-life applications for those courses involving theories and practice. We recommend further trial of PBL as a small portion of class time to year-one students in one or two major elective courses (with a smaller class size) and then a subsequent trial when the students move to second and third years. By following the same cohort of students over the years, students may become more receptive to this type of student-centered learning as they become more familiar with PBL. Lastly, lecturers have to be careful in planning the assessment items so as to avoid stressing the students excessively.

**References**


Enhancing Student-teachers’ Learning and Teaching through Guided Reflection

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Abstract
The project aimed at developing the ability of student-teachers of the new full-time Postgraduate Diploma in Education Course to better reflect on their teaching and prepare them for assuming their roles as teachers. Students participated in a series of group meetings in which they shared their feelings, thoughts and emerging concerns from their initial involvement in teaching. The meetings were held during the six-week practical component of the Course and continued during the first few months of their teaching in schools. The sessions were observed and recorded using a participant observation technique. In between meetings, the students were visited in their schools and interviewed to solicit their main concerns and thoughts. Main themes raised by the students served as a basis for their reflection in the meetings. Follow-up interviews highlighted the contribution of the sessions to students’ ability to reflect and to learn through guided reflection by the investigators. Using the above method enabled student-teachers to obtain direct feedback about their reflection process and help them to assume a more active role in evaluating their own teaching practice.

Key words
Teacher development, guided reflection, student-teachers’ learning

Introduction
One of the suggested ways to develop the reflective skills of teachers is to involve them directly in enquiry activities into their own teaching and monitor their learning through reflection sessions (Henderson, 2001; Pollard, 2002; Moseley & Ramsey, 2008; Postholm, 2008; Shussler et al., 2008). The development of teachers’ ability to reflect on their own teaching is one of the major aims of the Postgraduate Diploma of Education Course offered in the Department of Education Studies.

Involvement of students in enquiry activities has been implemented in an elective entitled Classroom Research, which was taught by the principal investigator.
of the project. A list of 120 concerns was raised by students as part of their initial reflection exercise. These concerns were related to personal and professional issues which teachers have to face in practice. While students were engaged in simulated enquiry activities in the class, they were not given the opportunity to undertake these activities in their practice. It was hoped that during the component entitled Supervised Teaching Practice (STP), students would be generating questions and subject their everyday professional experience to ongoing critical reflection, action and observation, a process which is of high value for teachers since it facilitates their understanding of their teaching practice, helps them to gain a better understanding of their role and improves their teaching and their students’ learning. While reflection is an essential process for student-teachers, it is best undertaken in a collaborative manner where participants share their experience and thoughts in a dialogical way. We can then ensure that “the audience serves to validate, extend, modify, support, or reject what we think through by interacting with us and providing feedback that can happen only in a collaborative process” (McAllister & Neubert, 1998, p.6) Furthermore, collective thinking on experiences and ways to improve practices is a significant process for teachers (Kwo, 1998). To best facilitate such a process, the use of guided reflection is highly recommended for pre-service students and beginners-teachers (Wodlinger, 1990; Baker & Shahid, 2003; Orland-Barak & Yinon, 2007; Nolan, 2008).

This includes teacher’s modelling and questioning in the classroom setting, with models of reality being analysed before and during the field opportunities (McAllister & Neubert, 1998).

Aims and Objectives
The present project aimed at enhancing the reflection skills of student-teachers in their initial practice experience as teachers. The objectives of the project were as follows:

1. to develop in student-teachers the practical knowledge of reflection;
2. to provide a platform and forum for collaborative reflection on their initial teaching experience;
3. to facilitate their application of reflection in their initial teaching experience; and
4. to provide support for their personal and professional growth into the teaching profession.

Methodology
The project was implemented with students who attended the course Classroom Research during their initial reflection stages in class. Consent was sought from students and all of them (total=16) agreed to participate. The methodology employed in the project comprised: four guided reflection sessions undertaken in a group setting and two individual interviews with students. The two interviews were conducted with the students to solicit their generated concerns and questions about their teaching and
learning. The first interview was held during students’ six-week Supervised Teaching Practice (STP) period while they were still students of the PgD in Ed Course. The second interview was held during their actual teaching in schools after they had completed the Course. Data solicited through the interviews were analysed using the NU•DIST Qualitative Package to arrive at the main themes of student-teachers’ general concerns and specific questions.

**Results/Findings**

**Sharing Sessions**

During the first two sessions, students reflected their concerns about finding employment in teaching. Being fresh graduates, only a few of them had been invited for interviews or been offered jobs. With the guidance of the project investigators, those who had attended job interviews shared their experience of the interview process and content.

This was followed by an interactive discussion on interviewing techniques and the best ways to prepare for interviews. Since the participants were from different disciplines, the sharing was useful in terms of widening their practical knowledge and understanding about other subjects beyond their own. Furthermore, they had a better understanding of the local job market in the teaching profession, for example, the small number of teaching positions for History.

The process undertaken during these sessions illustrated the usefulness of the guided reflection employed by the project investigators. Below are some examples of student-teachers’ accounts:

One student-teacher in the English major said:

> The preparation [for the job interview] is important. I did a lot of predictions and prepared standard [questions and] answers. I also collected past materials and put them into a file in order to show the principal.

Another student referred to the importance of raising the level of confidence during the interviews. She said:

> The principal showed me some [school] situations which involved discipline problems and asked me to suggest some coping strategies. I answered him confidently even though I was not sure whether my suggestions were good enough. I would suggest that all of you show your confidence when you respond to the interviewer.

The following two sharing sessions took place after the participants had obtained a teaching position in schools. The focus of the sharing sessions shifted from issues related to job hunting to feelings and thoughts related to job competencies and satisfaction. While some participants indicated that they obtained an acceptable position, others showed lower satisfaction which they attributed to a mismatch between their expertise and their
present job. In general they also felt their qualification was underestimated. Some examples are as follows:

One History major student said:

Right now I am teaching in a primary school... I do not enjoy teaching there. My students are very young and it is so time-consuming to handle classroom administrative tasks, for example, collecting money [fees] and homework.

Another student mentioned:

I am a teaching assistant and I am not given the chance to teach in class. In fact, I am only acting as a tutor and students ask me questions only during recess or lunch time.

While reflecting on their positions as teachers, the participants raised several issues related to their current position and its impact on their lives. The common concerns of the participants included aspects of socialisation into the new school and being overworked, which apparently affected their quality of life. Some student accounts were as follows:

The problem is that my school has a lot of hidden agenda; everyone just goes on and you are behind them. You do not know how to operate. For example, teachers were supposed to go to the playground to lead the students to their classrooms. However, no one told me about that, so I went to the class [directly]. [To my surprise,] I saw nobody [in the classroom]. After a while, I discovered my students lining up in the playground and immediately I rushed to them.

I feel so tired after work that I go straight home for rest. I cannot think about anything else but watch TV. During weekends, I spend much more time sleeping at home.

Interviews

Two interviews were held with the student-teachers. The first was conducted during their participation in the Supervised Teaching Practice (STP) as part of the PgD in Ed Course. The second was held after their graduation from the Course and during their first year of teaching.

The main themes raised during the first interview related mainly to the STP. Student-teachers described the main duties they understood as well as the things they learned and their related feelings and concerns.

Student-teachers’ duties were related to their subject teaching and their involvement in extra-curricular activities. During their STP they learned communication skills, new teaching methods, issues related to time and classroom management, as well as to school structure and administration. The student-teachers felt fairly happy about the STP asserting that this mechanism was practical and helpful. Some students mentioned that they were being a bit overloaded during this practicum. Students were mainly concerned with classroom discipline. A few of them mentioned the
problem of having inadequate school resources. Following are some typical examples of these students’ accounts:

...In fact, I have been struggling for the direction of classroom management. Some teachers set many rules at the beginning of the lesson. Students are quiet during the lesson, but the relationship between the teacher and the students is poor and students dislike the lesson too. I find that if I set fewer rules, the learning atmosphere of the class is better and students can enjoy the learning process [more]. Even the students who dislike studying will also participate in the lesson. Therefore, I am still groping for the best controlling level of classroom management.

...I teach an elite class and I need to follow two of their examinations. I’m nervous, as I’m loaded with many responsibilities and much pressure. I looked for the results in the past, fearing that their results would step backwards. [Luckily] the results which have just been announced showed that they [my students] have made a little progress.

Student-teachers also suggested that the period for STP could be extended so that they can have more practical experience. At the same time they suggested shortening the School Experience (SE) period. It seems that students were really keen to embark on the teaching duties earlier in the Course.

The second interview shed more light on student-teachers’ initial teaching experience after graduation from the Course. The main themes arising from their accounts included their current responsibilities, what they have learned from their teaching experience and their feelings, thoughts, expectations and concerns about that. Their responsibilities were mainly serving as class teachers and subject teachers and taking part in extra-curricular activities. During their initial teaching experience, they acquired communication skills with their students and colleagues. They understood better the role of a teacher in teaching and in class management. They further experienced the importance of stress management and competence of coping with problems independently. Below are some student-accounts:

Other than learning how to be a teacher, I also learn how to tackle my working pressure, and how to handle problems in the changing teaching environment. I know how to rank the priority of work. I can develop a good relationship with my students. I believe that my pressure could be reduced if I could maintain good relations with students.

I learnt how to keep a good relationship with colleagues and how to communicate with parents. I need to contact parents of those students with weaker academic results in the English subject, talk with them regarding the causes of students’ poor results and their difficulties in learning English. I [gradually] learnt the
techniques in handling parents. It is very important for me to communicate with colleagues.

When talking about their feelings, student-teachers referred to the relationship with their colleagues as well as their work nature:

My colleagues are very nice and friendly. Teachers always group together to have gathering every week, such as playing football. Female teachers will watch our match together. Teachers will also travel together and have dinner and lunch together. We all help each other in teaching and share our teaching material and exam papers. We work together like friends.

I feel very happy because I meet some helpful and nice colleagues in this school. I am a Christian. I can share my feeling and experience with others in the praying meeting. We always help each other. Although there are not many Christian teachers in our school, the atmosphere is very good and harmonious. There are only 10 Christian teachers in our school.

Their main concerns were in their relationship with their students and at times there were some conflicts among their colleagues. They also shared their difficulties in teaching their subjects and issues related to pressure and workload at school. When facing such problems, the student-teachers would either solve the problems by themselves or consult colleagues and friends. Ideally, student-teachers expected to solicit support from their school in terms of getting some background information, useful teaching materials, proactive assistance from their colleagues, adequate mentoring support and less pressure from school. In reality, the support they obtained from their school was along their expectations.

The relationship among teachers is quite complicated. Teachers always struggle with each other for promotion chances. For example, some teachers will send e-mail to tell the principal about the personal life of other teachers and about some teachers who have lost their exam papers and other belongings in the staff room, etc.

It is difficult for me to handle students with emotional problems. Some students (3-4 out of 37 students each class) have such problems. These students cannot sit down [properly] and pay attention in class. They cannot refrain from moving their bodies. Teachers always ignored these students’ actions and behaviour deliberately. [I think] schools pay less attention to or deliberately ignore some students with emotional or intelligence problems. In fact, they [these students] should be sent to special education schools. However, the parents refused to do that. As a new teacher, I can do nothing to solve this problem, as it’s the culture of the school. Regarding the class teaching, most of the students attend private tuition after school. As a result, they do not pay attention in class.
When comparing their current teaching to their STP experience, student-teachers indicated some similarities and differences, with the latter related to the amount of their responsibility and stress.

It's almost the same. Unlike other student-teachers, I was a teacher in this school before. Also, I was doing STP in this school. I know the [school] culture and students' preferences for this school and I know how to draw their attention in class. One different thing is that the responsibility of current teaching is much heavier than that of STP as I need to do follow up actions concerning students' homework and examination result.

We had a lot of time for lesson preparation in STP. For example, I could spend 3 hours for one lesson preparation. However, I cannot do that while teaching now. I had no other duties in STP whereas currently I have a lot of duties. As a class teacher, I face some technical problems that I have never encountered in PgD in Ed course. For example, I could not enroll in the PgD in Ed subject “School Guidance”. Anyway, I don’t know whether the guidance subject can help us or not. Actually, I have no working experience as a class teacher. I believe that September is the most important month for Form 1 new students to adapt to the new school life. However, I did not provide any [special] guidance for them.

My expectation of STP was less than that of the current teaching. I have lighter responsibilities in STP. As for teaching, I see no big difference during the STP and my current teaching.

There is a great difference between my current school teaching and STP. I think that the period for STP was rather short. I could not learn much from STP and could not establish a student-teacher relation within the two-month period. Besides, students always thought that I [student-teacher] was a learner and did not treat me as a teacher. As compared to my current school teaching, I learn more communication skills and teaching techniques.

There is a great difference between my current school teaching and the STP. I was not a class teacher during the STP while I am a class teacher in my school now. Actually, I devote much time in performing a class teacher’s role rather than in preparing my teaching content. During the STP, I could attend more to the teaching content and teaching techniques such as using IT presentation. However, I can hardly devote much time to preparing for my routine teaching. I really do not have time to do so. As a class teacher, I need to handle students’ behavioural and emotional problems. To sum up, I have more responsibilities and pressure during my current school teaching as compared with the STP.

**Discussion**

Student-teachers’ feedback indicated that the present project has been highly
relevant to their career as teachers. The project has provided a platform for them to reflect in a collaborative manner on their teaching experience in their last stage of studying and their initial stage of their teaching career. Student-teachers were able to share their concerns and get support for their personal and professional growth. They indicated the usefulness of sharing their experiences with their fellow-students and highly appreciated the advice of their project investigators with the sharing sessions being undertaken in a form of guided reflection.

The information solicited through the interviews which were conducted with student-teachers at several milestones in their teaching experience shed light on their concerns, feelings and thoughts. It was interesting to find out the common concerns which set the foundation for the sharing sessions. What made the sharing sessions so unique was the informal setting, that is, being relaxed and yet creating an atmosphere conducive to learning. The sharing sessions were found to be the most appropriate forums for student-teachers in their final stage of learning as well as when they embark on their role as initial teachers. While being students of the PgD in Ed Course, they reflected on their learning process, and when being initial teachers, they reflected on both their learning and teaching experiences. The sharing session can be viewed as the intersection between two important stages in their development and thus supports a smooth shift from being learners to practitioners.

With the investigators escorting the participants throughout these stages of development and providing guided reflection on themes raised by them, the participants gain a holistic understanding of their role as teachers and can better reflect on both their teaching and learning processes. This reflection can enhance their acquisition and implementation of coping strategies necessary for best undertaking the role of a teacher:

**Enhancement on Teaching and Learning**

Student-teachers’ feedback on the contribution of the project to their professional development as teachers has indicated clearly how it has enhanced their teaching and learning. They especially indicated the usefulness of the sharing sessions which were the core of the project. Based on the main themes which emerged out of the individual interviews, the sessions provided an excellent platform for student-teachers to share the common issues they tackled during the initial phases of their career as teachers. Both the interviews and the sharing sessions were very helpful in facilitating student-teachers’ reflection on their experience both as students and initial teachers. They kept emphasizing the usefulness and contribution of the sessions in enabling them to talk about their difficulties, making them aware of their peers’ problems and facilitating them to obtain support as well as advice from the lecturers:

*During the sharing session, we discussed*
with each other regarding our teaching experience and the interview process for teachers’ recruitment. I think that the sharing session is valuable. Sharing sessions should be relaxing in nature so that we can bring up questions and share our experience with each other. It is good that our lecturers/advisors can give us some advice and comments.

It is good that the sharing sessions address our sharing of working experiences, for example, ways of handling disciplinary problems, teaching skills and job vacancies in the market, etc.

Some students came up with some suggestions for the nature of the sharing sessions, stating that they could be combined with training sessions on updated issues. They also suggested holding the sharing sessions on holidays when more teachers are free, and this will enable everyone to attend.

There should be no limitation in the topics and scope of sharing. I expect that we can share our experience in teaching and problem-solving with one another. We can also talk about our attitudes towards teaching and mutually encourage ourselves when we are frustrated with our routine teaching. It [The sharing session] should be in a group format.

It can be done during a casual dinner. We can just share our teaching and experience with one another.

I do not have much expectation of the sharing sessions. I [simply] expect it to be a gathering session or a supporting team for classmates to share their experience with others in tackling different teaching problems in school. As a result, we can support one another.

It is good that the sharing sessions facilitate our sharing of working experiences, for example, our ways of handling disciplinary problems, our teaching skills and updated information about job vacancies in the market, etc.

Teachers will not come as they have to attend meetings in schools, and as new teachers, they are particularly busy with their work. They will not bother to come all the way from the New Territories to [the meeting venue in] Kowloon. The most obvious constraint is time. It will be better to have a workshop first and a dinner next…

Maybe you can offer a training session prior to the sharing sessions. We can hold the sharing sessions informally over dinner. For me, it will also be better if we hold the sessions over the holidays…

Even though the majority of the students indicated the importance of holding the sessions in an informal setting, one student suggested having it as a formal meeting which combines individual consultation with a group sharing:

It should be a formal session rather than
a gathering session. It will be better if the lecturer and professor meet individual student periodically first, and then conduct a group session after individual consultation. However, the sharing sessions actually provide us chances to understand the situation of our classmates and other schools. Therefore, spending half an hour on individual consultation will be more useful for us in tackling our individual problems.

Based on the success of the project in achieving its objectives, it is recommended to continue introducing similar activities which could facilitate student-teachers’ reflection. Since the use of informal settings is of great significance to the success of the collaborative sharing sessions, it would be useful to combine the sessions with some activities which are more explicit in nature.

**Limitations/Difficulties**

There were two main constraints which affected the smooth running of the project. These included the change of Project Assistant and the student-teachers’ heavy workload at schools. The first constraint led to the need for extending the project duration. The second constraint caused a reduction in the number of interviews conducted with students as well as in the number of sharing sessions. Even though these constraints affected the smooth running of the project, the investigators managed to achieve the stated objectives. Students were interviewed before and after embarking on their jobs as teachers, which provided an in-depth picture about their feelings, thoughts and concerns. The main themes which came up during the interviews served as the foundation for the sharing sessions. In addition, the investigators made use of the electronic mail to communicate with the student-teachers when it was difficult to arrange a sharing session due to their heavy workload.

**Conclusion**

Results of the project indicated the importance of involving student-teachers in activities which would facilitate their reflection in their last stage of study and their initial stage of teaching. The sharing sessions were significant in that they served as the platform for students to share their experiences with one another and learn different ways to cope with their concerns. Interviews held with students during the above two stages in their career highlighted the main themes which served as the foundation for guided reflection by the investigators during the sessions. On the whole, the project was successful in achieving its objectives of developing student-teachers’ practical knowledge of reflection, providing them the forum for collaborative reflection, facilitating their reflection in their teaching experiences and providing them with the adequate support for their personal and professional growth. The use of guided reflection in a group setting and with the involvement and support of the lecturers, was found to be an effective way for enhancing student-teachers’ personal and professional development. Our project
has indicated the contribution of guided reflection to support student teachers at the last stage of their study as well as then they change to be beginning teachers. Previous examinations of guided reflection mechanisms among pre-service teachers have indicated the contribution of self-directed (Chitpin, Simon & Galipeau, 2008), and journal writing approaches (Wodlinger; 1990; Baker & Shaid, 2003). Our project highlighted the contribution of the sharing sessions mechanism. Based on the results of the project it is recommended to include the use of this mechanism in our pre-service teacher education programmes and continue it while the students embark on their job as teachers.

References


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The Development of Authentic and Localised Instructional Materials for the Teaching of Business English to Year I BBA (Honours) Students at Hong Kong Baptist University

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Abstract
The project aimed to investigate the English language skills and needs of graduate employees in four banks in Hong Kong so as to match these skills with the existing curriculum of Lang 1 160: English for Business, and to revise and improve the materials used on that course. On-site investigations were carried out to gather information. This was then matched with the existing instructional materials used to teach the Business English course, and revisions were made to improve them. It was also found that the existing curriculum covered many of the needed English skills but would benefit from a longer duration.

Key words
Business English, authentic and localized instructional material

Introduction
Before starting this project, I had been teaching Business English to Hong Kong Baptist University students for more than ten years. One of my major responsibilities as the Business English course coordinator and teacher was to design and run the Business English course for first year students studying for the degree of Bachelor of Business Studies (BBA Honours). This was a compulsory 40-hour course taught to more than 300 BBA students every academic year, which aimed to improve their English language skills for business studies and business communication. There is a widespread perception among Hong Kong employers and the general public that the English language standards of university graduates are not
good enough to meet the needs of the economy. Employers have in the past decade become increasingly dissatisfied with the English language standards of the university graduates that they employ (American Chamber of Commerce Survey, 2001; Chew, 1999; Hong Kong Census & Statistics Department Survey, 2000; Hong Kong General Chamber of Commerce, 2001; "Mainland Cities," 1999; Standing Committee on Language Education and Research, 2003). The business sector is alarmed that the poor English standards may cause the city to become less competitive not only with its traditional rival, Singapore, but even with some cities in mainland China where standards of English are improving fast ("Business Community," 1999; "Job Applicants," 2002).

As a teacher of Business English to university students, I was very interested to find out for myself how these graduates were faring in the workplace. I therefore decided to conduct my study in there. I specifically wanted to investigate the English standards of bank employees, since the financial sector is one of the pillars of the Hong Kong economy and Hong Kong has one of the world’s most developed and modern banking systems, in which the use of English is very important. I would first gather the necessary information, and then match what I found with the existing curriculum for Business English and make revisions so as to improve it.

I also had the opportunity to participate in a large-scale collaborative project conducted by and across five local universities. It was entitled Teaching English to Meet the Needs of Business Education in Hong Kong and it was headed by Professor Vijay K. Bhatia and Professor (Chair) Christopher N. Candlin from the City University of Hong Kong. This five-university project was funded by the Standing Committee on Language Education and Research Language Fund (SCOLAR). It investigated the scenario within the academy regarding the adequacy and efficacy of the English courses offered to undergraduate students in the Business faculties. I was the Baptist University coordinator for this five-university project.

Aims and Objectives
The aims of this project were:
1. to investigate the English language needs of graduate employees in four banks in Hong Kong, so as to determine what kinds of English writing and speaking skills are needed to carry out their daily work;
2. to investigate what difficulties the employees encounter in carrying out their tasks in English and what solutions they adopt for overcoming these difficulties;
3. to match these skills with the existing teaching materials of Lang 1160: English for Business; and
4. to revise these materials and improve them to make them more authentic and localised so as to better prepare these BBA students for future work challenges in English in Hong Kong.
Methodology

The project consisted of four stages.

Stage 1

Letters were sent out to 20 banks in Hong Kong in June 1999 requesting their participation in the study. My aim was to get the target number of six banks to participate in the study. Most of the banks did not even bother to reply. A few did reply but declined to take part in the study citing resource limitations. Fortunately, through my repeated attempts and through the contact gained in one bank, I eventually managed to get the consent of four banks to participate in the study.

Stage 2

I interviewed a total of 16 employees in the four banks in order to investigate the first and second aims of this study. Each of these interviews lasted about one hour and they have been transcribed so that there are more than 16 hours of work description and details about the informants’ language use. The informants were also asked to complete a questionnaire detailing various aspects of their work and language use. I used a modified version of the questionnaire used by Bhatia and Candlin in their study of the communicative needs of legal professionals in Hong Kong (Bhatia & Candlin, 1998). In one of the banks, I also interviewed the Head of Department for his views about the role of English in the bank, and was allowed to generally observe the work of his department. However, none of the banks granted me access to any of their written documents. Consequently, I have had to scrutinise the information gathered from the interviews.

Stage 3

I then used the information and insights gained from the interviews to study the existing instructional materials adopted for use in Lang 1160: English for Business and then to modify the materials so that they would be more relevant to workplace English skills and would better equip our Business School students with these skills.

Stage 4

The modified and improved instructional materials were trialled in the classroom in the 2001-2002 academic year. They were then further revised and used in the 2002-2003 academic year, after which they were yet again revised and used in the 2003-2004 academic year. This meant that the instructional materials for the teaching of Business English to year-one BBA (Honours) students at Baptist University went through three rounds of revisions even as they were being adopted for use in the classroom over three academic years.

Results/Findings

The 16 informants perform numerous and varied tasks in their respective positions. Classifying them broadly, four informants are in marketing or selling retail banking products and services, three are in corporate communication, four are in the area of computer and information technology and Management Information
The findings for the first aim, which is to investigate the English language needs of graduate employees in four banks in Hong Kong so as to determine what kinds of English writing and speaking skills are needed to carry out their daily work, reveal that there is an interesting and diverse use of English at work. Seven of the 16 employees use English primarily for reading and writing while one uses English only for writing. However, eight use English in all the four linguistic areas of reading, writing, speaking and listening. Further analysis of the use of English for speaking and listening by the eight staff members reveals the following insights: one informant provides IT support and uses English for oral communication with vendors from Australia and the USA about twice a year. Another informant is an investment analyst and uses English for discussions with English-speaking counter parties from other investment houses and for business lunches where social English is used. All the four employees of one of the banks are required to speak English because the bank is a branch of a multinational bank and it has many international members of staff, particularly in the more senior positions. Two informants in another bank work in the Corporate Communications Department and they report to a British Head of Department. In addition, one of these two employees reports directly to the Bank’s CEO who is a non-Chinese. Thus, it is found that in all the eight cases where English is used for oral communication, it is with English-speaking colleagues and associates.

2. Asked about the difficulties employees encounter in carrying out their tasks in English and what solutions they adopt for overcoming these difficulties, five informants report that they have no English language difficulty, while another informant reports having had initial difficulty in writing but states that this is no longer the case. Further analysis reveals that some informants do not encounter any difficulty because they can either pass their writing to their supervisors to be checked and corrected, or they have a standard format or template that they use.

Of the remaining 10 informants who reported, or are identified as, having some difficulty with the English language, six had difficulty in writing memos, proposals or reports and taking notes, while the other four had difficulty in oral communication. Three from this latter group reported not being familiar with social English. The need to give quick and accurate verbal responses in English was also cited as a difficulty by two of them, who were actually the most competent users of English among the 16 informants in this study. The most common solution for their writing difficulties was to
pass their writing to their supervisors for correction. One such supervisor in turn passed it on to an external copywriter for further correction and improvement of the language. Only two informants tried to solve their language difficulty by taking a course after office hours—a writing course for one and a speaking course for the other. But the informant who took the speaking course stopped taking the course because it was too basic to be helpful to her. The remaining eight informants facing some language difficulty were not doing anything about it.

3. The findings for the third aim, which was to match these skills with the existing curriculum of Lang 1160: English for Business, revealed that our curriculum does cover, to a considerable extent, the speaking and writing skills used by the bank employees in this study. The skills we teach include speaking skills such as how to participate in meetings and to articulate one’s opinions, how to give short oral presentations, and writing skills such as how to describe graphs and tables and present information on trends, how to write short reports, how to write memos, and language exercises to help students with these writing tasks. However, the existing course does not cover social English skills because there is no time for it in a 40-hour course.

4. The fourth aim was to revise the existing Lang 1160: English for Business materials and improve them to make them more authentic and localized, so as to better prepare BBA students for future work challenges in English in Hong Kong. I made revisions to the instructional materials for this course so that they became more relevant and also added more exercises based on local examples to provide more practice in using the right vocabulary, tone and style for writing in the workplace.

Enhancement on Teaching and Learning

The findings of this study affirmed what I had expected would be the useful workplace English skills to include in the course Lang 1160: English for Business. The existing curriculum was improved by revisions to the materials to give the students more language and grammar exercises based on local contexts so that the materials would be more authentic and more relevant to our students’ needs. However, the fact remained that the duration of the one-semester course, which was only 40 hours for three credits, was not sufficient to produce significant improvement in students’ English speaking and writing skills. The students needed English training during all three years of their university education, and not just in one semester in their first year. This would allow a broader range
of English skills to be taught, including social English skills.

Limitations/Difficulties

My original target was to get six banks to participate in the study. This figure proved to be unattainable. However, after repeated attempts, I was able to get four banks to agree to participate. The collection of data started in the summer of 1999, but later there were personnel changes in one of the banks involved, and further access was denied. This was a setback to the project and considerable momentum was lost. I also found that I could not control the number of employees who could be interviewed. The number of visits I could make was also dictated by the banks. I was also not given access to the documents written by the bank employees because the banks regarded them as confidential.

The interviews with the 16 bank employees provided approximately 16 hours of work description and details about their language use. The transcription of these interviews proved to be very difficult and time-consuming because the interviewees were generally not articulate, the pronunciation was in many instances unclear, the speech contained many grammatical and syntactical errors, and there was a great deal of repetition of non-meaningful words such as “the”, instances of stuttering, swallowing of certain words and other such problems. It took about 10 hours to transcribe each one-hour interview. This was just the first stage. In the second stage, I listened to each interview again and again, and went over the transcribed data to correct mistakes. The correcting and typing up took many more hours.

Conclusion

The project has been very useful in allowing the researcher to look outside the academy and in the workplace to determine the kinds of English skills new graduate bank employees use for their daily work, and the difficulties they face in using these English skills. As a result of the insights gained, the course materials have been revised to make them more authentic and the language exercises based on local contexts have been increased. All these add up to significant improvements in the instructional materials for Lang 1160: English for Business. More, however, could have been achieved if the banks had given the investigator access to some of their employees’ written documents. I conclude by quoting Sarangi and Roberts (1999):

… we, as analysts, need to immerse ourselves in specific workplace contexts. And shedding light on specific and local practice is equally important if we want to go beyond understanding and explaining to contributing to change. We believe that discourse analytic and sociolinguistic studies of workplace communication should be grounded in an ethics of practical relevance. (p. 2)

References

Bhatia, V.K. & Candlin, C.N. (1998). *The law society of Hong Kong project: Strategies and competencies in legal communication – A study to investigate the communicative needs of legal professionals.* Hong Kong: City University of Hong Kong.


Hong Kong Census and Statistics Department. (2000). *2000 Establishment survey on manpower training and job skills requirements.* Hong Kong: Author.


Business community can help. (1999, September 27). *South China Morning Post.*

Job applicants could not make the grade. (2002, December 15). *South China Morning Post.*

An Evaluation of the On-site Peer Observation Process to Enhance the Quality of Teaching and Learning of the Student Teachers of the Postgraduate Diploma in Education Course

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Abstract
The study aimed at examining the views of the student-teachers and supervisors on the On-site Peer Observation (OPO) component of the Postgraduate Diploma in Education Programme (PgD in Ed) offered by the Department of Education Studies of Hong Kong Baptist University. A total of 122 students participated in the study by completing a self-administered questionnaire. Interviews were conducted with 30 of these participating students and with ten instructors selected at random. Results indicated the OPO had played an important role in enhancing student-teachers’ reflection on their teaching and studies. Based on the results, three main recommendations were made to further enhance student learning.

Key words
Peer observation, initial teacher development, student teachers

Introduction
In pre-service and in-service teacher education, peer observation is widely practiced and accepted as a valuable contribution to evaluating teachers’ performance and enhancing teachers’ professional development (e.g., Cosh, 1999; Einwaechter, Jr., 1992; Elghannam, 1997; Munson, 1998; Richardson, 2000; Rauch & Whittaker, 1999). Since the launching of the in-service PgD in Ed Programme at Hong Kong Baptist University in 1993, on-site peer observation (OPO) has been an integral component of the Programme. To fulfill the requirements of this component, each student is required to conduct two OPO sessions in the first year of his or her studies. These sessions take place in
the classroom of the student’s own school. Based on the criteria stipulated in the Assessment Form, the student observes and evaluates fellow-teachers on different aspects of teaching (e.g., planning and preparation, implementation and classroom interaction and management, etc.). Furthermore, each student is required to submit an observation report to his or her instructor, a subject specialist, who will comment on the report. At the end of the semester, students are required to attend a seminar facilitated by their subject specialist to share the experiences gained from the OPO sessions. While the Supervised Teaching Practice, another component of the Programme, has been examined with respect to its impact on student-teachers’ learning, no in-depth systematic evaluation of this OPO component of the Programme has been conducted so far.

Aims and Objectives

The project aims at examining the impact of OPO by exploring student-teachers’ views on different aspects involved in the process on one hand, and soliciting the views of subject specialists involved in monitoring student learning in this process on the other. The study not only will help to establish a baseline for evaluation of OPO, but also will contribute to further enhancing student-teachers’ teaching and learning with respect to professional development.

The specific objectives of the study are as follows:

1. To examine the views of student-teachers on the process of OPO, its contribution to their learning and its promotion of their reflective teaching;

2. To obtain subject specialists’ feedback on the process of OPO and their way of monitoring student-teachers’ teaching and learning in this process;

3. To solicit student-teachers’ and subject specialists’ suggestions for enhancing and monitoring student-teachers’ learning and reflective teaching through OPO; and

4. To further develop and refine the guidelines for enhancing the quality of OPO process and for facilitating student-teachers’ teaching and learning.

Methodology

Both quantitative and qualitative approaches were used in this project. Data were collected through mailed questionnaires and follow-up personal interviews. One hundred and twenty two year-one (74) and year-two (48) student-teachers participated in the study by completing a self-administered questionnaire which included close-ended questions and a specific open-ended question in order to allow for additional comments. The items of the questionnaire focusing on different aspects and the potential impact of the OPO were rated on a 5-point Likert scale from “strongly agree” (5) to “strongly disagree” (1) (refer to Appendix I). Questionnaires and follow-
Face-to-face personal interviews were also conducted with 30 student-teachers and 10 instructors selected at random.

**Results/Findings**

The major findings of the study are summarized below. The quantitative data from questionnaires focuses on student-teachers’ views on the impact of the OPO, such as enhancing teaching skills, understanding teaching ability, and so on. The qualitative data from interviews includes elaboration of and comments on the OPO by both student-teachers and subject instructors.

**Quantitative Data from Questionnaires**

For the sake of brevity, when reporting the findings in the following, the “agree” and “strongly agree” response categories of the question items were collapsed. Students’ responses were grouped under the following headings: (1) OPO as a component of the Programme; (2) preparing students for OPO; (3) monitoring of student learning in the OPO process; and (4) impact of OPO on student teaching and learning.

1. **OPO as a Component of the Programme**

   On the whole, close to three-quarters (73.8%) of the student-teachers indicated that the OPO was an integral component of the Programme. About three-fifths (60.6%) agreed that scheduling one OPO visit for each semester in the first year of study was appropriate. Regarding the relationships between the OPO and the other courses of the Programme, the majority of them also agreed that the OPO complemented both the courses EDUC 4011-12 Teaching Principles & Subject Instruction (72.7%) and the Supervised Teaching Practice component of the Programme (69.7%). Though the OPO was regarded as an integral component of the Programme, more than half of the respondents (56.5%) thought that the OPO should be more structured.

2. **Preparing Students for OPO**

   Student-teachers responses show that not enough information had been provided in preparing students for the OPO, particularly with respect to explaining the objectives of this component and providing guidelines for conducting OPO. While only half of the students (51.7%) indicated that the objectives of the OPO were clear to them, about two-fifths (42.7%) agreed that they had not been given enough guidelines for conducting the OPO. About one quarter (26.3%) agreed that they had not been adequately prepared to benefit from the OPO. Regarding the assessment form to be used for observing and evaluating teaching in the OPO...
process, the results were more positive. More than half of the students (52.9%) mentioned that the assessment form provided useful guidelines for them to conduct OPO and about two-thirds (66.4%) said that the form contained useful information on what important features to look for in OPO.

3. Monitoring of Student Learning in OPO

Monitoring of student learning involved two major aspects: (1) students’ writing of an observation report; and (2) instructor’s feedback on the written report. The findings show that slightly less than half of the students (45.9%) agreed that the observation report was an effective means of monitoring learning and also just more than half (53.7%) reported that instructor’s feedback on the report was helpful to their learning. In both instances, about one-third of the respondents (32% and 34.7% respectively) were neutral regarding the mechanism for monitoring student learning. Few reported it was ineffective or unhelpful.

4. Impact of OPO on Student Teaching and Learning

The impact of the OPO was assessed by question items touching on a number of aspects relevant to teaching. The majority of the students agreed that the OPO had made a positive impact on their learning experience (80.9%) and some indicated that their learning experience in the OPO had been very rewarding (58.2%). On the whole, they also tended to hold positive views about the OPO process. These positive views about its helpfulness in descending order included: (1) providing a learning opportunity to observe the complexity of teaching (78%); (2) developing the ability to evaluate one’s own teaching (77.1%); (3) knowing more about various aspects of teaching (77.1%); (4) learning how to teach better (76.2%); (5) providing a learning opportunity to look at teaching from the evaluator’s perspective (75.2%); (6) reflecting on one’s own teaching (74.6%); (7) assessing one’s own teaching ability (72.9%); (8) enhancing one’s teaching skills (67.8%); (9) understanding better one’s teaching ability (65.5%); and (10) giving one more confidence in learning how to teach better (60.6%).

Qualitative Data from In-depth Interviews

In-depth face-to-face interviews held with interviewees (student-teachers: 30 & instructors: 10) highlighted the benefits of OPO as well as the areas for which improvement could be made. The accounts of the student-teachers and the instructors, subsumed under six headings, are briefly summarized in the following paragraphs. The areas of OPO examined include: (1) objectives; (2) sessions, scheduling, and arrangement for observation; (3) integration with other courses of the Programme; (4) monitoring process; (5) impact on student teaching and learning; (6) difficulties encountered...
by student-teachers and suggestions for improvement.

1. **Objectives of OPO**

Some student-teachers indicated that OPO not only provided an opportunity for them to observe another teacher’s teaching, but it also enhanced their ability to reflect on their own teaching. They maintained that through this mechanism they could learn from others’ teaching approaches and improve their own teaching skills.

Instructors’ views were similar to those of the student-teachers with regard to the objectives of OPO and its contribution to learning. Most of them maintained that OPO provided a valuable experience and could enhance student-teachers’ reflection on their teaching. They further believed that through observation student-teachers could learn from others and put theory into practice.

2. **Sessions, Scheduling, and Arrangement of OPO**

Most of the student-teachers interviewed thought that it was appropriate to have two sessions for OPO and some suggested that the two sessions should be scheduled with one in the second semester of year one and one in the first semester of year two. This was different from the current practice, with one session scheduled in each semester of year one. Some of them further emphasized that the period between the two sessions should be long enough to allow more time for them to reflect on their teaching.

Though most of the instructors indicated that the present arrangement of OPO was appropriate, some of them preferred to have the first session in the second semester. A reason to support this was that students should be given more time for reflection between their first Supervised Teaching Practice assessment, which took place almost at the end of the first semester, and their first OPO, which, in the current practice, was also scheduled in the same semester.

3. **Integration of OPO with Other Courses of the Programme**

When commenting on OPO, some student-teachers expressed that since OPO and Supervised Teaching Practice were complementary to each other, they should be integrated, while others mentioned that integration with the core course, Teaching Principles & Subject Instruction, was appropriate. Other courses suggested included Classroom Management, Classroom Research, Psychological Foundations of Teaching and Learning, and Teacher Self Development.

The majority of the instructors pointed out that there was an integration between OPO and the other courses of the Programme like Teaching...
Principles & Subject Instruction and Supervised Teaching Practice. Similar to those mentioned by student-teachers, courses such as Classroom Management, Classroom Research, and Psychological Foundations of Teaching and Learning were also suggested to integrate with OPO.

4. Monitoring of Learning in OPO

Student-teachers’ views on the monitoring process of OPO were generally positive. While some mentioned that the assessment form was useful because it included a lot of items on which they could focus in their observation, others said that writing a report not only intensified what they had learned in OPO, but also gave them an opportunity to reflect on their own teaching. Still others indicated that their instructor’s guidance in terms of briefing sessions and reference materials were useful to helping them to know about OPO.

Unlike those of the student-teachers, instructors’ comments on OPO were somewhat mixed. While some of them thought that the monitoring process was adequate with reference to the assessment form and report writing, others remarked that it could be improved by: (a) video-taping the session observed; (b) sharing of the tape among classmates and their instructor; and (c) having a follow-up discussion on the session with the instructor.

5. Impact of OPO on Teaching and Learning

The majority of the student-teachers stated that OPO had made a positive impact on various aspects of their teaching and learning. Some commented that OPO had enhanced their reflection on what they learned from the Programme, refreshed their teaching, and inspired them to try out different teaching methods in their classes. Others mentioned that through OPO they had improved their teaching skills by observing the strengths of others in teaching and avoiding others’ weaknesses or mistakes.

Similarly, the majority of the instructors tended to have a positive evaluation of OPO with respect to its impact on student teaching and learning. They pointed out that it had not only given them an opportunity to reflect on their teaching, but also broadened their perspectives on how the same course could be taught in different ways by different teachers.

6. Difficulties Encountered and Suggestions for Improvement

A number of difficulties in conducting OPO were reported by some student-teachers. Those deserving attention included:

- difficulty in finding a willing colleague for observation because most colleagues were reluctant to be observed by others in class;
- putting pressure on colleagues
concerned;
• feeling embarrassed to give comments on experienced colleagues’ teaching;
• not knowing what the observers’ role is and how to assess others’ teaching; and
• not feeling confident about their comments on others’ teaching.

Suggestions from student-teachers for improvement included:
• a briefing session before conducting the first OPO;
• a set of guidelines or a demonstration to introduce the rationale of OPO and the skills in observing others’ teaching;
• individual follow-up discussion with instructor to obtain immediate feedback.

With regard to difficulties encountered, most of the instructors echoed student-teachers’ views. They agreed that it was difficult for the student-teachers to make arrangements with their colleagues for observation of teaching. Some of them also observed that student-teachers had not been given adequate orientation regarding objectives and skills, guidance, and support in conducting OPO. One commented that the monitoring of student learning in OPO should be reviewed as the involvement of instructors was rather minimal and instructor-student interaction was limited.

Instructors’ suggestions for improving OPO were similar to those put forth by student-teachers. They included:
• orientation and guidance;
• better integration among the course Teaching Principles and Subject Instruction, Supervised Teaching Practice, and micro-teaching;
• a follow-up discussion session with the instructor; and
• experience sharing among classmates as a group.

Discussion

The findings of this Teaching Development Grant (TDG) project have not only contributed to a better understanding of how student-teachers and instructors perceived OPO, but also shed more light on the role of OPO in the Programme as well as its operation, monitoring, and impact on learning and teaching. On the whole, both instructors and student-teachers confirmed the significant role played by OPO as an integral component of the Programme and its contribution to enhancing student-teachers’ knowledge and skills in teaching, and developing their ability to reflect on their own teaching. Their views about its operation and monitoring suggest that there is room for improvement. The findings have highlighted three areas to which more attention should be paid in order to facilitate student learning:
• scheduling and integration of OPO within the Programme;
• pre-OPO orientation session for students;
• support for students in making arrangements for OPO.

First, the data suggest that there is a need to better integrate OPO with the core course, Teaching Principles and Subject Instruction (TPSI), on the one hand and with Supervised Teaching Practice (STP) on the other. In the present arrangement, though OPO is a part of TPSI and is monitored by the instructor responsible for teaching it, its operation shows that it is more like a stand-alone component somewhat loosely connected with the most relevant parts of the Programme like TPSI and STP. Better integration with TPSI could be achieved by explicitly linking OPO with TPSI in instructional activities and by incorporating experience-sharing and discussion sessions on OPO into the teaching schedule of this course, in addition to the end-of-the-semester session. Such integration could be deepened in view of expanding TPSI by creating a new course entitled Seminar on Subject Teaching for year-two students. This one-year new course, with a focus on reflective teaching, could serve as a platform to foster student-teachers’ reflection on their teaching experiences in general and those in OPO in particular. Regarding integration with STP, since both OPO and STP are using the same Assessment Form in observing teaching, the close link between the two should be strengthened explicitly. During OPO student-teachers serve as observers and assessors, but in STP they are being observed and assessed. Integrating these two mechanisms well in the Programme could facilitate and maximize learning if student-teachers understand the connection between the two roles and the experiences associated with them. Such integration between OPO and STP also contributes to learning when student-teachers reflect on their own and others’ teaching. In addition, the findings suggest that the scheduling of the two OPO sessions with one in each semester should be reviewed. With the present arrangement, students do not have ample time for reflection between the two visits because the first STP and the first OPO session tend to take place in the same period close to the end of the first semester.

Second, the findings of the study highlight the need for an orientation session preparing student-teachers adequately to conduct OPO. This induction session should focus on briefing students about the objectives and role of OPO in the Course, explaining in detail to students the criteria in the Assessment Form to be used for assessing teaching, providing students with a set of guidelines for conducting OPO, and informing them of the expectations for them and the sources of support. It is expected that learning from OPO will be further enhanced if students have been given full information on OPO and have been instructionally and psychologically prepared prior to undertaking this task.

Third, in order to overcome student-teachers’ difficulty in finding a willing colleague for OPO in their own schools,
formal support from the Department is needed. Though the success of this task depends a lot on the good will of colleagues, the Department could facilitate this by providing the observed with full information on the nature, objectives and expected learning outcome of OPO for student-teachers. This is to avoid and dispel any misunderstanding on the part of the observed that through OPO their teaching performance is being judged and scrutinized. It is recommended that a letter from the Department be sent to the colleagues concerned informing them of the objectives of OPO and inviting them to participate in this experience-sharing relationship. This informal relationship could become more formalized by developing into a mentor-mentee relationship within the school context.

Enhancement on Teaching and Learning

Both student-teachers and instructors indicated that OPO had made a positive impact on student-teachers. As an integral component of the programme, it has contributed to enhancing student-teachers’ learning and teaching by giving them the opportunity to observe, evaluate, and reflect on teaching in practice. Through their experience in OPO, student-teachers become more acquainted with different teaching styles and methods, are exposed to various ways of classroom management, and broaden their practical knowledge about teaching. OPO has helped to raise their awareness of their own teaching and facilitate their personal reflection, which is a significant process for teaching and learning enhancement (Sivan, 2001) as well as for personal and professional growth (Henniger, 2004). In addition, the project has also identified several issues to be taken on board as recommendations for further enhancement of student-teachers’ learning and teaching. These recommendations aim at

• maximizing student learning by integrating OPO with TPSI and STP within the Programme;
• preparing and equipping student-teachers with the necessary knowledge and skills for conducting OPO with an orientation session; and
• facilitating the arrangement of OPO by the Department by extending a formal invitation to the teachers being observed in the host schools.

Limitations/Difficulties

Three main difficulties were encountered in the undertaking of the project. As a result, the project was delayed and had to be extended beyond the expected completion date. Firstly, student-teachers’ response rate to the self-administered questionnaire was very low in the first round of data collection. To raise the response rate, two more rounds of data collection were conducted. Secondly, because of the sudden reduction in working hours of the part-time Project Assistant, the interviewing period for student-teachers and instructors was extended. Thirdly, because a problem arose with old software for qualitative analysis in the computer, there was a further delay in the progress of the project.
A new version of the software was purchased in order to solve this problem.

**Conclusion**

On the whole, OPO as a component of the Programme has played a significant role in fostering reflection of their teaching among in-service teachers, which has had a positive impact on their learning. In order to further enhance student-teachers’ learning in OPO, concrete recommendations were made to facilitate its implementation within the school context and to make it more structured and integrated within the programme.

**References**


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Transcription of Scores for Selected Repertoire of Chinese Operatic Songs

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Abstract
Chinese music, like other forms of national music based on aural tradition, has its intrinsic difficulties in transmission (Jiang, 2001, p.1). Urbanization has adverse effects on the preservation of indigenous musical culture in China, as folk music, traditionally played or sung in rural areas, is rapidly replaced by music that has a higher commercial value. Chinese opera faces the same problem, as live performances are readily replaced by broadcast (in Hong Kong by DVDs and VCDs): few students will have the opportunity to acquire the essence of the art form through direct contact with actors and singing teachers. Transcription of Chinese operatic scores into Western staff notation will clear a major barrier for students to acquire a solid foundation on Chinese music (Chan, 1999, p.4).

Key words
Chinese operatic songs, transcription of Chinese operatic scores, western staff notation

Introduction
For centuries, the study of music in China has been divided into two main streams: that for the literati and for the practical musicians. For the educated class, the learning of music included the playing of the guqin (seven-string zither) and research in music theory, particularly in the areas of pitches, modes and the theoretical basis for constructing instruments. For practical musicians, who often came from a less privileged background, the acquisition of the skill of playing an instrument was by rote. The Chinese music curriculum for undergraduates at HKBU combines the two traditions, allowing the student to develop a practical skill on the basis of a solid historical and theoretical foundation. The provision of Chinese operatic scores in Western staff notation will allow students to familiarize themselves with the musical aspects of the genre visually, in a form of notation known to them, as opposed to other obscure forms of notation available.

Aims and Objectives
The project endeavours to provide adequate music scores in Western staff
notation for the teaching and learning of Chinese opera at an undergraduate level in Hong Kong. Selected excerpts from the standard repertoire of Chinese opera in less familiar notations, such as gongche and numerical forms, are transcribed into Western staff notation.

Methodology
Ten excerpts from each of the following types of Chinese opera were transcribed into Western staff notation:

1. Kun opera
2. Beijing opera
3. Huangmei opera
4. Yueju (Shanghainese opera)
5. Cantonese opera

Scores of the excerpts were chosen in consultation with academic staff of the Musicology Department at the Beijing Central Conservatory of Music and other professionals to ensure that they were of the right standard for teaching at an undergraduate level. The products will then be presented in computer print-outs using the music software “Encore”, and used in lectures and distributed to students.

Results/Findings
The selected excerpts were duly transcribed into Western staff notation. Input into the computer was a relatively painless process, once the exact locations of what had to be transcribed were precisely identified.

The transcribed scores have been used in teaching and learning for one semester for two classes. These were particularly useful in the learning of form, melodic contours, relationship between music and words, and timbre for instruments/voice. The scores have provided a visual experience for students who are not familiar with Chinese opera. There is now a better sense of appreciative and analytical powers for the genre, and for Chinese music as a whole.

Discussion
The project relates to the teaching and learning of Chinese music. For music undergraduates in Hong Kong, the tradition of Chinese opera is difficult to appreciate (more so than instrumental music), owing to the large varieties of regional types (about 380 in total), each distinguished by its own dialect, although there are some common features in performance (Zhou, 1995, p.III). For someone unfamiliar with the art, the music may seem a mixture of high melodies and loud playing of drums, gongs and cymbals. The availability of music scores in Western staff notation for a selected repertoire will provide an opportunity for students to focus on a manageable area, while going into greater depth, for the appreciation and analysis of Chinese opera.

Transcription of scores for Chinese opera allows students to approach music of the genre through listening and score reading, a pedagogical means firmly established in teaching and learning of music history, theory and appreciation. The student can also understand the process of
transcription through reading the scores, and should, theoretically, be able to take on a similar task (on a slightly less professional level), should the situation arise (for example, when HKBU music graduates become teachers and have to illustrate a simplified music score to school children). In other words, the project promotes student-centred learning.

The practice of teacher-centred instruction has waned rapidly in higher education in recent years. Different approaches are used to promote learning, and arguably the most effective means is through interactive channels, where feedback of the students can be used to strengthen the curriculum and methods of teaching. The incorporation of the results of this project into the preparation of CD-Roms for Chinese opera will expand the scope considerably for self-learning, particularly in the area of creativity of Chinese music.

Enhancement on Teaching and Learning

The inclusion of Chinese music in the curriculum of degree courses is a relatively recent practice (it began in the Music Department of the Chinese University in the early 1970s). The shift in paradigm of teaching and learning means that the standard practice of rote-learning 30 years ago has to be replaced by a model involving a much more active learning process. The provision of Chinese operatic scores means students can learn the genre with less direction from the teacher. Students also found that there was a medium that they were familiar with in the learning of Chinese music – scores that they could read and understand. There is now an opportunity for students to study the scores in depth; analytical skills are now developed in contrast with observational skills in the past.

Limitations/Difficulties

Because of the enormous repertoire of Chinese opera, it is necessary to be selective in preparing the transcriptions. There are, of course, pros and cons in the notion of involving excerpts in the project. While this will be ideal for beginners of Chinese opera, a more substantial output is needed for the serious scholar (for example, someone who would like to do an Honours Project on a particular type of opera). These students can only be served by the provision of transcription of complete scores.

The most difficult aspect of the transcription of scores is the decision when to notate ornaments as symbols and when to consider them as part of the melodies (Shi, 1993, pp.342-349). Other tricky aspects include the notation of instrumental accompaniments when they are not in unison with the singer, and dealing with scores with irregular metres (Liu, 1993, pp.356-359). These are, however, issues that an ethnomusicologist has to tackle frequently.

Conclusion

The successful completion of the project on the transcription of Chinese operatic
scores in Western staff notation signifies an advance in the concept of teaching and learning Chinese music. As the famous pioneer in Chinese music Yang Yin Liu has said, “The teaching of Chinese music should be done through real musical experience” - the music scores provide an important channel for undergraduates to learn the musical culture of China.

References


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Spoken Communication in Chinese Medicine

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Abstract
This paper reports the production of a learning VCD developed to help the students majoring in Chinese medicine who take the course English for Academic Purposes - Chinese Medicine (EAP-CMED) to learn the communication skills, primarily those used in Chinese medical interviews. A questionnaire survey was conducted to elicit students’ feedback on various aspects of the VCD. The findings suggest that the majority of the students believe that the VCD has provided a useful linguistic model of medical interviews in the Chinese medicine context.

Key words
Chinese medicine, professional communication skills in medical interviews

Introduction
The medical interview is often regarded as the most important clinical tool available to health practitioners because it is professionally the major medium of caregiving. This is even more true in Chinese medicine since the unique diagnostic procedures in Chinese medicine are mainly carried out during the medical interview. The interview usually determines the problems to be addressed and builds the doctor-patient relationship that is so central to an accurate diagnosis of the problems and hence the treatment and satisfaction of both the practitioner and the patient. It is believed that a VCD exemplifying the professional skills involved in real medical interviews in the multimedia format will enable our students to have a better understanding of how these techniques are used by medical practitioners.

Aims and Objectives
The project aims to provide an alternative channel for our students to learn Chinese medical professional skills in the multimedia format. The main objective is to develop a VCD exemplifying the language and professional skills involved in real medical interviews so that our students could have a better understanding of how these techniques are used by medical practitioners in a Chinese medical context.
Methodology

Data Collection

In order to re-produce a near-authentic Chinese medicine interview, I have to know clearly what is going on at the Chinese medical clinic. It so happened that, on quite a few occasions, I was invited to be the interpreter for English-speaking patients who sought Chinese medical help, as many Chinese medicine doctors do not speak English. I was therefore able to observe the whole interview process, and took retrospective notes afterwards. Being an interpreter at the clinic gave me the advantage of being able to obtain reliable data without what sociolinguist Labov (1972) calls the “observer’s paradox” (from Allwright & Bailey, 1991), where the character of the interaction may be radically altered when the event is the researcher’s focus. Moreover, I myself have been to the Chinese medical clinic many times as a patient, of course, a patient with a research agenda, and I paid special attention to the discourse patterns and linguistic representations of Chinese medical conceptual ideas in the interviews, and again, took retrospective notes. So by the time I started writing the script I had a pretty clear idea of how Chinese medical doctors would conduct their interviews – how they would start, what questions they usually ask and what instruction they give for what purposes, what advice they give etc.

For obvious ethical reasons and because of potential disturbance and intrusion to both the doctor and the patient, I chose not to use recording equipment for obtaining data.

Writing up the Script

The VCD was designed in such a way that all talks would occur around one cancer case, so that there was a strong coherence between the sections. The final product comprises three parts: 1) a simulated medical interview in a Chinese medicine context; 2) two (follow-up) telephone dialogues related to the case; 3) one (follow-up) case discussion between doctors.

Knowing that there are very few references on Chinese medical interviews but believing that there is a marked similarity between Western and Chinese medical interviews, I drew heavily on references on Western medical interviews (see Reference list) - the discourse structure, language functions, and professional skills for effective communication in such an institutional setting.

Specialist medical advice was solicited from the medical consultant for appropriateness and accuracy of the medical contents of the script at every stage of writing. Thanks to the kind consent of the Chinese Medicine School and ready support of his Ph.D. supervisor Prof Yang Wei Yi, Yan Shi (M.D.) was able to participate in the capacity of a ‘medical consultant’ in the project. He carefully examined my scripts from a medical point of view and provided many valuable comments and suggestions.

**Final Product**

In order to make the VCD more accessible to different levels of learners, two tracks were prepared, one with and one without subtitles in English. Countless hours were spent on writing and editing the sub-titles of the VCD. I allowed some degree of linguistic variations and differences from the prepared script in the talks such as ‘I see’ instead of ‘Mm’ in backchanneling, as long as they were natural occurrences in a conversation. This flexibility however created tremendous work for sub-titling. Talks had to be ‘transcribed’. Difficult as it was, with an efficient production team from the Center for Educational Development (CED), and a very cooperative and committed cast, the final product was very satisfactory considering it was the first ever attempt.

**Results/Findings**

A questionnaire survey was conducted only on the quality and relevance of the VCD. There were two reasons for this. First, because of course restructuring in the Chinese Medicine School, in the academic year of 2001/2002, there was only one group of Chinese Medicine (pharmacy) students who took the EAP (Chinese Medicine) course. This group of students was less interested in Chinese medical consultations. More attention was therefore put on business-related skills than on language and professional skills for medical interviews to meet the students’ needs. When the learning objective had been modified and material had been changed, to test how this VCD had enhanced their learning became irrelevant. Second, the main purpose of the project was to produce a sample of a series of professional communications in English in a Chinese medicine context. It makes sense to let students evaluate the quality and relevance of the VCD production.
Students' Comments on the VCD

(1 = strongly disagree; 6 = strongly agree)

The majority of the students agreed that the VCD had provided them with an interesting alternative way to learn medical communication skills in the workplace (Q1), with an average rating of 4.5. This clearly shows that students enjoy learning Chinese medical communication skills through this multi-media format.

Most students were convinced that the VCD had provided them with a better understanding of real life communications in a Chinese medical setting (Q2). A slightly higher average rating of 4.6 was obtained for this item.

The majority of the students also agreed that professional skills (Q3) such as echoing, facilitating, showing empathy and requesting action or information, and language skills (Q4) learnt in class were well demonstrated in the VCD, with a high rating of 4.5 and 5 respectively.

A few students were slightly less convinced of the difficulty level. The reason was, as identified later from informal interviews, that some students were unfamiliar with Chinese medical communication in English; they would therefore prefer a slower speaking speed. However the average rating was still very positive.

As it was hoped that this VCD could serve as a kind of linguistic model for our Chinese medicine students, Questions 6

The questionnaire comprises three parts: part one consists of only one question about students' previous experience in Chinese medical interviews conducted in English. Part two seeks students' comments on the production. Part three contain open-ended questions for students elaboration of their choices in Part two and suggestions for future production. Fifteen Chinese medicine (pharmacy) students (one absence) participated in the survey. The statistics generated from the survey are briefly presented and interpreted below:

**Students' Previous Involvement in Chinese Medical Interviews Conducted in English**

<table>
<thead>
<tr>
<th>Doctor</th>
<th>Pharmacist</th>
<th>Interpreter</th>
<th>Observer</th>
<th>Patient</th>
<th>Nil</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td>21%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Surprisingly, only seven percent of the students reported that they had no experience at all in Chinese medical interviews conducted in English. Most of the students reported that they had been involved in Chinese medical interviews conducted in English in one way or another, either being a doctor, a pharmacist, or an interpreter. This could be explained by the fact that some students may have received field training at clinics of Chinese medicine, where they acted as practising doctors or pharmacists for English speaking patients. This could be an advantage. With their previous experience, students would be in a better position to assess the relevance and usefulness of the VCD.
and 7 asked about the clarity of articulation and accuracy of pronunciation of the performers. It seemed that students were slightly less pleased with the pronunciation of the actors (average rating: 4.1) than clarity of articulation (average rating: 4.5). The reason could be that three non-native speakers were invited to play the role of the Chinese medicine practitioner; nurse and secretary respectively, as such an arrangement was believed to be more realistic in a Chinese medical setting. Though they were all highly competent English speakers, they unavoidably spoke with an accent. Despite a very positive average rating, a couple of students seemed to be less tolerant of the accented English of the speakers.

Comments were also invited on sound quality of the VCD. Again, the feedback was very positive, with an average rating of 4.6. The last question asked whether it was necessary to have English sub-titles and most students agreed they were useful for the better understanding of lower-level learners, with an average rating of a high 4.8.

**Discussion**

Students’ feedback makes us generally convinced that the VCD production has achieved its main objective, which is, to set a good model of professional communications in a Chinese medicine context for learning purposes. Most students commented that they were impressed by the language and professional skills demonstrated by the participants. Some reported that the discussions of Chinese medical ideas in English were useful and relevant.

Some non-linguistic aspects of this production were also found to be impressive. A few students commented that the medical examinations carried out by the doctor were very professional. There was actually a good reason for this. In order to make the VCD more authentic, Dr. Shi personally performed the part of examining the patient.

As for the aspects that students were least satisfied with, most of the comments were about the layout of the clinic. Students criticized that the clinic did not look like a real Chinese medical clinic; the decoration was not appropriate. This problem had been brought to our attention even before the filming. However due to practical constraints such as the tight budget and particular fixed layout of the CED studio, unfortunately the decor of the clinic in the VCD was the best we could do.

A couple of students thought that some sections of the interview were too long, for example, the opening part of the interview and the part of examining the patient. One reason for this could be that what the students saw in the VCD challenged their existing schema of medical interviews (world knowledge). Students are more familiar with conventional (western) medical interviews, where patients usually have little chance to talk. Even when they do, their narration of illness is often either interrupted or ignored (Mishler, 1984).
whereas in traditional Chinese clinical medicine, a full investigation through \textit{wan4 wen2 wen4 qie4} (looking, listening/smelling, asking and palpating) that are all conducted in the interview inevitably makes the duration longer. Another reason is that in Chinese medicine each patient and his/her illness are regarded as unique. The patient usually gets comparatively more attention from the doctor. However this comment was valid in the sense that, for classroom use, shorter episodes would be more effective than longer ones due to students’ limited attention span. Learners do lose patience especially when they see more monotonous parts like examining the patient.

For future production, students suggested that the layout of the clinic should be the area for improvement. They also suggested that to make the VCD more interesting, different patients could be used for different sections of the VCD. Some expressed their desire to hear more discussions in English on the diagnoses of the tongue and pulse.

Enhancement on Teaching and Learning

Although there are a couple of audio tapes and/or audio CDs on medical interviews on the market, few focus on the professional skills in medical interviews. Fewer feature the professional as well as linguistic skills involved in effective medical communication. Worse still, none of them specifically deals with such skills in the context of Chinese medicine, where a totally different medical theory governing the diagnostic procedures during the medical interview is applied. While there are similarities between all medical interviews, Western or Oriental, differences reflecting respective medical theories and their linguistic representations are a matter of necessary fact, and should be made known and exemplified to our students before they enter the Chinese medical profession. The multi-media VCD has provided an ideal channel for our students to acquire such knowledge and skills in the Chinese medical context in a more interesting way.

Not only can the tailor-made VCD be used as a supplementary/complementary material to classroom teaching, but also serve as self-learning material as well for students who are exempted from the English for Academic Purposes (EAP-Chinese Medicine) course and even traditional Chinese Medicine (TCM) lecturers who are interested in the related skills.

Limitations/Difficulties

Major difficulties arose mainly from the tight budget. Limited funding made it impossible for us to rent a real clinic for the production as any moving of equipment would incur extra charges, in addition to the rental fee. The solution was to turn the CED studio into a temporary clinic, with basic furniture such as a desk and a chair, an examination bed with curtains. The arrangement was certainly not ideal, as revealed by some students’ feedback in the questionnaire survey.
Constrained again by a small budget, we could not afford to hire professional actors either. As a compromise, I invited staff members from the Language Center of HKBU to play the roles of doctors, patient, nurses and secretaries for respective communications. I myself took several responsibilities simultaneously – stage directing, logistics managing, and playing the role of a secretary in one of the episodes in the VCD. Though I took major responsibility for the non-technical aspects of the video production, all the team members gave great support.

As in any professional video production, there were many “Take 2s” during the filming process. Re-making did occur, but mainly due to technical failure, rather than our amateur actors/actresses’ performance. The enthusiasm, the strenuous effort and amazing talent of all the staff involved undoubtedly enhanced the efficiency and quality of the production.

**Conclusion**

The questionnaire survey has shown that students are generally satisfied with the language contents of the VCD and interested to learn more professionally related English skills through such a medium. As there is almost no audio-visual material of spoken communication in Chinese medicine currently available, most of the time, teachers have to resort to material on western medical interviews for classroom use. This VCD has served as a very relevant linguistic model of Chinese medical communications for our students, and provided them with more exposure to near-authentic professional encounters in English while they are still studying at university.

With the current shrinking of university funding and tightening of budgets, I think that existing resources, including human resources, should be fully utilized to produce more useful learning materials that are tailored to our students’ needs, especially when such materials are not available on the market.

**References**


**Acknowledgements**

I wish to thank the Academic and Professional Standards Committee of HKBU for their funding (Teaching Development Grants) to make this project possible, the Center for Educational Development for their technical support, the School of Chinese Medicine for their consent for Dr Shi’s involvement, Dr Shi Yan for his professional advise, but most of all, the genius staff members from the Language Centre of HKBU - Patricia Warren, Brian Chan, Derrick Stone and Elsie Chan - for their marvelous performance.
Abstract
Very often student-teachers have difficulty in transferring declarative knowledge into procedural knowledge. When they are taking a practical course like EDUC 4120 Classroom Management, they find it difficult to apply the theories that they have learned in the course directly to their teaching practice because real-world classroom management problems are far more complicated. To bridge the gap between theory and practice, a videotape recording entitled “Classroom Management in Action” was produced. The recording has six cases of classroom management problems. Each case is a typical pupil discipline problem found in Hong Kong secondary schools. Through viewing the six cases and the professional advice given by experienced frontline teachers from the Hong Kong Association for School Discipline and Counselling Teachers and going through in-depth class discussions, student-teachers could have a better understanding of the kind of pupils’ misbehaviour that they have to deal with in their teaching practice. At the same time they could think of some effective methods or techniques used to tackle pupils’ discipline problems and to facilitate positive classroom behaviour.

Key words
Classroom management, teacher education

Introduction
The course EDUC 4120 Classroom Management is a core elective of the teacher education courses offered by the Department of Education Studies, Hong Kong Baptist University. It introduces student-teachers to theoretical foundations, intervention strategies and techniques for creating a conducive learning environment in Hong Kong classrooms. One of the objectives of this course is to train student-teachers to monitor classroom discipline based on current approaches to classroom management. To facilitate this, student-teachers should be exposed to real situations found in Hong Kong classrooms. A videotape recording demonstrating the high incidence in the school environment of discipline problems like attention seeking behaviour (Dreikurs, 1968) might be the best tool to compensate for the limitations of classroom simulations conducted during
through viewing different cases in the videotape recording, student-teachers were able to share their ideas of classroom management among themselves more easily and discuss in depth the effective methods or techniques used to tackle pupils’ discipline problems and to facilitate positive classroom behaviour. Six cases (three typical and three atypical) were produced in this project. Questions to consider, classroom discipline methods and theoretical background are introduced after the presentation of individual case. Professional advice given by experienced frontline teachers from the Hong Kong Association for School Discipline and Counselling Teachers is also included in the recording. With the help of the videotape recording, student-teachers could develop a repertoire of effective strategies for classroom management and understand how to apply the knowledge gained in the course EDUC 4120 appropriately to their teaching practice.

Aims and Objectives

The project aimed at evaluating the use of a specially produced videotape recording with six cases of classroom discipline problems found in Hong Kong. Each case was followed by a discussion session and some evaluation activities. Student-teachers could examine the cases from different points of view, consolidate their knowledge of effective classroom management and practise their methods of monitoring pupils’ classroom behaviour. Through the learning activities, student-teachers could obtain useful information about the real classroom environment in which they would work in future. Student-teachers would also have a better idea of the future challenges in the classroom and be better prepared to join the teaching profession. The videotape recording would help student-teachers monitor pupils’ behaviour in the classroom environment more easily.

The objectives of the project were to let the student teachers:

1. be familiar with the contemporary classroom environment
2. know the role(s) of a teacher when dealing with pupils’ classroom behaviour
3. be familiar with the conception of effective classroom management
4. be familiar with the ways of tackling pupils’ discipline problems in the classroom

Methodology

The main theme of the videotape recording is to capture the classroom management issues found in Hong Kong classrooms. There are six different cases of pupil discipline problems in the recording:

1. breaking classroom rules
2. failing to hand in assignments
3. peer conflict
4. teacher-student conflict
5. pupil emotional problem
6. peer revenge
The first three cases are typical classroom management problems encountered by most Hong Kong teachers in their daily practice. The other three cases are atypical cases which require more sophisticated classroom management techniques of the teacher.

Each case is followed by an in-depth discussion section conducted by the co-investigator of this project, Mr Yeung Siu Wing, and three guest speakers from the Hong Kong Association for School Discipline and Counselling Teachers. All three of them are experienced discipline and counselling teachers. During the discussion, the guest speakers analyse each individual case in detail by identifying the cause(s) of the pupils’ discipline problem(s). Then they give some suggestions on dealing with those classroom management problems. From the information given by the guest speakers, student-teachers would have a better picture of how frontline discipline and counselling teachers handle pupils’ discipline problems. Special emphasis is given to the discussion of teachers’ responsibilities, their authority in school and the conflicts they face.

The six cases were used in six different tutorial sessions. In each session students viewed the case at the beginning of the session, students were then divided into groups of five and discussed the case among themselves to identify the problem(s) found in the case and the possible cause(s) of the problem(s). After that, each group had to suggest some possible solutions to the problem(s). The instructor gave feedback to the suggested solutions given by each of the groups. After discussion, students viewed the in-depth discussion section in the recording as consolidation of the tutorial session.

Results/Findings

A questionnaire about the usefulness and convenience of the videotape recording (see Appendix I) was administered to a total of 96 students on the two teacher education courses offered by the Department of Education Studies, HKBU in the last tutorial session held in November 2004. There were 68 respondents on the Diploma in Education Course, who were pre-service student-teachers; the remaining 28 respondents were in-service teachers who were taking the two-year part-time Postgraduate Diploma in Education Course. The feedback collected from the questionnaire survey was generally positive, and provided useful information for future revisions of the videotape recording.

The results collected in the questionnaire survey are presented in Table 1.

Table 1: Means and standard deviations of the “2+2” Dip in Ed. group and the Part-time PgD in Ed. group in responding to the 14 items of the questionnaire
<table>
<thead>
<tr>
<th>Item No.</th>
<th>“2+2” Group (N₁=68)</th>
<th>PT PGDE Group (N₂=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Q.1</td>
<td>1.8</td>
<td>.56</td>
</tr>
<tr>
<td>Q.2</td>
<td>1.8</td>
<td>.65</td>
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<tr>
<td>Q.3</td>
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<td>.73</td>
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<tr>
<td>Q.4</td>
<td>1.9</td>
<td>.69</td>
</tr>
<tr>
<td>Q.5</td>
<td>2.3</td>
<td>.72</td>
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<tr>
<td>Q.6</td>
<td>2.1</td>
<td>.67</td>
</tr>
<tr>
<td>Q.7</td>
<td>2.1</td>
<td>.70</td>
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<tr>
<td>Q.8</td>
<td>2.0</td>
<td>.73</td>
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<tr>
<td>Q.9</td>
<td>2.1</td>
<td>.71</td>
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<tr>
<td>Q.10</td>
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</tr>
<tr>
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<tr>
<td>Q.12</td>
<td>2.1</td>
<td>.77</td>
</tr>
<tr>
<td>Q.13</td>
<td>2.0</td>
<td>.67</td>
</tr>
<tr>
<td>Q.14</td>
<td>2.1</td>
<td>.63</td>
</tr>
</tbody>
</table>

The videotape recording turned out to be a useful teaching aid for both pre-service student-teachers and in-service teachers who were taking the course EDUC 4120 Classroom Management.

From the data presented in Table 1, it is concluded that the respondents found the videotape recording useful in the learning and teaching of the course EDUC 4120 Classroom Management.

**Discussion**

It seems that most of the existing supporting teaching materials for the course EDUC 4120 Classroom Management are contrived (e.g. textbook materials) to allow student-teachers to study a particular theory or a particular classroom management problem more easily. These materials may not be able to give the student-teachers a true picture of classroom discipline issues. Because of this, there was a need for the Department of Education Studies to develop a unique, specific and purposeful teaching aid for delivering the subject matter of classroom management in order to enhance the quality of learning and teaching.

There is no doubt that student-teachers will benefit most if they can expose themselves to real classroom situations. However, according to our experience, there are too many issues happening in the classroom at the same time, such as different pupils’ discipline problems, pupils’ learning difficulties and various arrangements of resources, etc. This complicates matters and leaves student-teachers unable to handle so many things at a time. As a result, the learning pace and the learning outcome of student-teachers
could be greatly affected. The complicated classroom situations also give student-teachers the belief that applying theories to practice is almost impossible. In the end the confidence of student-teachers in handling classroom discipline problems will be damaged as well.

With the help of the videotape recording, student-teachers could identify the discipline problem more easily and they could single out the incident for comments more efficiently. By doing so, they could acquire declarative knowledge of classroom management more effectively and transfer the declarative knowledge to the procedural knowledge when dealing with pupils’ misbehaviour in the classroom more easily; at the same time they can build up their confidence in combating challenges in their teaching practice.

According to in-class observation conducted by the principal investigator in the tutorial sessions, students found the six selected cases relevant to their needs. Some of the students’ responses to the six cases during in-class discussion are as follows:

**Case 1:**
*Breaking Classroom Rules*

Student A:
“This case is very useful. Now I know how to deal with pupils who are eating, drinking, reading comics and using mobile phones during the lesson.”

**Case 2:**
*Failing to Hand in Assignments*

Student B:
“The case helps us learn the pupils’ excuses for not submitting their assignments. I did have this problem when I was doing my teaching practice during STP I. I didn’t know what to do at that time. I just reported the case to the class teacher. But now I will take the advice given by the three guest speakers from the Hong Kong Association for School Discipline and Counselling Teachers. I think I can manage to handle this kind of problems now.”

**Case 3:**
*Peer Conflict*

Student C:
“At first I thought peer conflict was quite common among secondary pupils and it didn’t matter at all. But now I understand that if the teacher doesn’t handle the problem properly, it may affect the teacher’s teaching in the classroom.”

**Case 4:**
*Teacher-student Conflict*

Student D:
“After viewing the case, I know that if the teacher fails to build up a positive relationship with the pupils, the pupils can be very hostile. This will get the teacher into trouble. Fortunately, the advice given by the guest speakers is very useful and now I know that there
are a number of ways to tackle the problem.”

Case 5:
Pupil Emotion Problem
Student E:
“From the case, I notice that teenage pupils can get upset very easily. Now, I know that a teacher should not scold pupils in the first place. A lot of patience on the part of the teacher is needed when dealing with this kind of case.”

Case 6:
Peer Revenge
Student F:
“Bullying has become very common in Hong Kong schools recently and I have learned a lot from the case. I think employing some effective intervention strategies is very important in this case; otherwise the situation will become even worse.”

From the students’ responses, we may notice that not only did the students have a better understanding of individual cases, but also they could learn different classroom management strategies from viewing the videotape recording. More importantly they had more confidence in themselves when dealing with pupil discipline problems after viewing the videotape recording.

Limitations/Difficulties
The six cases in the videotape recording were not contrived for classroom delivery but real cases of pupil discipline problems in schools. To collect those cases, the investigators collaborated with a Drama teacher in a Secondary School. He introduced four of the members of the School Drama Club, who were all secondary three students, to the principal investigator. The principal investigator interviewed the four Drama Club members to collect their views on pupil discipline problems according to their own experience. To make the cases as real as they were, the principal investigator encouraged the Drama Club members to write up the outline of the cases based on their real experience in school. After five meetings, the investigators with the project assistant finalized the six cases and the project assistant took charge of script-writing.

To make all the pupils act naturally and simulate the actual incidences experienced by them, special training was given to all pupils before the actual shooting of the recording. To facilitate appealing in-depth discussion sections, the investigators invited guest speakers from the Hong Kong Association for School Discipline and Counselling Teachers to share their experience in dealing with classroom management issues.

The production team found the process of production time-consuming because it involved quite a number of steps such as data collection, script writing and shooting. As considerable time was needed to carry out each of the steps, it took months...
before the recording was ready for classroom use.

Conclusion

It is believed that the videotape recording “Classroom Management in Action” has enhanced the learning and teaching of the course EDUC 4120 Classroom Management. According to the feedback from the students on the Diploma in Education Course and part-time Postgraduate Diploma in Education Course, they benefited a lot from viewing and discussing the six cases of the videotape recording. They found all six cases very realistic and they realized that these cases match the classroom management problems that they faced or were about to face in Hong Kong schools. Students also found the follow-up discussions conducted by experienced discipline and counselling teachers very helpful. Not only did the students understand the causes of pupils’ discipline problem(s) in each of the six cases, but also they had a better understanding of the teacher’s responsibility and authority when handling pupils’ misbehaviour. They gained much confidence in dealing with problem cases in the area of classroom management. They also looked forward to having another videotape recording of the same kind including more cases in the future.

The EDUC staff members who had used the materials in their lectures found the recording useful in facilitating in-class discussions. Student-teachers were willing to share their views on dealing with the six cases according to their own experience in school. As the cases are real cases found in local schools, student-teachers could learn to cope with classroom crisis with the help of the recording. Student-teachers also found the advice given by the guest speakers from the Hong Kong Association for School Discipline and Counselling Teachers helpful in learning to manage complex situations in the classroom.

References


Acknowledgements

Mr Lai Ping Wah
(Former Vice-principal, YCH Wong Wha San Secondary School)

Mr Chan Shu Ming
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Ms Tang Sau Lan
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Mr Tang Man Kit
(Committee member, The Hong Kong Association for School Discipline and Counselling Teachers)

Mr Lau Yiu Man
(Committee member, The Hong Kong Association for School Discipline and Counselling Teachers)

Members, Drama Club, YCH Wong Wha San Secondary School
Appendix I:  
Teaching Materials Evaluation Form  
As you may probably know, we are developing a DVD, entitled “Classroom Management in Action”, for learning and teaching EDUC 4120 Classroom Management. We request your completion of this questionnaire to help us evaluate the mentioned DVD. The information you and others provide will assist us in our continuing effort to provide better learning and teaching of the course.

Your answers will be handled in the strictest confidence. Your answers will be tabulated with those of others to determine information needs, usage patterns, content requirements, format preferences, and overall quality.

Thank you for your time and assistance.

For each of the items below, please select your choice by filling the circle with a pen/pencil.

Key:  
1. Strongly agree  
2. Agree  
3. Neutral  
4. Disagree  
5. Strongly disagree

<table>
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<tr>
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<th>Items</th>
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<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>1. The DVD has helped me to comprehend the subject matter more effectively.</td>
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<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>2. The DVD has increased my understanding of this academic discipline.</td>
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<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>3. The DVD has been effective in developing my analytical power and critical thinking.</td>
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<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>4. The use of the DVD has been helpful in my learning of the course EDUC 4120.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>5. The DVD gives opportunity for me to apply and develop the ideas, concepts and theories learned in this course.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>6. The content of the DVD has been clearly related to the overall objectives of the course EDUC 4120 Classroom Management.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>7. The content of the DVD has been effective in relating theory to practice.</td>
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<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>8. The content of DVD is current and relevant to my daily practice.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>9. The content of the DVD is current or consistent with the contemporary knowledge of classroom management.</td>
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<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>10. The content of the DVD is well-organized.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>11. The cases shown on the DVD are challenging for me.</td>
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<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>12. The cases shown on the DVD relate to my everyday experiences.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>13. The cases shown on the DVD have been useful to my daily practice.</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>14. The discussions shown on the DVD have been helpful in clarifying the subject matter.</td>
</tr>
</tbody>
</table>
Learning Internal Chinese Medicine by Clinical Cases – Development of a Video and Multi-media System for Teaching

Dr Li Min, Prof Zhao Zhong Zhen, Teaching Division
Prof Liu Liang, Office of Dean of Chinese Medicine
Dr Bian Zhao Xiang, Clinical Division
Mr Wai Ming, Division of Continuing & Professional Education
School of Chinese Medicine

Ms Wendy Y C Wong
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Mr Ng Tsun Hao
Information Technology Services Centre

Abstract
This project included 12 kinds of common diseases of Internal Chinese Medicine (ICM), as well as Chinese medical diagnosis, pathological analysis, treatment methods of Chinese medicine, prescriptions of Chinese medicine and differential diagnosis of Chinese medicine. The purpose of this project is to increase the interest of students on learning of ICM, to deepen their understanding of clinical diseases of ICM, and to enhance the effects of clinical teaching of ICM.

Key words
Internal Chinese medicine (ICM), ICM students

Introduction
Internal Chinese Medicine is a clinical professional course, the main part of the Chinese Medicine course and the foundation of the various courses in clinical studies. The teaching and research standards of Internal Chinese Medicine reflect those of Chinese Clinical Medicine. This project aimed to produce a video production and a multi-media package to enhance the teaching effectiveness of the course CMED 3122: Internal Chinese Medicine, which is offered by the School of Chinese Medicine. These will greatly help students to establish a solid professional foundation in the area and to be nurtured as Clinical Chinese Medical practitioners.
of high quality. Moreover, since there is no base for practice for Clinical Chinese Medical teaching in Hong Kong and a lack of multi-media tools for teaching Internal Chinese Medicine in Mainland China, the video production and the multi-media package produced in this project will become extremely important tools to facilitate teaching of Clinical Internal Chinese Medicine at HKBU. They can fill the gap caused by the absence of this kind of material in the exemplary teaching of Clinical Internal Chinese Medicine.

**Aims and Objectives**

The project aimed to produce a video and multi-media software for teaching the course **CMED 3122 Internal Chinese Medicine**. This course introduces the basic concept of pathological mechanisms according to the fundamental theories of Chinese medicine. Fifty-five kinds of internal diseases or syndromes can provide students with the necessary knowledge for treating internal diseases. The investigator taught this course and perceived that the students of the School of Chinese Medicine urgently needed some kind of software to increase the interest of students in learning ICM, to deepen their understanding of clinical diseases of ICM, and to enhance the effects of clinical teaching of ICM.

**Methodology**

- Using the Macromedia Authorware to write the infrastructure of the software
- Writing scripts of description on 12 kinds of internal diseases or syndromes
- Mouse-click the related information on types of internal diseases or syndromes to show the definition, historical information, Chinese medical diagnosis, pathological analysis, treatment methods of Chinese medicine, prescriptions of Chinese medicine and differential diagnosis of Chinese medicine.
- Interactive real-time multiple choices exercise
- Audio-visual clinical demonstration video package
- Producing a computer file for teaching [Disk characteristic: CD-ROM is attached]

The System requirements: Windows 2000/XP or above version, Pentium III 600Mhz or higher processor, 64MB RAM or higher; SVGA display adaptor at 800 x 600, CDROM or DVDROM Drive, Sound card.

**Contents of the Software**

The software was produced for 12 kinds of common diseases in Internal Chinese Medicine, namely headaches (頭痛), vertigo (眩暈), cough (咳嗽), stomachache (胃痛), diabetes (消渴), insomnia (不寐), depression (鬱證), heart-throb (心悸), back-pain (背痛), stroke (中風) and consumptive disease (虛勞).

A common format for each of the common diseases has been designed which contains the following sections:

1. Definition (定義): to provide a brief theoretical background of the diseases
2. Historical process (源流): to provide...
a brief historical background of the diseases
3. Different diagnosis (鑒別): compare the difference between two diseases with similar syndromes
4. Treatment (證治): to provide table form notes about the treatment of the disease.
5. Case studies (病案實例): to provide an Audio-visual clinical demonstration video of the disease for the student to learn the clinical skills. The run time for each audio-visual clinical demonstration video part is approximately 4-5 minutes. Commentary is in Cantonese.
6. Exercise (練習): to provide an interactive real-time multiple choices exercise

Results/Findings
We discovered that students did not want to look at screen after screen of text. Lots of text is physically tiring on the student’s eyes even with an accompanying audio track. Therefore, we designed the Audio-visual clinical demonstration video. It provides a place for the student’s eyes to rest and relax. Visuals also have an added cognitive benefit; they explain difficult ideas and illustrate relationships between concepts, especially clinical skills which are difficult to put over through a normal lecturing approach. The Visuals arrange information in the appropriate order and increase the chance of student’s retaining and comprehending what is being taught. For example, students can take time to review the materials before going to the clinic to acquire real hands-on experience.

We apply the following tips in the software:
• Include a screen of yourself on the first frame. Learners want to know who is speaking.
• Keep the visuals relevant to the topic.
• Diagrams or tables are great for explaining complicated material.

According to the above findings, we invited some graduated CM students to help design this software and their suggestions were taken into account. In this way, the enhancement of teaching and learning was achieved through these consultative interactions.

Students feedback was obtained in the first semester of the 2005-2006 academic year by using a questionnaire after a trial run with the year-three students. By using this software, there is no doubt students’ learning effectiveness opportunities will be increased and it will be a useful tool for lecturer’s explanations and for examination purpose.

Figure 1. Achieve requirement of the teaching schema
Figure 2. Achieve the requirement of Chinese Medicine Practitioners Licensing Examination

Figure 3. Enhance learner’s ability of difference diagnosis

Figure 4. Table form notes are helpful to memories

Figure 5. Suitable for foundational practices

Figure 6. Enhance self-learning

Figure 7. The software is user friendly

Note: Copyright in the software belongs to HKBU.
Discussion

The software produced will greatly enhance the learning effectiveness of the students in the course on Internal Chinese Medicine. It will help CM students to memorize and handle the materials and clinical skills in Internal Chinese Medicine. The software will continue to bring life-long benefits to the students, even after they become Chinese medicine practitioners. The software is a highly creative endeavor in the field of Chinese Medicine. It can serve as very valuable reference materials for those who are teaching in the field of Chinese Medicine, and very useful resource materials for those who are practicing or interested in the field of Chinese Medicine.

Enhancement on Teaching and Learning

A lack of interest in Chinese medicine among undergraduate students is not just a problem for Hong Kong universities, but a concern for educators worldwide. To motivate the learning attitude of the students is a challenge to all teachers and university faculty. The productions of a video and multi-media software are a reasonable solution to increase student interest. We have used the software in our Internal Chinese medicine lessons. The real life nature of the clinical cases built up in the software enables the students to appreciate the power of clinical skills in diagnosis and treatment strategy. The movie files made the class presentation more appealing to the students and they have started to feel the “fun of learning”, especially for students who have grown up in the internet age. To most young students, the fun of learning science appears to be closely related to how well the materials being taught can be directly connected to things that would impact their daily lives and future careers. In this connection, we are pleased to see the availability of this teaching tool through the provision of the Teaching Development Grant that has vividly illustrated and highlighted the fun and practical aspect of Chinese medicine to the students.

Students feedback was obtained in the first semester of the 2005-2006 academic year by using a questionnaire after a trial run with the year-three students. There is no doubt that the software increased students’ learning effectiveness and it will be a useful tool for lecturer’s explanations and for examination purposes.

In general, the students agree that the software can

• Strengthen their understanding of the theory of ICM
• Achieve requirements of the course plan
• Achieve the requirements of the Chinese Medicine Practitioners Licensing Examination
• Enhance learners’ ability in diagnosis
• Assist them to understand clinical skills
• Extend their knowledge to other real-life case studies
Limitations/Difficulties
We were fortunate to be able to recruit students of the Department to serve as student helpers. They had sufficient Chinese medicine knowledge to help us to prepare most of the content of the software. However, their computing skills were not up to professional standards. Also, due to limited TDG funding, we were unable to buy the official and original software (we used the trial version), unable to take high quality video in hospitals, and unable to recruit a project assistant to handle the technical problems. As a result, the content of the software certainly has room for improvement. If we can secure a bigger budget for the project, we would like to build up more clinical cases, recruit a project assistant to handle the technical problems and use the official and original software. It may then be possible to publish the results.

Conclusion
Development of a video and multi-media software training package was the first attempt of the Department to make available a multi-purpose teaching aid for undergraduate students in the School of Chinese medicine. We shall follow up this approach by establishing more interactive teaching methods so as to enhance the teaching and learning experience of the staff and our students.

References


Acknowledgements
We would like to thank Clinical Division of School of Chinese Medicine for giving aid and support as well as the patients for taking part in the video recording session.

Graphics

Graphic 1.
The index of Internal Chinese Medicine software
Graphic 2.
The content of Internal Chinese Medicine software

Graphic 3.
The historical information of headache disease in the Internal Chinese Medicine software

Graphic 4.
The table form notes of treatment of headache in Chinese Medicine

Graphic 5.
Case studies (病案實例): to provide an Audio-visual clinical demonstration video of the disease for the student to learn the clinical skills. The run time for each audio-visual clinical demonstration video part is approximately 4-5 mins accompanied with Cantonese.

Graphic 6.
The screen of the interactive real-time multiple choices exercise

Graphic 7.
The screen of the interactive real-time multiple choices exercise
Appendix:
Questionnaire on the Video and Multi-media System for Teaching

《中醫內科學》教學光碟使用意見回饋問卷調查

首先多謝閣下使用中醫內科學教學光碟！由於中醫內科學教學光碟出版不久，編者尚未在使用過程中積累成熟的經驗，因此本光碟難免有不妥之處，敬請批評指正，以便再版時修訂提高。

第一部份：
教學內容部份(0分最低分，5分最高分)

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Enhancement of Teaching Quality by Animation: Experience of Neurobiology-related Courses

Prof Ken K L Yung
Department of Biology, Faculty of Science

Abstract
The project focussed on effective ways to convey knowledge of the brain, its aging and diseases to our students, both at the undergraduate and postgraduate levels. Since the ideas and concepts are complicated, animated teaching materials were developed and used in classes. Students benefited in terms of better understanding of these complicated topics. If our students know more, they will know how to take preventive measures and these measures will help them to lead healthy lives.

Key words
Animated teaching materials, neurobiology-related courses

Introduction
Hong Kong faces the problem of an aging population. In 2004, 11.7% of our population was aged 65 or above. It is predicted by the Hong Kong SAR Government that by the year 2033, about one quarter of the population will be aged 65 or over. While healthy aging does not cause any burden to our lives, aging is often associated with various diseases. A major group of diseases associated with aging are the diseases of the central nervous system. Some well-known ones are depression and mood disorders, stroke, movement disorders such as Parkinson’s disease, and Alzheimer’s disease. These diseases can cripple lives to various degrees: from minor disability, loss in movement or memory, to life-threatening conditions. These conditions are very relevant to our students as their elderly loved ones or they themselves in the future may encounter many of these conditions.

The major aim of the present project was to present information to students about brain diseases and to enhance their understanding of the nervous system. The functioning of the nervous system is in
fact very complicated. Using animated teaching materials, it was much easier for the students to understand the concepts and the ideas.

Aims and Objectives

Our project focused on enhancing the teaching of the nervous system, the causes of different diseases in the nervous system and also on the effects of drug abuse. Undergraduate students from the Science majors and also other disciplines benefited.

Animated teaching materials for two undergraduate courses were used. The courses were BIOL3350 Neurobiology for students of BSc Applied Biology major and BIOL 1620 You and Your Health, a complementary course for non-Biology-major students. In addition, students of one postgraduate course BIOL 4010 Advanced Topics in Biotechnology also benefited.

The major objective was to enhance the knowledge of students on issues relating to aging, the brain and the nervous system, and health. New teaching materials included new computer-animated presentations of basic concepts on the functioning of the nervous system, on the outcomes and consequences of drug abuse, and on diseases of the brain. The materials were proven to be useful in providing an interesting learning experience for all the students (see results section).

Methodology

New teaching materials were developed using new computer software. Animated presentations were used throughout the courses. The animated slides were very appropriate for the explanation of complicated concepts about the normal functioning of the nervous system. In addition, the presentations also could help the students in understanding the serious consequences of drug abuse and the harmful effects of drugs on the nervous system. The animations were very good in attracting the attention of the students.

In order to assess the research results, questionnaires were distributed to the students. The results suggested that employing animated presentations enhanced the effectiveness of teaching of the complicated topics of the nervous system (see results).

Results/Findings

Results of the applications of animated presentations in the classes were assessed by means of questionnaires. Analyses of the questions in the questionnaires are provided as follows.

The total number of respondents: 29

Over 80% of students either agreed or strongly agreed that they understood the concepts of the nervous system better
after being exposed to the animated teaching materials (Figure 1). This result strongly indicated that the use of animated materials could convey a clearer and better picture of complicated ideas in teaching.

In addition, more than 90% of students thought that it was interesting to watch the animated materials in classes (Figure 2). This one-sided response by the students strongly indicated that the use of animated materials could greatly arouse the interest of students in learning. These results were satisfying as one of the major targets of the present project was to spark the interest of the students in learning the complicated concepts of the nervous system.

Also over 80% of students stated that the animated materials could help them in understanding concepts (Figure 3). This result together with the result of question 1 strongly suggested that there should be more use of animated materials in classes.

Moreover, the students responded one-sidedly on the issue of using more animated materials in classes (90%, Figure 4). They clearly showed that they preferred to see more animated materials in class. These results suggested that the experiments illustrated in the present proposal were successful.

Importantly, 93% of students agreed or strongly agreed that the animated materials could enable them to understand the complicated issues of brain disease and drug abuse better (Figure 5). Brain diseases and the harmful effects of abused drugs were complicated and it was tedious for students to listen and learn through words alone. With animated materials, the students could form more complete pictures of the brain disease mechanisms and also the harmful effects of the drugs. Effectiveness of teaching was therefore enhanced.

One key consequence of mastering the topics covered was in the prospects of the students themselves leading healthier lives. The ultimate aims were to provide students with scientific information about the brain, and to help them to live a better life by avoiding harmful substances. These aims were reflected as 63% of students thought that the lessons had provided them with useful facts on these aspects (Figure 6).

**Question 1**

It was easy to understand the concept of teaching using the animation materials.
Question 2
I found it very interesting to watch the animated materials.

Question 4
I preferred to include more animated materials in class.

Question 3
I could understand the concepts better by the animated materials.

Question 5
I could understand diseases of the brain better with the use of animated materials.
**Question 6**

With the concepts of the brain, I could plan my future healthy living better.

![Pie Chart](image)

**Figure 6**

Example of the animated presentations: a picture illustrating neurotransmission of a synapse in the brain.

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**Discussion**

The present results indicate that animated materials are very useful and extremely effective in conveying complicated concepts to students such as the functioning of the nervous system, the causes of brain diseases and the effects of drug abuse. This suggests that the current generations of students are more graphic-oriented. Students preferred to watch graphics and animations rather than words alone. They also preferred animated materials to be used in class. With the animated materials, they can understand the topic better and form more complete concepts. This knowledge may result in the students leading healthier lives. The teaching was therefore effective.

The findings of the present project are significant. One suggestion is that more animated materials should be used in class. This is more applicable to courses that involve conceptual and complicated issues. The students will be mobilized, involved in learning and will understand the concepts and ideas of the course in more comprehensive ways. The effects are obvious. However the preparation of animated materials is time-consuming. Compared with more conventional forms of teaching, the overall balance is that lengthier preparations are needed but the results are better. It is of course worth taking the extra trouble.
Enhancement on Teaching and Learning

The present project has clearly shown that using animated materials in classes can arouse students' interests in learning, especially on complicated issues and concepts, and will obtain much better results in learning outcomes. It is easier for the teaching staff to convey teaching materials to the students; it will also enhance the communication between teacher and students. The project has provided first-hand evidence that using animated materials is a good direction to move to in preparing future teaching sessions.

Limitations/Difficulties

One limitation on the project was that we had to abandon plans to arrange an exhibition on aging and brain diseases for our students. The exhibition was cancelled because of arrangement problems such as availability of venues, and also time constraints within the term. One suggestion for improvement here will be to co-organize this exhibition as part of a student activity, such as the academic weeks organized by student organizations. This will arouse the interest of students in the topics as well as enhance participation. This should further improve learning outcomes. This will be done in future.

The main difficulty for the project was the limited resources and time available for the development of animated materials. It was time-consuming to prepare the materials. Topics on the nervous system and brain diseases involve complicated issues and a great deal of thought was needed as well as the actual animation work. So it was even more time-consuming to prepare the materials. It was however, a very worthwhile project because the results were very encouraging.

Conclusion

In conclusion, animated teaching materials can be very useful in conveying complicated concepts and ideas to students. The materials were very useful in conducting teaching of the nervous system and brain diseases. The students enjoyed the learning experience.
Teaching and Learning of PCM 2000
Phytochemistry - Utilizing the Molecular Models and PC Software for Chemical Structures

Prof Jiang Zhi Hong
Teaching Division, School of Chinese Medicine

Abstract
“Phytochemistry PCM 2000” is a core course in the full-time Bachelor of Pharmacy (Hons) in Chinese Medicine programme. The chemical structures and properties of organic compounds in Chinese medicinal herbs are the major teaching content of this course. It is very important for students to memorize and understand the chemical structures in Chinese Materia Medica (CMM) and hence their physico-chemical properties, structural elucidation and biological activities. This is the main objective in teaching the course “Phytochemistry”. This project focused on teaching the students to draw 2D and 3D chemical structures of the constituents in CMM by using several pieces of PC chemical software, and to make stereo-molecular models by employing Molecular Model Kits. Some of the resulting models and graphics were used in PowerPoints for the teaching of this course.

Key words
Chinese medicine, phytochemistry, chemical structures

Introduction
Phytochemistry PCM 2000 is a core course in Hong Kong’s first full-time Bachelor of Pharmacy (Hons) in Chinese Medicine Programme, launched in Hong Kong Baptist University in 2001. The educational content of this course includes chemical structures, physico-chemical properties, isolation and separation methods, structural analyses and elucidation, and biosynthesis of active constituents in Chinese Materia Medica (CMM). The chemical constituents in CMM usually possess structural diversities, complex skeletons and particularly have much more chiral centers forming special 3D stereo-structures compared with synthesized organic compounds. The stereo-structures of the CMM components
are closely related to their pharmacological activities. Therefore, the chemical structures in Chinese herb are very important for grasping their physico-chemical properties, structural elucidation and biological activities.

This project aimed at training students to draw 2D and 3D chemical structures of the constituents of CMM by using several pieces of PC chemical software, and to make stereo-molecular models by utilizing two kinds of Molecular Model Kits. Through these activities, students' understanding of the chemical structures and their properties was enhanced and strengthened. In addition, one common and typical pharmacologically-active compound of CMM was selected for measurement of its 1D- and 2D-NMR spectra for the purpose of elucidating the stereo-structure in solution. The stereo-structures derived from modeling and NMR measurement were compared. The students were required to search the chemical references of the constituents in CMM, to draw the chemical structures, and to establish molecular models. This improved their ability to analyze and solve problems they encounter, and trained them in the use of chemical software and molecular model kits which are necessary for their future study and work. Moreover, 3D stereo-structures in the PowerPoints generated by this project were attractive and vivid, and thus could stimulate students' learning enthusiasm and increase their understanding of the chemical constituents in CMM.

**Aims and Objectives**

This project was designed to teach the students how to draw 2D and 3D chemical structures and make stereo-models of the organic compounds in Chinese herbal medicines. Students learned:

1. To draw 2D and 3D structures of organic compounds employing ChemDraw software
2. To make molecular models of chiral compounds using Dreiding Model Kit and HGS Molecular Model
3. To measure the 1H-NMR spectrum of common natural products. A solution structure obtained from NMR data was compared with those of the models drawn from software by the students.
4. To establish a database of the organic compounds in some common Chinese herbal medicines

**Methodology**

This project ran from January, 2003 to December, 2004. The project consisted of:

1. The chemical structures of several types of compounds, such as alkaloids, flavonoids, tannins, lignans, saponins, which are very common in CMM, were drawn using chemical software “ChemOffice”.
2. Using the chemical software “Chime” and “Rasmol”, downloaded from websites, the stereo-structures of CMM constituents were viewed.
3. Molecular models were hand-made using Dreiding Model Kit and HGS...
Molecular Model. The models were photographed.

4. One compound which is a typical active constituent of CMM was selected. Students measured the NMR spectra, particularly the NOESY and ROESY spectra, in order to clarify its stereostructure in solution.

5. Based on the above achievements, PowerPoints were made for effective and qualified teaching of the course Phytochemistry.

Results/Findings

We have made the following progress in the teaching and learning of Phytochemistry (PCM 2000):

1. The students were taught to use ChemDraw and Chem3D software for drawing, observing and calculating 2D and 3D molecular structures of the active components in Chinese medicines. Students showed in assignments that they could skillfully use the software and their understanding of the stereochemistry of organic compounds improved greatly.

2. A free software named ISIS Draw, similar to ChemDraw, was installed in the PCs in the CM library and the students' own PCs so that they could study chemical structures in the library or at home.

3. In the teaching section of the Chapter “Monosaccharides and Glycosides”, HGS Molecular Models were employed in the lecture to give the students a better understanding of the concepts of conformation and configuration of natural organic compounds.

4. In the students’ project reports and oral presentations arranged in the course, students were found to have fully grasped the use methods of the drawing software and HGS molecular model.

5. 1D and 2D-NMR spectra of quercetin, a common flavonoid in Chinese herbal medicines, were measured with Varian Inova NMR (400 MHz) in the Department of Chemistry. The 3D conformation of quercetin based on the NMR data and molecular modeling were compared in the class.

6. Some students took part in the compiling of two books on Chinese medicines (see the references) using the knowledge they grasped in course Phytochemistry.

Enhancement on Teaching and Learning

Through this project, it was observed that:

• Students learnt how to use several items of chemical software which are necessary for research work in the field of phytochemistry and phytochemical analysis.

• Students were trained to better understand and observe the 3D stereostructures, conformation and configuration of the organic compounds in CMM. They became able to analyze and elucidate the characteristics and physico-chemical properties of organic compounds.
• The structures of the compounds in the PowerPoints of the lecture were presented in a three-dimensional image. Therefore they were more attractive and easier to memorize and understand.

• Students were given assignments on the components of CMM including their 3D structures and stereochemistry. This trained the ability to analyze and solve problems in the organic chemistry of natural products.

Students’ feedback on the teaching style was solicited by using a questionnaire. The students’ feedback and Teaching Evaluation results showed that this approach was largely welcomed by students. They found that this teaching style greatly helped them learn phytochemistry.

Limitations/Difficulties
In the classes, there were not enough models for the students to use. In addition, as the ChemDraw software was installed in the PC of CM Library, the lecture had to be held in the CM Library so that the teacher could demonstrate how to draw 2D and 3D structures of the compounds using the software. We found that 3D structures of the compounds are somewhat difficult for some students to understand even if the software was used in the lecture. This may be due to the poor stereo-imaginative ability for some students. Another limitation is that the use of ChemOffice software in the SCM Library sometimes became crowded because PG students, RAs and year three and four BPharm students all wanted to use this software in the library.

Conclusion
Employing several PC chemical softwares and two kinds of Molecular Model Kits, the lecturer of subject “Phytochemistry” was successful in teaching the students to draw 2D and 3D chemical structures and further ensured the students understood the stereochemistry, chemical properties and characteristics of the organic compounds in Chinese herbs. These abilities are important for their subsequent subject study, honours project and future work after graduation. Also, using this knowledge, the students could join in the compiling of a Chinese (Zhao, 2003) and an English book (Zhao, 2004) on Chinese herbal medicines by searching and drawing chemical structures. This demonstrated the effectiveness and quality teaching of the course “Phytochemistry”.

References


Acknowledgements
BPharm students, Jeff Tam, Kent Law, Byrant Mak, Rosita Leung, attended the compiling of the chemical structures of some Chinese herbal medicines.
Abstract
I taught the course ENG 3850 Special Topics in Literature (The Child and Literature) for the first time in semester 1 of the academic year 2002-2003. My overall average teaching evaluation for this course was 5.047. I sought ways to improve the quality of delivery and content of the course, proposing to establish a website and to experiment with alternative teaching methodologies. I speculated that a more thematic and critically oriented approach to the course, backed up by internet and other resources, might prove more successful than the rather staid text-based teaching approach I had used for the first implementation of the course.

Key Words
Thematic approach, child and literature, use of internet in literary studies

Introduction
The application related to a course being taught by me during semester I of the academic year 2003/2004, namely ENG 3850 Special Topics in Literature (The Child and Literature). In the only previous teaching of this course, I had received a satisfactory teaching evaluation (overall average 5.047), with many supportive comments.

However, some observations indicated that the class was less than gripping at times:

Sample observation (a):
"well, the pace is too slow; reading out paragraph by paragraph does not help us realizing the elements or the important features of the book"

Sample observation (b):
"To be frank, I don't like the selected texts. Many of them are very boring. The distribution of time in each novel should be more balanced. I agree that Harry Potter should use more time."
However, the Wonderful Wizard of Oz is a very easy novel. I think we should spend less time on it.”

Sample observation (c):
“What is so special or important about children’s literature? Why should we pay special attention to it?”

Sample observation (d):
“More criticism and theories could be introduced.”

It was clear to me that a more innovative and energized approach was needed on my part. This would involve a reassessment of suitable texts coupled with a more technologically oriented approach to the course. The anticipated duration of the project would be 12 months from 1 August 2003. In the longer term, it was hoped that the course would provide a dynamic forum for future students (both teacher trainees and others) to engage literature for children and the representation of children in adult literature. This is an important critical area, for childhood is at once perhaps the most fascinating and yet the least understood developmental phase of human life.

Aims and Objectives
The project sought funding for the following intentions:

1. continuous and terminal evaluation of the process of ENG 3850 (The Child and Literature);

2. the acquisition of specialist resources for the course and

3. the construction of an internet site intended to offer supplementary resources and guidance to students following future offerings of this course.

Methodology
The project was planned to run from 1 August 2003 until 31 July 2004.

The intention would be to approach the course from a thematic rather than a set text point of view. In my previous teaching of this course, the teaching pattern followed this broad outline:

- Introductory sessions;
- Set text A — discussion and analysis;
- Set text B — discussion and analysis;
- Set text C — discussion and analysis;
- The Role of Illustration in Children’s Literature
- Set text D — discussion and analysis;
- Concluding and revision sessions.

This set text approach, in my handling of it at least, did not succeed fully in capturing the life and essence of literature for and about children. Hence, in the second teaching of this course (semester I, 2003/2004) I adopted a stronger thematic approach. A broad outline of the course was as follows:
• Introductory session;
• Children’s literature through the internet;
• Literature as visual experience: from text to film (Harry Potter et al.);
• The role of illustration in children’s literature;
• Representations of the child in adult literature;
• Concluding and revision sessions.

This stronger thematic approach was open to some negotiation on the part of students. The regular monitoring of the subject enabled me to adjust the direction and emphases of my teaching in order to achieve more effective outcomes. But, additionally, students had greater choice in what texts they actually followed. For example, groups of students offered a presentation during the course of the semester. They were able to select the texts and resources that they felt were most relevant to the topic they had chosen. Close records were kept of the effectiveness or otherwise of teaching materials and approaches; and students were also given opportunities to use the internet to develop presentations on particular authors or modes of publication.

All this helped to inform my teaching pedagogy for the Child and Literature, but also facilitated the electronic resourcing of the course. During the process of ENG 3850, and largely based on the advice and opinions of students, an internet website was developed containing materials relevant to the course and links to other helpful sites.

Results/Findings

The overall average teaching evaluation of 5.91 showed a substantial improvement on the performance in the first teaching of the course. In addition, there were very few negative comments from students in the evaluations. Here is a sampling of positive comments:

“This course increases my interests"
“good set text"
“Theories of children literature are explained thoroughly and precisely.”
“Students are given chances to discuss questions in lectures.”
“The whole course is very well-planned.”
“The chosen texts are interesting.”
“Children’s literature is an attractive course to study. I never expect to have a chance to investigate deeply the texts that I’ve studied since I was a kid!!”

And here are the indicative negative comments:

“don’t have enough time on teaching and explaining the text in a more detail way”
“More interaction in class would be better”
“sometimes professor is too fast in syllabus that I find hard to follow.”
“Room for improvement? Not really? But… found it quite a big challenge to complete the 2500 [word] essay.”
The second teaching of the course showed a substantial improvement in student attitudes and motivation. This fact was validated also by the built-in monitoring mechanisms of the course. The progress of students was monitored through designated assessment procedures, including:

- an initial short answer assignment to establish some indication of entry knowledge and conceptual proficiencies (this did not count towards overall grade assessment);
- a terminal short answer assignment (to test exit knowledge and conceptual acquisition);
- a term paper (to evaluate argumentative capabilities and conceptual grasp within a specific learning domain);
- a two-hour written examination (to assess students' conceptual grasp of key concepts and issues).

In addition, students were questionnaired at regular intervals on the course, and several were informally interviewed on completion of the course. The feedback from questionnaires was used to revise/upgrade subsequent teaching activities.

**Discussion**

Literature for and about children has not found a niche near the centre of the English literary canon until fairly recent times, and the idea of children’s literature as a separate genre has been extant only since the nineteenth century. Whether literature seeks to “educate” children or not, it needs to be entertaining in order to capture the imagination and the notoriously limited attention span of its young readers. Similarly, courses on children’s literature and on literature about children should seek to capture the energy and interest that permeates the best of children’s literature. My first teaching of ENG 3850 Special Topics in Literature (The Child and Literature) had failed to engage fully the imagination of my students. This was largely because I had adopted the kinds of approaches that one might adopt in teaching adult literature - where such approaches are valid because the content of adult literature is more intellectually challenging and intrinsically interesting for university level studies. Dealing with children’s literature and literature about children demanded a new and more enervating approach.

Through internet resources, a stronger focus on theoretical interplays in children’s literature, and a more prudent selection of texts for study it has been possible to enhance the impact and effectiveness of the course in question. In addition, the grant has allowed the collation and evaluation of a significant number of relevant texts and electronic resources (CDs, VCDs, DVDs and so forth). These will play an important role in pushing pedagogical effectiveness further in the years ahead.
Enhancement on Teaching and Learning

The project has made me think much more carefully than I ever have before about the relationship between pedagogical strategies and the intellectual level of content. Practices entirely valid (such as close reading) for the study of adult literature are much less effective for children’s literature (and, by children’s literature, I am using the broad sweep of 0-16 yrs as my age parameter). This was true even of adolescent literatures. To some extent the differences may be explained by the fact that children’s literatures tend to focus more on story line than on the intricacies of character or imagistic development.

Additionally, I have come to appreciate more that internet resources bring a new dimension to the study of literatures. Some of the group presentations focused on this very issue, showing how the customary considerations for a hard-copy children’s book (page size; the relationships between text and pictures; font sizes) are necessarily modified, downplayed or even rendered irrelevant in the context of web-literatures (where animations, sound support, and technical customization are not only possible but commonplace). As a teacher of children’s literature, one has to some extent to let students control at least a part of the syllabus themselves. The new frontier of the internet makes us all learners and new interpreters in a sense and that, in itself, is an exciting development.

Limitations/Difficulties

I have had some technical difficulties with my internet site, and have had to rely on my student helper to put this right. Unfortunately for the project, this helper transferred to The University of Hong Kong almost as soon as the website was established and obtaining her technical services after that was not always easy. The website is currently being revamped by a different student using private funds.

Conclusion

The project was allocated a grant and all the money was spent. I have come a long way, I believe, to turning this course into a quality learning experience for my students. Of course, there will always be new challenges and complacency is never an option. But I do feel that my revised approach to ENG 3850 Special Topics in Literature (The Child and Literature) provides a very strong platform for continuing pedagogical development of the course.
History of Western Music: An Interactive and Multi-media Website to Enhance Learning

Dr Helan H L Yang
Department of Music, Faculty of Arts

Abstract
This project was to develop a set of multi-media materials to be put on the web for students’ use during and outside class. The resources package included score examples, audio recordings of music, video clips of performances, narration, and educational materials related to music, as well as links to other related web resources. Students were encouraged to take part in the virtual learning environment, to use the materials uploaded, to take part in the chat rooms and discussion groups, and explore various music-related resources on their own to enhance their learning experience.

Key words
Use of multi-media in the music classroom, interactive teaching and learning

Introduction
Music history has always been a challenging subject to teach in Hong Kong. A lot of students come to college with a pre-conceived notion that history is a ‘boring’ subject with a lot of information to remember. Lack of familiarity with the Western world, Western culture, and the Western music repertoire makes learning music history seem a daunting task. The objective of this project was to create an interactive website in which students could explore the various facets of music history – including the culture, the art, the architecture, the composers, the sound, the notation, and the issues concerned, etc. Through a detailed guide, students go through various music-history related resources on a weekly basis. Through the resources on this interactive and multi-media website, it is hoped that students’ interest in music history will be raised and their learning thus enhanced. Part of the materials used for the website will be used in class, which I hope will enhance teaching as well.
Aims and Objectives
Most of our students come to college with minimal knowledge of Western culture and a disdain for history. They lack the necessary language skills to handle the reading materials for such a subject, which is often seen as having little relevance to them. The objective of this project is to make teaching and learning of music history relevant, meaningful, and fun. To accomplish this, the Principal Investigator of this project wanted to create a virtual learning environment in which students could chat with the instructor and their classmates, while having easy access to various resources about music, and to change the lecture format to a very intense but effective multi-media presentation, thus leaving class time for activities such as discussions, outside visits, quizzes, etc. It is hoped that through the implementation of this new approach to teaching music history, students will be more motivated and will as a result find the study of music history fun, easy, and - most important - relevant to their careers. Also the resources developed could be shared by music history teachers in other local universities or universities of Asian countries.

Methodology
WebCT was used to deliver the virtual learning environment.

1. Through the WebCT calendar, the instructor of the class announced local musical events as well as drawing attention to events abroad.

2. For each teaching topic, there was a folder of resources to enhance learning:
   (a) lecture notes;
   (b) reading materials of various levels of difficulties to accommodate students with different abilities;
   (c) music scores of representative musical works for students to study;
   (d) sound files of music recordings for students to listen;
   (e) websites related to the topic.
   For each lecture, there was a set of highly sophisticated Powerpoint slides (with sound and video clips).

3. For each teaching topic, students had to complete a web test to reinforce learning.

4. Key concepts and technical terms were singled out to make sure that students reach the minimum standard.

5. For the discussion list, the instructor put up threads for students to share their views with each other.

Results/Findings
A CD Rom was produced which was used during the semester. Students found the materials helpful for their learning. Of the 26 students who took part in the survey (5 students short of the class size), 8 strongly agreed with the statement that “the multi-media resources as a whole have enhanced your learning), whereas 17 agreed with the statement. Only one answer was neutral.
Regarding the components in the resource kit, 10 and 11 each agreed strongly and agreed to the statement that “the powerpoint slides (images, key terms, and notes) have enhanced your learning.” 14 and 12 each agreed strongly and agreed to the statement that “the sound files (recordings and scores) provided have enhanced your learning.” 11 and 14 each agreed strongly and agreed to the statement that “the videos incorporated into the power-point presentation have enhanced your learning” whereas one’s pick was neutral. 7 and 11 each agreed strongly and agreed to the statement that “additional web-resources provided have enhanced your learning whereas 7 were neutral and one disagreed.

**Discussion**

There is no question that the advent of the internet has changed our way of life, our approach toward knowledge, and our method of learning.

Students’ feedback was all very positive with regard to whether the multi-media resources had enhanced their learning. They largely thought the images and notes provided on the powerpoint were helpful, and they particularly thought highly of the usefulness of the sound-recordings and the videos (all digitized), whereas they thought less useful some additional resources such as websites.

I also asked students’ opinion on what they thought most useful in helping them to learn. Interestingly, the instructor’s teaching style and the multi-media resources are rated about the same in their role in enhancing one’s learning – all rated as strongly important. Then, students tended to think peer influence had very little part to play in enhancing their learning. Examinations as a way of learning enhancement were not highly favoured by students. Assignments, both reading and writing, were not considered as important as the instructor’s teaching style or the multi-media resources concerned. The finding suggests that students preferred multi-media web-resources to traditional teaching materials such as books and articles.

The experiences of producing the CD Rom and creating this Web-based learning environment have been rewarding for my professional growth. Seeing that some of my friends are running web-classes, I feel like the project has prepared me to take the next step – to run classes on the web.

**Enhancement on Teaching and Learning**

I myself find the web resources very handy for classroom teaching and students did find the approach more interesting than the traditional one. As students were unfamiliar with European culture as a whole, the multi-media resources (providing visual and aural input) were a very effective way of enhancing their learning.

**Limitations/Difficulties**

The gathering of materials and the preparation of materials to be put on the
Conclusion

The web resources created were perceived as useful to enhance teaching and learning both by the instructor and students respectively. There is no doubt that modes of teaching are changing and students are more and more dependent on web-resources. Thus, it is necessary to up-date one’s teaching approach to address students’ needs. Nonetheless, the humanistic aspect of teaching and learning, the person-to-person and one-to-one interactions between student(s) and instructor, should not be neglected, even at the university level. As the questionnaire has shown, while students thought highly about the usefulness of Web resources in enhancing their learning, equally, they also thought the same regarding the instructor’s teaching style.
Developing a Course Resource Package and an Online Resource Centre for Teaching Modern Chinese Society

Dr Ruan Dan Ching
Dr Wang Xun

Abstract
China has experienced dramatic social changes since late 1970s, after adopting market-oriented economic reforms and the “Open Door” policy. What has happened to the main social institutions in China in the past two decades? We have carried out a teaching development project consisting of:

1. a course resource package including
   (a) a comprehensive bibliography;
   (b) a selection of video programmes, internet links, and major academic journals in the field of China studies;
   (c) a reading package containing selected readings on Chinese social institutions and their changes, and
2. an on-line teaching resource centre on China studies containing those elements.

The project aimed to enhance students learning and faculty teaching in China studies.

Key words
Online resource centre, modern Chinese society

Introduction
China has experienced dramatic social changes since late 1970s, after adopting market-oriented economic reforms and the “Open Door” policy. What has happened to the main social institutions such as political, economic, education, health care, religion, and family institutions in China in the past two decades? Why have social institutions undergone such dramatic changes? Where are they heading in the new century? Those are important theoretical and practical questions. However, in both Hong Kong and the United States, there has been no systematic and comprehensive teaching resource site focusing on Chinese social institutions and their changes. Many students have reported difficulty in finding relevant information
for coursework and research projects on Chinese social institutions and their changes. This project has been set up to deal with this problem.

**Aims and Objectives**

To meet the needs of teaching and learning about major social institutions in China today, we aimed at producing a set of teaching and learning aids under this teaching development project. The intended products of the project include

1. a comprehensive bibliography;
2. a selection of video programmes, internet links, and major academic journals in the field of China studies;
3. a reading package containing required and recommended readings on Chinese social institutions and their changes.

An on-line teaching resource centre on China studies focusing on main social institutions will be established, to contain these elements.

**Results/Findings**

There were several stages in selecting the materials to be included in this teaching aid package. We first asked an assistant (a Ph.D candidate in the field of sociology) to do a literature search through the library network. Then, the Principal Investigator and Co-investigator went over the list and made suggestions about deletions or additions of certain items. After the list was finalized, we asked another assistant (an M.phil student) to compile and format the final product. Finally, we asked a technician to set-up a homepage for the package.

The project has produced the following teaching/learning aids:

1. A comprehensive bibliography for the study of major social institutions in China. This bibliography contains the entry of 378 books and 287 academic journal articles, written between 1980 and the present. These books and articles are sorted under seven topics: Family, Education, Religion, Economic Institutions, Political Institutions, Health care system, and Legal system. There is also a general background section, which lists books and articles on the general social development in China since 1949.

2. A list of China-related social science journals. This will help students find the most current articles on a topic that they are interested in.

3. A list of China-related videos. This will help students learn about China in a fun way.

4. A list of useful internet links. This will help students search for the most updated information on China-related issues.

5. An on-line resource centre: [http://www.hkbu.edu.hk/~sosc1/soc/aboutus/drruan](http://www.hkbu.edu.hk/~sosc1/soc/aboutus/drruan) This resource centre contains Items A
to D above, and students can obtain the information they need from school or from their home.

6. A reading package with selected articles. Articles will be provided with this package to save students' time to locate relevant articles for their courses or research papers.

All of the above is available to students currently taking Dr. Ruan’s course, SOC 2690 Understanding Chinese Society in Hong Kong and in the Mainland. Other students also have free access to them by simply logging on HKBU Sociology Department’s homepage.

**Discussion**

One can learn about China in many ways and from various angles. However, Chinese social institutions and their social changes are a key aspect that students of China should not miss. However, in both Hong Kong and the United States, there has been no systematic and comprehensive teaching resource site focusing on Chinese social institutions and their changes. As the interest and need for learning about China grow, more China-related courses are being set up at HKBU and at other universities, and more students are taking these courses. This project was initially designed to meet the needs of students taking SOC2240 Modern Chinese Society, which is a required course for all sociology majors (about 60 students), and is also attended by 40-60 students from several schools on campus and international students every year. But, the project has positive implications for many other China-related courses and students as well.

**Enhancement on Teaching and Learning**

The project enhances teaching and learning in the following ways:

1. The project will immediately benefit students who take SOC2240 (and SOC390 taught by Co-investigator Dr Wang Xun at his university in America) by providing updated information on Chinese social institutions. Furthermore, the information is online, and therefore, students can access it anywhere and at any time. Since 2006, Dr Ruan has begun to teach two more courses on Chinese Society: SOC 2690 Understanding Chinese Society in Hong Kong and in the Mainland, and EDUC4940 China and Chinese Culture in Global Society. Therefore, an additional 60 Master Level students and 40 undergraduate students will directly benefit from the project in the future.

2. The project benefits students beyond SOC2240. They can still use the teaching resources developed by the project for their research projects and papers in other classes and for their honours project - a major task before their graduation. And students from other classes will benefit too, as the online resource centre is open to everyone.
3. Other faculty members can also use the course resource packages and the on-line teaching resource centre in courses on China such as *Chinese Family & Kinship, Women in China, and Population of China*, as well as courses offered by other departments.

4. Students and scholars from other universities and in other countries can also use the on-line resource centre for their courses on China.

So far, the feedback from the students have been very positive. Some of them are our current undergraduate students or post-graduate students; some have graduated, but they still find the resource centre helpful to them. In general, students think that the resource centre is quite informative and useful. In particular, they like the on-line feature of the resource centre since it makes it easy for them to search for information from home, workplace or school. Towards the latter part of the semester when students begin to write papers or to prepare for class projects, more of them may make use of the resource centre. We shall continue to collect student feedback.

**Conclusion**

Under this project, we have developed teaching/learning aids for the study of major social institutions in China. We hope that these aids will help students in their search for useful information for their classes and their papers on contemporary China. These teaching/learning materials will be updated periodically.

**Acknowledgements**

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On-line Resource Centre for Teaching Environment and Resource Management of China

Prof Zhou Qi Ming
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Abstract
This project aimed to establish a teaching resource centre for environment and resource studies for China studies. The teaching resources include historical and up-to-date statistical information, literature, multimedia materials such as digital photographs and movies, as well as remotely sensed data and digital maps, which help students to understand the spatial diversity of China’s natural environment and the geographical issues in resource and environment management in economic development. It was also the aim of the project to make all collected teaching materials available on the Internet for easy access.

Key words
On-line resource centre, geography, natural resources in China

Introduction
With the rapid economic reforms in China, it is now widely realised that the carrying capacity of land in the populated region has reached its limit. The human impact on the environment has become so large that much of the national population has to live with daily threats of pollution, an overcrowded urban environment, and rapidly vanishing farmland that will ultimately lead to shortages of food.

Environment and resource management has long been a focus of China studies, especially in the field of natural resource utilisation and environment protection. Given the recent move for China to join WTO and the highly promoted “Western China Development” strategy pushed by the Chinese central government, the potential impact on the natural resources and environment could be enormous, if appropriate precautions and proper management practices are not implemented.

To address the environment and resource problems in China, the existing course
GEOG 3850 Resource Management of China provides an overview of the environment and natural resource issues. The course, offered to both geography majors and China studies students, has been recognised as one of the major electives focusing on specific aspects in China. Recently the course has passed through a major revision exercise with substantial change in its lecture topics and laboratory exercises. In addition, in order to give students first-hand experience of the environment and resource issues, a field trip in Mainland China have been added to the course syllabus.

Given the rapidly changing natural environment and urban areas, access to up-to-date environment and resource information has become an urgent need for students who wish to understand current affairs related to China’s environment and natural resources. Although a large collection of such environment and resource data, including statistics and multimedia information such as photos, movies and animations, is already available from various sources either privately or publicly, substantial effort is needed to incorporate such data into the teaching programme and allow easy access by students. There is also a need for a multimedia information resource for course field excursions.

The benefits of the on-line resource centre to teaching include:

1. The rich, up-to-date data can be easily accessed by students at any time, on campus or at home.
2. The multimedia information will stimulate interest in self-learning.
3. The virtual environment for the field excursion will encourage students to prepare their field observation and to conduct post-exursion reviews.

Aims and Objectives
The objectives of the proposed project are:

1. To collect current and historical data on the environment and resources of China with the emphasis on environmental change.
2. To establish an on-line resource centre for students to access up-to-date information on the environment and resources in China.
3. To create multimedia teaching materials and presentations to enhance classroom teaching and self-learning in the course Resource Management of China.

Methodology
The methodology of the project included three major components:

1. Collection of data and teaching materials,
2. Design and programming on-line resource centre software and database, and
3. Assessment and evaluation of the effectiveness of the on-line resource centre.
Collection of Data and Teaching Materials

A substantial collection of environmental and resource data is available from various sources including the Chinese Academy of Sciences, universities and government departments. The data collection tasks, however, are quite demanding on labour and time, and require substantial knowledge of data availability and accessibility among different types of sources. Collaboration has been sought from Beijing Normal University. Material was acquired, verified and formatted into appropriated form to be incorporated into the on-line information resource centre.

Design and Programming On-line Resource Centre Software and Database

The on-line resource centre software and database have been developed based on the Internet server installed in the Department of Geography. The software development tasks include design of the web site structure, development of multimedia user interfaces and search engine, development of on-line databases including satellite images, digital airphotos, geographical photographs, digital maps, field excursion guidebooks and reports, and statistics for environment and natural resources.

Assessment and Evaluation of the Effectiveness of the On-line Resource Centre

The web-based resource centre has been introduced to the classroom teaching and laboratory classes for the course GEOG 3850 Resource Management of China. The resource centre is now the regular source for students to download useful information for their course work and reference for their honours projects.

Results/Findings

The project has developed an on-line resource information centre to present real-world cases to students who study environmental and natural resource issues in China. Through this approach, students not only learn the principle and methodology for analysing environmental and resource problems in China, but also have some first-hand experience on the actual facts found in China. Thus, their learning in classroom has direct contact with real-world cases. This has stimulated the study interest for students on the China study course and also allowed more flexible and practical methods in teaching because of the readiness of the large collection of multimedia teaching materials. Moreover, since some of the key teaching materials such as textbooks are quite difficult to get and frequent updating of the teaching materials is required, the on-line resource centre can largely remedy the shortage of available teaching materials in the normal printed form.

The web-based resource centre is now accessible at http://geog.hkbu.edu.hk/geores, and sample displays of the web-pages are shown in Figures 1 and 2.
The implementation of the project has been monitored through student feedback and response in their learning during the course work. A link was also established to allow inter-University sharing of web materials with the experiment of access control for all students logging in from computers located in The Chinese University of Hong Kong (CUHK). Group discussions and interviews were conducted to gain suggestions from students on the improvement of the web development. A presentation was also made at CUHK to share the idea and problems.

Due to copyright concerns, the web-site is not accessible from computers outside the HKBU and CUHK campus.

**Enhancement on Teaching and Learning**

The web-based resource centre provides a basis for students to find rich information about natural resources of China and related materials such as national standards on land use classification and digital codes, different digital maps, photographs, videos, presentations, government documents and satellite images. This encourages students to undertake independent studies by finding their own reference materials and conducting their own interpretations of these materials. A large portion of the course Resource Management in China has been allocated for students’ research reports, which have benefited greatly from the on-line resource centre putting much useful information at students’ finger-tips.

A survey has been conducted using a specially designed questionnaire. The students enrolled in the course GEOG 3850 Resource Management in China participated in the survey and 26 answering sheets were returned from the 32 students enrolled in the course in 2004. A summary of the survey results is shown in Appendix 1.

By analyzing the returned answering sheets, the following findings can be made:
1. The on-line resource centre had been used to some extent though not being an essential part of the coursework. This is illustrated by question 1 where 74% responses indicated that they have quite often or occasionally used the website.

2. The contents of the website to some extent satisfy students’ need, but new and updated information is continuously needed. (Q2: 62% answer on “quite often” or “occasional” in finding the materials requested. Q3: 96% used it for course work of GEOG3850, and 38% for personal interest. Q4: 100% answer on “quite useful” or “somewhat useful”.)

3. All students thought the on-line materials useful for their course work (Q5: “It gives me materials that I need for completing course work”: 100%).

4. The on-line resource centre is appreciated by students mainly by its provision of reference materials (62%), digital photos (46%) and friendly user interface (46%).

5. The major problems of the current system are insufficient materials (42%), explanations (31%) and out-of-date materials and missing links (31%). This clearly indicates the need for continuing support for the Internet resource centre.

6. Most suggestions to improving the on-line resource centre include “putting more up-to-date materials” (62%), “Including more Internet links to useful sites” (62%), “Adding more categories of materials” (58%), and “Making upload area so that we can share materials” (42%).

Limitations/Difficulties

The web-based resource centre has been successfully installed on the Geography Department’s web server and currently serves students’ coursework and honours projects well. However, keep information updated and enhancing service to the users remain as major challenges for the future. Another difficulty is to handle large volume of data, particularly the satellite images, which are increasing rapidly with new images available. The current database has already reached the capacity of the internet server. Further expansion will require upgraded hardware.

Publicity and promotion of the website usage may also present some problems. This clearly links to the above data updating issues. From the questionnaire findings, it is clear that the students want to access more up-to-date materials for their coursework and honours project before they will really rely on the resource centre. Practically, however, lack of resources makes this difficult as collecting data always demands continuous efforts.

Conclusion

The TDG project has been successfully executed and a high-quality on-line resource centre have been developed
and implemented. Although the resource centre still needs further development and improvements to cover more materials, frequent updating and to provide more learning assistance, the rich on-line resource will certainly enhance the teaching in China study, particularly resource and environment related courses.

Further improvements and enhancements are needed to make more comprehensive and up-to-date on-line teaching materials. The on-line resource centre needs to be further promoted to the students for accessing more assistance and teaching materials in a more efficient and cost effective way.

**Appendix 1. Summary for On-line Resource Centre for Resource Management in China**

Total samples: 26

1. How often do you use the on-line resource centre for resource management of China (including image database, map database, photo and video databases and document database)?

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quite often</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Occasionally</td>
<td>16</td>
<td>62</td>
</tr>
<tr>
<td>Rarely</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

2. How often did you find the on-line materials (e.g. images, maps, photos and documents) requested by you?

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quite often</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Occasionally</td>
<td>14</td>
<td>54</td>
</tr>
<tr>
<td>Rarely</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>Never</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

3. What did you use the on-line resource centre for? (Tick all that may apply.)

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course work for GEOG3850</td>
<td>25</td>
<td>96</td>
</tr>
<tr>
<td>Course work for other courses</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td>Honours project</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Personal interest</td>
<td>10</td>
<td>38</td>
</tr>
</tbody>
</table>

4. How do you think about the on-line resource centre?

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quite useful</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>Somewhat useful</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>Waste of time</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I have never used it</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

5. In what way that you think the on-line resource centre useful? (Tick all that may apply.)

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, I do not think it useful.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>It gives me materials that I need for completing course work.</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>It gives me materials that I need for completing honours project.</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>It shows the correct answers to the course work.</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>I think it might help for me to pass exam.</td>
<td>5</td>
<td>19</td>
</tr>
</tbody>
</table>
It contains a lot more materials than I need now but I would probably use it later.
Other reasons (please specify): 0 0

6. Why do you like this on-line resource centre? (Tick all that may apply.)

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not like it at all.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I can get reference materials very easily so that I can save time to search Internet.</td>
<td>16</td>
<td>62</td>
</tr>
<tr>
<td>A lot of materials are not easily available elsewhere.</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>There are many beautiful photos.</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>The interface is friendly and easy to use.</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>It would be nice to have the on-line materials handy when I take the exam.</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td>Other reasons (please specify):</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

7. What are the reasons that you do not like this on-line resource centre? (Tick all that may apply.)

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it. It is perfect.</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>The interface confuses me and I found it difficult to locate materials.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>It does not tell me what is available so that it takes too much time to search.</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>There are not enough materials.</td>
<td>11</td>
<td>42</td>
</tr>
<tr>
<td>There are not enough explanations on the data.</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td>There are too many out-of-date and missing links.</td>
<td>8</td>
<td>31</td>
</tr>
</tbody>
</table>

Other reasons (please specify): 1 4
“Sometimes load slow”

8. In which area you would like to see the improvement? (Tick all that may apply.)

<table>
<thead>
<tr>
<th>Answer</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making better interface (e.g. index and table of contents) for search.</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Putting more up-to-date materials.</td>
<td>16</td>
<td>62</td>
</tr>
<tr>
<td>Including on-line student feedback and chat room.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Including more Internet links to useful sites.</td>
<td>16</td>
<td>62</td>
</tr>
<tr>
<td>Making upload area so that we can share materials (e.g. photos).</td>
<td>11</td>
<td>42</td>
</tr>
<tr>
<td>Adding more categories of materials (e.g. all previous honours project, field reports, etc.).</td>
<td>15</td>
<td>58</td>
</tr>
<tr>
<td>Others (please specify):</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

9. Any other comments and suggestions?

“More photos”
“More promotion regarding the online-resources centre. Don’t waste money and time for setting up the web-site”
“Worth to use”
European Studies: Electronic ‘eurolingua’ Study Paths

Prof H W Hess, Dr Claudia Tamme
Department of Government and International Studies, Faculty of Social Sciences

Abstract
This project continues earlier projects to build up, enhance and revise electronic support for language learning of German as prescribed by the European Studies curriculum. A new system of so-called electronic ‘Study Paths’ was created, covering language learning needs for year one and two of the course. The system operates with easy-to-use authoring software and is constantly being expanded to provide a ‘personalized’ stock of interactive language learning activities.

Key words
Electronic ‘eurolingua’ study paths, European studies

Aims and Objectives
The purpose of this project was to upgrade the E-learning and electronic reference system of the German Stream of the BSocSc (Hons) in European Studies. The system (‘Study Paths’) was originally developed in 1996 and expanded in successive years (Hess, 1996, 1998a, 1998b, 1999; Hess & Stählin, 1997). It covers approximately one third of the required units/credits of the course and is attached to the courses GERM 1111-2 and GERM 2111-2 (32 units/credits). A ‘Study Path’ is an electronic tool to link appropriate self-access learning materials to a certain stage or segment of the classroom tuition process. The system’s objective is the provision of extensive self-study opportunities for rapid language acquisition, which are at every stage commensurate with the level reached by the student. They lead and encourage students to language activities parallel to and beyond the classroom. The intensive acquisition of German up to a fair level of fluency at the end of semester 4 is a key requirement of the course, which cannot be reached unless such additional, systematic self-study patterns can be established.

As Study Paths are closely linked to the classroom syllabus, a revision became necessary because the course team switched to a new textbook and method. Since September 2001, the textbook Moment mal! (Müller et al, 1996) became the main basis for teaching and learning.
Preparations for the new system started in April 2001 and were finalized in September 2001. During the AY 2001-2002, the Study Paths were progressively enlarged with tailor-made online exercises and reference listings for further self-access learning. Concurrently, weekly tutorials for year-one students were (and are still) held to familiarize students (year one) with the system and to systematically develop their self-study skills. The new online system is accessible at http://www.hkbu.edu.hk/~europe/mmpaths/mm0.htm or through the ‘portal’ of the German Stream at http://www.hkbu.edu.hk/~europe/gindex.htm (‘Study Paths (MM)’). The old Study Paths (based on the textbook Themen neu) have remained online for additional self-learning support (http://www.hkbu.edu.hk/~europe/gindex.htm). Students can make use of the system in the course’s Self-Access Learning Unit (SALU), at home or from any point with online connections.

Methodology

The Study Path system was revised according to the results of structured questionnaires regarding self-access learning (see below Project Stage 1).

Language learning activities and exercises were (and are) then written parallel to the gradual classroom progression with the new textbook. This ensures that the online activities correspond closely to the needs of students, as they are observable in the classroom. The activities can be (and are) modified on a permanent basis in line with student needs and interests. They partly use ‘avatars’ of our own students, i.e. photographs and/or comments provided by the students themselves. This is meant to increase motivation for using the system. By way of classroom teaching and additional intensive 1:1 self-access learning tutorials, student feedback is constantly included in the process of enlarging the system (see Stage 2).

The project uses MS Frontpage for its basic outline. The online activities were written mostly with the ‘Hot Potatoes’ software from the University of Victoria/British Columbia and the web-based ‘Quintessential Instructional Archive’ (QUIA). The course holds an annually renewable licence from Quia. In addition, Markin 2.1 from Creative Technologies (U.K.) is used for electronic correction of student texts and feedback purposes. The software packages are far more cost-effective and simple to use than the University’s ‘Web CT’ system.

Project Stage 1 (April – June 2001): Evaluation of the Previous Study Path System and Its Usage by Students

German Stream students have worked with Study Paths since 1996. The self-access practice was monitored regularly, and student suggestions were continuously incorporated to improve the ‘user friendliness’ of the system. In April 2001, a detailed final “SALU questionnaire” was administered to all year-one and year-two students (Hess, 2001e), which aimed at finding guidelines for the construction of
the new Paths and general improvements of self-learning facilities of the programme. The original Study Path system was conceived as a (electronic) reference guide to non-electronic learning materials. 93% of year-one students and 100% of year-two students rated it as ‘very useful’ or ‘often useful’. Since about 1999, the course team used new possibilities of creating interactive online exercises to further enhance the system. These ‘Online-Übungen’ (online exercises) now became the predominantly used component for self-study (for 87% of year-one, 64% of year-two), due to convenient access and the fact that they were tailor-made and specifically related to classroom teaching. All other learning opportunities, including WWW study material from other locations, have since then steadily lost ground.

In general, students were very satisfied with the structure and layout of the original Study Paths. These were rated ‘clear and easy to handle’ by 67% of year-one and 36% of year-two or ‘mostly clear’ by 33% of year-one and 64% of year-two. The difference can be explained by the fact that year-one students had tailor-made ‘Online-Übungen’, whereas year-two students were referred to other media formats.

We decided therefore:
- to author an entire new online exercise system for the new textbook Moment mal! as the central and immediate means to provide practise and revision of the classroom syllabus,
- to establish a parallel but separate reference system for further individual study with SALU and WWW materials.

The questionnaire referred to all courses of the programme currently taught with electronic (online) support: EURO 1110, EURO 2120, EURO 3120, POLS 2170, GERM 1111-2, GERM 2111-2. As far as they are relevant for this project, the results can be summarized as follows.

The SALU is an indispensable centerpiece of language learning and area studies, used on average 5-10 hours/week on top of classes. Self-access language learning preferably begins with access to the electronic Study Path system. 80% of year-one students, for example, cited the Study Paths as the ‘most frequently used component for learning (27% of year-two students – with 45% quoting ‘WWW pages for Area Studies’ as the predominant source).

Table 1: Self-Access Learning and E-Learning in the German Stream of Studies (Questionnaire)

<table>
<thead>
<tr>
<th>Focus</th>
<th>No. of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A The SALU in general</td>
<td>7</td>
</tr>
<tr>
<td>B SALU components</td>
<td>5</td>
</tr>
<tr>
<td>C E-Learning</td>
<td>9</td>
</tr>
<tr>
<td>D E-Mail &amp; Chat</td>
<td>8</td>
</tr>
<tr>
<td>E Study Paths for German</td>
<td>11</td>
</tr>
<tr>
<td>F E-Learning and Area Studies</td>
<td>40 (administered separately)</td>
</tr>
</tbody>
</table>
• to introduce concurrent self-study tutorials for year-one students in order to train them gradually in establishing their own learning preferences and utilising supplementary SALU materials. The overall structure of the Study Paths, however, could be maintained.

A side effect of the questionnaire, although not directly relevant to this project, was a shift in buying policies for the SALU. ‘Traditional’ media formats, with the exception of popular video and audio material, are now scaled down. This also (partly) includes multimedia CD-ROMs for language learning. All of these were rated as ‘inconvenient’, ‘time-consuming’ to use and mostly inappropriate for students’ immediate learning needs. The focus is now predominantly on WWW-based learning.


The new Study Path system corresponds to three volumes of the textbook *Moment mal!*. The volumes are to be worked through in four semesters and lead to the internationally acknowledged Zertifikat Deutsch als Fremdsprache (Certificate of German as a Foreign Language). Acquiring this certificate is a mandatory requirement for students to pass into year three (and hence continue their studies in Europe). The Study Path system includes a total of 40 individual paths. Students can access them by going directly to the Kapitel (lesson) they are currently studying. Alternatively, the project team created a topical index (‘Themen’) and a grammar index (‘Grammatik’). Students can therefore choose language activities according to a topic or they can revise specific grammar points if they wish. The textbook method is based on a “spiral curriculum”, which means that certain topics or grammatical functions occur several times over the learning period of four semesters, with increasing linguistic complexity. Since the online system is available at all times, students can easily switch back to refresh previously acquired skills/knowledge or can progress individually in three different structuring modes (classroom progression, topical threads or grammar paths. The opening pages of the system are shown in Figures 1 - 3.

**Figure 1. Opening Page of the Study Path System**
Each Study Path is framed by additional learning tools (Figure 4):

- introduction into working with the system
- instructions for using German characters on the PC
- online dictionaries (English-German-English)
- online grammars
- links to move back and forth within the system
- additional links to German-language radio stations online (music channels for young people, news channels, see Figure 6).

Instructions are initially given in English, with an early switch to German already towards the end of semester 1 (Figure 5).
Study Paths are tools to structure exercise types and to allow students to choose language learning activities according to need, interest and individual learning preference. Earlier empirical evidence (observation and questionnaires) showed that students prefer online activities over other media formats, and structured exercises pertaining to current lessons over ‘free’ browsing (Hess, 2001a). We therefore concentrated on authoring review exercises in four categories (Figure 7), which gradually lead from precise reviews to ‘independent’ language (communicative) usage:

1. Grammar (Grammatik) (see Figures 8+9)
2. Vocabulary (Wortschatz) (Figure 10)
3. Writing (Schreiben) (Figure 11)
4. German in the WWW (Deutsch im WWW) (Figure 12)

The system so far deliberately excludes language activities, which can be done better and more meaningfully in class or in face-to-face tutorials (e.g. conversation/listening). Thus, preference is given to language structures and the lexicon as well as writing activities. Writing skills depend on the existence of an addressee. The system therefore provides direct e-mail links to all lecturers of the German Stream (Figure 13). In addition, the course team works with a standardized e-mail correction programme. Regardless of whether students write in response to a Study Path activity suggestion or in ‘free style’, they will always obtain a detailed correction feedback plus comments by one of their teachers (Figure 14). Links to appropriate language learning exercises elsewhere on the Internet and to sites of interest round up the Study Path system (Figure 15). With increasing proficiency, these links can be used for explorative ‘research’ into matters German.
The rationale of the system and empirical evidence about its usage are discussed in detail in various published articles (see reference list). Its proven effectiveness does not depend on using fanciful ‘multimedia’ gadgets but rather on its systematic linkage with the classroom and students’ learning needs at each stage of language acquisition. It was developed for the students of the German Stream of European Studies at HKBU, but is available freely on the WWW. Thus, it serves a community of German language learners in Hong Kong currently estimated at approx. 1,500 for the beginner’s and lower-intermediate level. Beyond that, it can be used by anyone worldwide currently studying with the textbook *Moment mal!*. In combination with the earlier version of Study Paths online (‘Themen neu’), it supplies online learning activities for an estimated 1,000 hours of individual (self-access) language learning.

**Limitations/Difficulties**

Contrary to many statements about the alleged advantages of ‘multimedia’ or ‘online learning’, such systems do not per se improve learning. They can do so only if they are an integrated part of an intensive language learning environment, the centre of which remains the classroom. The system has proved to be extremely popular with all students – to the extent that it is ‘tailor-made’ and closely related to all other parts of the learning environment (Hess, 2001b, 2001c, 2001d, 2003b, 2006).

To achieve this aim and enhance the
system further, a very intensive, concerted effort by all lecturers teaching language subjects is necessary on a continued basis (Hess, 2003a). In the future, the system will require further constant expansion and modification (rather than conventional one-off grants to establish an electronic ‘infrastructure’ as in the present case). This collective task goes far beyond normal language teachers’ remits and must be acknowledged appropriately.

It was also found in all previous projects (including this one) that the availability of IT resources does not automatically guarantee systematic usage. The more complex resource collections (online and offline) are and the more individual choice is offered to students, the more important and indispensable counselling and additional tutorial sessions become.

References


(pp. 323-339). Hong Kong: Action Learning Project.

Hess, H.W. (2001c). Online learning systems as mediation between cyberspace and learner – Why (and how) teachers (and not primarily students) should become ‘autonomous’. *GFL* (German as a Foreign Language), April 2001 [online: http://www.gfl-journal.de/]


Creating an Interactive Homepage to Enhance Language Teaching and Learning

Dr Carol M H Lam
Language Centre, Faculty of Arts

Abstract
This project aimed to provide EAP (English for Academic Purposes) students and outsiders with better access to the course materials and better interaction with each other to enhance both the students’ motivation for learning English and the delivery of EAP teaching itself. Data collected from 40 questionnaire surveys and ten follow-up interviews concerning the effectiveness of the use of the present homepage suggest that an overwhelming majority of the students found the homepage attractive, effective and useful for their English learning. It has provided an extra, easy and reliable means for them to learn English in their own time.

Key words
Language teaching, language learning, interactive mode

Introduction
As browsing and using the Internet have become almost daily activities for many university students, the project explored the effectiveness of integrating the use of a homepage in course design in addition to the traditional classroom learning and teaching. The homepage provided information on five main areas: course syllabus and material of LANG 1330 English for Academic Purposes B.A. (Hons.) Music, other learning material on English learning designed by the project investigator, useful links that are helpful for the students to improve their English on their own, visual material like photos of the class together, and a discussion forum that allows the students and the course teacher to interact with each other.

Aims and Objectives
The aims of this project are threefold:
1. to provide students of LANG 1330, students of the investigator’s other EAP courses, and outsiders, with better access to the course materials and more opportunities to interact with each other;
2. to enhance EAP teaching and learning in general by motivating students to
have more academic exchanges with peers on the web, and
3. to encourage the students to use other sources available on the homepage to continue and consolidate their English learning in their own time, at their own time and by themselves.

**Methodology**

Findings concerning the students’ response to the integration of the homepage and its effects on the delivery of the EAP course in particular and on the students’ English learning in general were gathered through three channels: the homepage Guestbook on a continuous basis, in-class questionnaire surveys conducted by the project investigator in four classes with a total number of 60 students at the end of November 2000, and ten follow-up interviews in late April 2001.

**Results/Findings**

According to the findings gathered from both quantitative and qualitative methods, the overall responses to the setting up of a course homepage were very positive. Visitors to the homepage included not only the students taught by the project investigator; but also peers of the students of the project investigator and some former students and outsiders, which was quite a surprise for the project investigator. Feedback of the homepage mainly focused on five aspects: its layout and design, content, accessibility, reliability and most important, its usefulness and effectiveness for the students’ English learning.

### Layout and Design

Out of the 60 students polled, a large majority of them, 82%, stated that the layout of the homepage was attractive and interesting, while some male students thought that more graphs and animation could have been included in the homepage. The colour used was especially appealing to female students who thought the homepage carried the right colour tone. They liked the simple division of content, which made things easy to find. Although it mainly contained words without many pictures or graphs, it appeared pleasant and attractive in its own way. As one of the informants said, “It is an interesting and beautiful website. Its design is creative. The website really attracts me to stay and learn English.”

### Accessibility

Most of the students found the homepage easy to access since it was connected to the University homepage address. Having said that, it was often much easier and quicker to access with the computers on the University campus than with the students’ own computer at home, depending on the kind of online system the students used at home. On the whole, students found “learning through the internet is a convenient, easy, quick method which should be promoted nowadays,” as one of them said.

### Reliability

Comments about reliability from respondents and informants were
surprisingly common. Many of them found this an important consideration when using information from the Internet. Since the homepage was designed and intended to be used by their teacher (the present project investigator) for her students in particular, a large majority of them found it more reliable. What is more, they could personally approach the teacher when they had a question about the content on the homepage, which made the homepage feel more trustworthy.

Content
The content covered in the homepage was found appropriate and right for the needs of the students. Since the homepage was mainly designed to enhance the accessibility of course materials and interaction among students of the course, LANG 1330 English for Academic Purposes B.A. (Hons.) Music, 92% of the students in this course found the course materials and course outline provided on the homepage helpful to them. Besides the course materials, 90% of them also found the other three components - English learning material, links and forum - very suitable since the particular content catered for their needs. Other EAP students and even some former students shared the same view. As one of them said, “I think this homepage is quite useful for students because its content is practical. Although my English is very poor, I will try my best to finish the tests in this homepage.” One last item that received unexpected appreciation was the inclusion of my former students’ photos under “Precious Moments”. A large number of students found this very interesting and enjoyable since they could see some of their peers online, partly share the joy that their teacher/project investigator had experienced with the former students, and knew that one day they would be on the site as well.

Usefulness and Effectiveness for the Students’ English Learning
Most of the respondents found the homepage useful and thought it helped to improve their English learning. They commented most on the practicality and usefulness of the materials in “Learning Materials” and “Links”. Among the material under speaking, writing and grammar, they liked what was included in writing and grammar most. An overwhelming majority (90%) said that the sample writing items, which mainly centered on job application, scholarship application, pursuing further studies and other practical purposes specifically for students, were just right for their needs. Besides, since these writings were authentic pieces collected by the project investigator while teaching, they appeared particularly practical and right for the needs of the students studying at the University.

Some grammar tests were another popular item under “Learning Materials”. To the project investigator’s surprise, quite a few students who visited the homepage were eager to try out the tests themselves and asked the teacher to follow up when they had a problem understanding the key provided on the site. Amazingly, the tests appeared more encouraging than
the project investigator expected. As one of them wrote to the project investigator, “I have finished three tests of ‘Test Your Grammar’. The result is quite good. I get six correct out of ten in every test. Does that mean that my English standard is quite good?”

This kind of question and response gave the project investigator a chance to communicate with her students and get to know their interests and needs, so that she could continue to help them with their English learning. Last but not least, many found the links recommended by the project investigator under “Links” useful and helpful for their English learning. As the project investigator was more familiar with what was available in the field of English learning and teaching and with the needs of her students, the links selected were found particularly appropriate and useful for the respondents. In a way, the respondents thought that the project investigator has introduced them to many other ways to improve their English through the useful websites she recommended in this homepage.

**Areas to Improve**

The findings show that possible improvements for this homepage lie in two main areas: more variety of content and better sound effects. A number of the respondents, 32%, thought that the content included in the homepage could be more varied. At the moment, the content mainly focused on the learning of academic English and practical English. To make the content more interesting and attractive, particularly to some students who enjoyed more visual material like comics, the project investigator could include some links to children’s literature and sites offering the use of comics in English learning. In addition, the project investigator can also insert sound effects so that the effect of some items on speaking proficiency can be improved. In terms of materials under the section “speaking”, some respondents also suggested including the learning of pronunciation, a rather weak area of most of the students in the group surveyed.

**Discussion**

The project explored how the use of a course homepage could enhance the teaching and learning for the course LANG 1330 English for Music, other EAP courses and language teaching and learning in general. Clearly the project stimulated a certain number of students to use the net to further their language learning on their own. It particularly met the needs of students who wanted to learn in their own way, and provided a chance for practice in autonomous learning. As with many other multimedia devices used in the classroom, however, making the most of a course homepage in language learning requires a certain level of monitoring and facilitation from the course teacher so as to maintain the students’ interest and motivation. In the absence of human communication and interaction the students will lose focus and learning will eventually stop.
Enhancement on Teaching and Learning

The impact of using a course homepage and the net on the teaching and learning in the course LANG 1330 English for Music and EAP course in general can be seen respectively from the perspectives of teacher and student. By integrating the homepage in the regular classroom teaching and learning, both the project investigator and the students found their work more enjoyable and rewarding.

The Enhancement of Teaching

From the teaching perspective, the project increased the variety of course learning materials, provided an extra, efficient channel for the teacher to communicate with her students after class, and opened up more topics for discussion between the teacher and her students. Firstly, besides the LANG 1330 course outline and information, the teacher uploaded some extra English learning materials that she had found useful for this particular group of students at the University and useful material on English learning in general. This greatly expanded the variety of learning materials she planned to use for the course because the original EAP course was quite limited to academic English, while the students need a lot more than pure academic English. Secondly, the course homepage provided another channel for the teacher to get in touch with her students. As the course time was only three hours a week, the course homepage became an additional online channel for the teacher to have an access to her students and vice versa. Most important, the homepage stirred more common language between the teacher and her students as the students discovered more learning materials prepared by the teacher and other channels of English learning suggested by the teacher. It developed the rapport between the teacher and her students, which directly improved the interaction between the two parties.

The Enhancement of Learning

From the learning perspective, the project investigator found three major positive changes among her students. First of all, the students did show more interest in learning other aspects of English, like grammar, as well as academic writing. They also found the links provided very useful and helpful, which boosted their intrinsic motivation for learning the language. A ‘boring’ course - the general opinion about English learning - could be a fun and positive experience with the facilitation of what was presented through many other sites of English learning. Secondly, what is more encouraging to see is that these initial interest and motivation were turned into action as the students tried out the English tests or tasks provided by the project investigator, and they followed up this practice and sought clarification and further understanding from the project investigator through the net. This proved to be a real enhancement of the students’ English learning. Lastly, by using the net, the students also enhanced their communication with each other in terms of their intellectual exchanges. The peer
review of each other’s writing on the net has provided an online learning opportunity for them to learn from each other.

**Limitations/Difficulties**
The difficulties of using the design of a course homepage that aims to achieve what was suggested in the present project lie in two main aspects: the maintaining and updating of the homepage and the full integration of the course homepage in the course syllabus and delivery. To keep the information posted on the site requires the project investigator to acquire a certain level of technical skills of website design. Since this is an on-going process, the project investigator cannot rely too much on the help from the technician or student helper. Also, the project investigator needs to be sensitive to the way students’ use the site to maintain their interest in using the site. The second major difficulty lies in the integration of the homepage with the design of the course work and schedule in every class operation. Since the homepage was partly designed to enhance the interaction and to provide another channel for students to work on their assignment on the net, the project investigator needs to sort out her course schedule and work requirement very carefully in order to ensure a smooth process when the students are required to use the net to process their course work.

**Conclusion**
To conclude, the project investigator found the design and integration of the course homepage an encouraging experience. It received very positive responses not only from her own students, but also the peers of her students. What is most rewarding for the project investigator is to find out that the homepage did boost some of the students’ motivation and interest in learning English on their own. At the same time, it did provide the project investigator and the students with another effective channel to communicate with each other. However, to make the most use of the course homepage together with the other elements in the course, the project investigator needs to further adjust the form of course work and schedule so that students can fully use the design of the homepage. Besides, in order to maintain the students’ interest in using the site, the homepage needs to be updated frequently and revised to include a wider variety of learning materials.
Do Not Turn off Your Mobile Phones in My Lectures – A Mobile Phone Based Response System

Prof Albert W M Lee
Department of Chemistry, Faculty of Science

Prof Joseph K Y Ng
Department of Computer Science, Faculty of Science

Abstract
Every student has a powerful wireless signal transmitter hanging around his or her neck or inside the pocket. Our Mobile Response System (MRS) platform can be used to collect and analyze the answers or opinions sent in by the students via SMS messages after a question is posed during a lecture. With MRS, class interaction is greatly enhanced. No set-up or purpose-built response pads (signal transmitters) are needed. The operation cost of our system is very minimal.

Key words
Mobile phone based response system, interactive teaching, class polling system

Introduction
In a typical lecture of class size over 50, interactions among students and between instructor and students are usually very low. Simple talk becomes the norm and learning can be rather passive.

Instructors may try to pose some questions during lectures to gauge the level of understanding of the concepts introduced or to stimulate class discussion. However, many of our students are afraid to speak up and prefer to avoid embarrassment in front of their peers.

The Mobile Response System (MRS) was developed to remedy the situation. When a question (in multiple choice or opinion survey format) is posed to the class, students can comfortably send in their personal responses anonymously via their mobile phones. MRS can carry out a real
time analysis, and display the answers or opinions. It can further stimulate discussion and interactions among students.

Cell phones are no longer just interpersonal communication necessities. They can become handy teaching and learning tools in lectures via the MRS platform. Therefore, please keep your mobile phones on in my lectures.

**Aims and Objectives**

1. To develop a location and hardware independent Mobile Response System (MRS) for teaching based on the wireless communication networks with mobile phones as the signal transmitters.
2. To develop a web based software for the MRS.
3. To test out the MRS platform in the teaching of chemistry and computer science courses.
4. To explore the scope and limitations, such as loading capacity and response time, of this Mobile Response System.

**Methodology**

The overall architecture of the MRS platform is outlined in Figure 1.

Students’ responses to the question posed during a lecture are sent as SMS (Short Message Service) messages. There are only six mobile phone service providers (CSL, Hutchison, New World, Peoples, Smartone and Sunday) in Hong Kong. Students use one of the six phone numbers corresponding to the same local service provider that they subscribe to. There are no charges for SMS messages sent within the same mobile phone service provider. Therefore, students do not pay to send in their answers. The SMS messages are logged onto the HKBU MRS server (housed in room RRS 716) via the GSM network and the SIM cards installed in the modems networked to the server. Our MRS software analyses the students’ responses and the results, as bar charts or other selected formats, are sent back to the lecture room’s computer for LCD immediate display.

Depending on the results, the instructor can ask the students to discuss the question in small groups and then send in their votes again.

A flow-chart summarizing how the MRS platform can be integrated into classroom teaching and learning is depicted in Figure 2.
The key features of the MRS platform are:

1. Students can send in their responses to a question anonymously. They are no longer afraid to give an answer or opinion in front of their peers.

2. It provides immediate analysis and display of the students’ feedback.

3. It can further stimulate class discussion.

4. Compared with other commercially available systems, our MRS does not require any signal receivers inside the lecture room. There are no purpose-built response pads (signal transmitters). The mobile phones are the personal signal transmitters. There is no need to distribute signal transmitters at the beginning or to collect them back at the end of the lecture.

5. The operation cost is minimal. SMS messages sent within the same local mobile phone server provider is free of charge. The SIM cards installed inside the modems networked to the MRS server cost less than HK$100 each for 6-month period.

Results/Findings

Technically, we found that the MRS concept works as planned. The software system we developed operates smoothly with minimal attendance.

We tested out the MRS platform in the tutorial sessions of Organic Chemistry I & II. Students found little problem in learning how to use the MRS as they are very familiar with sending SMS messages via their mobile phones. The atmosphere of the tutorial session became very lively. They were eager to send in their responses to the questions posed and to participate in the subsequent discussion.

Students’ feedback to the MRS platform was very positive. They found it very user-friendly and did not feel embarrassed to answer questions in class. In general, students agreed that the MRS platform could enhance their classroom learning experience. A summary of the student evaluation of the MRS system can be found in Appendix 1.

Upon the invitation from colleagues of the Education Bureau of the SAR Government, we conducted a workshop of the HKBU MRS platform for a group of 20 high school science teachers on November 30, 2007. The list of participants and their school affiliations can be found in Appendix 2. The results of the survey conducted immediately after the demonstration were also highly positive and encouraging (Appendix 3). Many of the school teachers were prepared to incorporate the MRS platform into their own classroom teaching.
Enhancement on Teaching and Learning

According to the survey, both our year-one chemistry students and the high school science teachers found that:
1. The MRS platform is user friendly.
2. With MRS, they do not feel embarrassed while answering questions in class.
3. The MRS gives instant response and feedback to the class.
4. MRS is easy to use and understand.
5. Their learning experience is enhanced.
6. With MRS, they are willing to discuss the questions with their peers.
7. They find it easy to express their opinions in front of peers.
8. MRS is an efficient system for answering multiple choice questions in class.
9. The MRS approach may help students to learn better.

In addition, the MRS can be easily adapted as a tool to take roll call, and to conduct in-class instant tests and quizzes. It can also be used as a platform for collecting and instant analysis of data on a field trip or road-side survey.

Limitations/Difficulties

According to the information provided by the mobile phone service providers, SMS messages they receive via the GSM network will be dispatched to the recipients within 6 seconds. However, on several occasions, we experienced delays of up to two minutes. If we are going to expand our MRS platform to simultaneous multi-users, the loading capacity of the server and the number of SIM cards/modems needed will have to be carefully evaluated.

Conclusion

A versatile Mobile Response System for classroom teaching has been developed. It is highly user-friendly with very minimal operational cost. No hardware is required in the lecture rooms. No purpose-built transmitters are needed. In the trial runs with year-one chemistry students and a group of high school science teachers, we found that MRS is a very useful tool to enhance interaction in teaching and learning.

References


The URL of the HKBU Mobile Response System: www.mrs.hk.

Acknowledgements

The funding from the Teaching Development Grant is gratefully acknowledged. The investigators would like to thank Mr Anders Yeung, Mr Stephen Lai and Mr Newlor Lau for their very competent technical support.
Appendix 1

Mobile Response System (MRS) Student Questionnaire – Statistics

<table>
<thead>
<tr>
<th>Quality Rating</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Strongly Agree + Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The MRS system is user friendly.</td>
<td>17.4% (8)</td>
<td>54.3% (25)</td>
<td>26.1% (12)</td>
<td>2.2% (1)</td>
<td>0%</td>
<td>71.7%</td>
</tr>
<tr>
<td>2. With MRS, I do not feel embarrassed while answering questions in the classroom.</td>
<td>37.0% (17)</td>
<td>45.7% (21)</td>
<td>19.6% (9)</td>
<td>2.2% (1)</td>
<td>0%</td>
<td>82.7%</td>
</tr>
<tr>
<td>3. The MRS gives instant response and feedback to the class.</td>
<td>13.0% (6)</td>
<td>54.3% (25)</td>
<td>26.1% (12)</td>
<td>4.3% (2)</td>
<td>0%</td>
<td>67.3%</td>
</tr>
<tr>
<td>4. I found the MRS easy to use and understand.</td>
<td>32.6% (15)</td>
<td>54.3% (25)</td>
<td>10.9% (5)</td>
<td>2.2% (1)</td>
<td>0%</td>
<td>86.9%</td>
</tr>
<tr>
<td>5. My learning experience is enhanced by MRS.</td>
<td>15.2% (7)</td>
<td>37.0% (17)</td>
<td>32.6% (15)</td>
<td>6.5% (3)</td>
<td>0%</td>
<td>52.2%</td>
</tr>
<tr>
<td>6. With the support of MRS, the ‘ConceptTests’ approach has helped me to learn better.</td>
<td>19.6% (9)</td>
<td>47.8% (22)</td>
<td>28.3% (13)</td>
<td>8.7% (4)</td>
<td>0%</td>
<td>67.4%</td>
</tr>
<tr>
<td>7. With MRS, I am more willing to discuss the questions with my peer.</td>
<td>30.4% (14)</td>
<td>43.5% (20)</td>
<td>23.9% (11)</td>
<td>6.5% (3)</td>
<td>0%</td>
<td>73.9%</td>
</tr>
<tr>
<td>8. MRS is an efficient system in answering multiple choice questions in class.</td>
<td>10.9% (5)</td>
<td>54.3% (25)</td>
<td>26.1% (12)</td>
<td>6.5% (3)</td>
<td>2.2% (1)</td>
<td>65.2%</td>
</tr>
</tbody>
</table>

Appendix 2

Demonstration of MRS to High School Science Teachers, November 30, 2007

List of Participants

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>School/ Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chow Kwok Lim</td>
<td>Jockey Club Ti-I College</td>
</tr>
<tr>
<td>2</td>
<td>Ho Kam Yuen</td>
<td>New Asia Middle School</td>
</tr>
<tr>
<td>3</td>
<td>Kong Ping Wah</td>
<td>Sing Yin Secondary School</td>
</tr>
<tr>
<td>4</td>
<td>Kwong Kit Ling</td>
<td>Belillos Public School</td>
</tr>
<tr>
<td>5</td>
<td>Chan Chi Keung</td>
<td>Law Ting Pong Secondary School</td>
</tr>
<tr>
<td>6</td>
<td>Ng Kai Bun, Anthony</td>
<td>Fukien Secondary School (Siu Sai Wan)</td>
</tr>
<tr>
<td>7</td>
<td>Tse Suk Man</td>
<td>Homantin Government Secondary School</td>
</tr>
<tr>
<td>8</td>
<td>Wong Chi Kong, Alex</td>
<td>STFA Lee Shau Kee College</td>
</tr>
<tr>
<td>9</td>
<td>Kan Hang Kuen</td>
<td>St. Francis’ Canossian College</td>
</tr>
<tr>
<td>10</td>
<td>Pun S K</td>
<td>St. Stephen’s College</td>
</tr>
<tr>
<td>11</td>
<td>Lee Ka Ming</td>
<td>CCC Yenching College</td>
</tr>
<tr>
<td>12</td>
<td>Pau Kit</td>
<td>Pui Ching Middle School</td>
</tr>
<tr>
<td>13</td>
<td>Ho Yuet Wah</td>
<td>Kwun Tong Government Secondary School</td>
</tr>
<tr>
<td>14</td>
<td>Kwok Siu Ping, Joanne</td>
<td>Ning Po No.2 College</td>
</tr>
<tr>
<td>15</td>
<td>Lee Charn Kau</td>
<td>HKT A Ching Chung Secondary School</td>
</tr>
<tr>
<td>16</td>
<td>Lam King Hang</td>
<td>SKH Bishop Mok Sau Tseng Secondary School</td>
</tr>
<tr>
<td>17</td>
<td>Chung Quen Hei</td>
<td>SKH St. Mary’s Church Mok Hing Yiu College</td>
</tr>
<tr>
<td>18</td>
<td>Cheng Pit Kai</td>
<td>Rhenish Church Pang Hok Ko Memorial College</td>
</tr>
<tr>
<td>19</td>
<td>Lam Chi Kin</td>
<td>Rhenish Church Pang Hok Ko Memorial College</td>
</tr>
<tr>
<td>20</td>
<td>Chan Pui Kwan</td>
<td>Lung Cheung Government Secondary School</td>
</tr>
<tr>
<td>21</td>
<td>Pang Joe</td>
<td>King Ling College</td>
</tr>
<tr>
<td>22</td>
<td>Yan Chin Kin</td>
<td>Cotton Spinners Association Secondary School</td>
</tr>
<tr>
<td>23</td>
<td>Chu Yun Fat</td>
<td>Bishop Hall Jubilee School</td>
</tr>
<tr>
<td>24</td>
<td>Lam Mei Tak</td>
<td>Ng’Wah Catholic Secondary School</td>
</tr>
<tr>
<td>25</td>
<td>Raymond Fong</td>
<td>EDB</td>
</tr>
<tr>
<td>26</td>
<td>Sophia Cheng</td>
<td>EDB</td>
</tr>
<tr>
<td>27</td>
<td>Chan Chi Leung</td>
<td>EDB</td>
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</tbody>
</table>
Appendix 3
Mobile Response System (MRS) Demonstration

Feedback from high school science teachers participated in a workshop co-sponsored by the Education Bureau

<table>
<thead>
<tr>
<th>Average Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The MRS system is user friendly.</td>
</tr>
<tr>
<td>2 With MRS, I do not feel embarrassed while answering questions in the classroom.</td>
</tr>
<tr>
<td>3 The MRS gives instant response and feedback to the class.</td>
</tr>
<tr>
<td>4 I found the MRS easy to use and understand.</td>
</tr>
<tr>
<td>5 My learning experience is enhanced by MRS.</td>
</tr>
<tr>
<td>6 With MRS, I am more willing to discuss the questions with my peer.</td>
</tr>
<tr>
<td>7 With MRS, I feel easy to express my opinions in front of my peer.</td>
</tr>
<tr>
<td>8 MRS is an efficient system in answering multiple choice questions in class.</td>
</tr>
<tr>
<td>9 With the support of MRS, the 'ConceptTests' approach may help my students to learn.</td>
</tr>
</tbody>
</table>

Note:
5: strongly agree
4: agree
3: neutral
2: disagree
1: strongly disagree

No. of participants : 24
No. of return : 22
Response rate : 91.7%