Studies on Teaching & Learning
Volume 2
Edited by Atara Sivan
I. Teaching Development Grants Scheme

(1) Towards the Establishment of a “First-rate” Undergraduate Teaching Programme in Analytical Chemistry: Development of Innovative Multimedium Software Training Package
Chan Wing Hong, Department of Chemistry, Faculty of Science
Carmen W K Huie, Department of Chemistry, Faculty of Science
Shiu Kwok Keung, Department of Chemistry, Faculty of Science
Martin M F Choi, Department of Chemistry, Faculty of Science

(2) VCD on Common Laboratory Techniques in Analytical Chemistry and Organic Chemistry
Ricky M S Wong, Department of Chemistry, Faculty of Science
Shiu Kwok Keung, Department of Chemistry, Faculty of Science

(3) The Teaching and Learning of Evidence-based Clinical Intervention
Angela O K Tsun, Department of Social Work, Faculty of Social Sciences
Victor C W Wong, Department of Social Work, Faculty of Social Sciences

(4) Preparing Students for the Challenges of the Academic Study
Elizabeth A Bankowski, Language Centre, Faculty of Arts
Elsie C H Chan, Language Centre, Faculty of Arts
Carol M H Lam, Language Centre, Faculty of Arts
Patricia Warren, Language Centre, Faculty of Arts

(5) Bridging Workshop on Practical Skills for Year-one Biology Students
Zhang Jianhua, Department of Biology, Faculty of Science
All teaching and technical staff, Department of Biology, Faculty of Science

(6) Mission-oriented Experiments for Year-one Physics Students
Cheung Nai Ho, Department of Physics, Faculty of Science
Edward W K Chan, Department of Physics, Faculty of Science
Benson S C Leung, Department of Physics, Faculty of Science
Lui Siu Lung, Department of Physics, Faculty of Science
Ng Wang Yip, Department of Physics, Faculty of Science
Lo Ka Ming, Department of Physics, Faculty of Science
(7) The Implementation of Associate-teaching in the Whole-class Teaching Environment to Enhance Classroom Interaction
Hung Chun Wah, Department of Education Studies, Faculty of Social Sciences

Chow Bik Chu, Department of Physical Education, Faculty of Social Sciences
David K C Mak, Department of Physical Education, Faculty of Social Sciences
Cheung Siu Yin, Department of Physical Education, Faculty of Social Sciences
Lobo H T Louie, Department of Physical Education, Faculty of Social Sciences

(9) An Alternative Approach to ENG 1110 Introduction to the Study of Literature
Clayton G MacKenzie, Department of English Language and Literature, Faculty of Arts

(10) Using Films in Teaching
Amy W S Lee, Department of English Language and Literature, Faculty of Arts

(11) Development of Multi-media Teaching and Learning Materials for Psychology and Sociology of Music
Ha Wai Chung, Department of Music, Faculty of Arts

(12) Virtual Field Visits to the Pearl River Delta
Wong Ming Hung, Institute for Natural Resources and Environmental Management, Department of Biology, Faculty of Science
Doris W S Ng, Institute for Natural Resources and Environmental Management, Department of Biology, Faculty of Science
Angela W M Wong, Institute for Natural Resources and Environmental Management, Department of Biology, Faculty of Science

(13) The Integration of Chinese Cultural Studies with Different Courses: Development of Teaching Pedagogy Utilising a Web-based Package
Leung Yin Bing, Department of Education Studies, Faculty of Social Sciences
Cheung Wai Chun, Department of Education Studies, Faculty of Social Sciences
Sandy S C Li, Department of Education Studies, Faculty of Social Sciences

(14) Enhancing the Teaching of Web Based Journalism – Setting Up a Pioneering Online News Station
Huang Yu, Department of Journalism, School of Communication
Timothy F Hamlett, Department of Journalism, School of Communication
To Yu Ming, Department of Journalism, School of Communication
Judith L Clarke, Department of Journalism, School of Communication

(15) English Language Teaching in Action
Lai Kwok Hung, Department of Education Studies, Faculty of Social Sciences
Yeung Siu Wing, Department of Education Studies, Faculty of Social Sciences
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 full-time 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 and/or learning;
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. the design of courses or delivery methods in which there are new approaches to student participation in the teaching/learning process;
6. the design of student assessment framework and the use of assessment results to enhance teaching and learning;
7. the monitoring of students' learning effectiveness to enhance programme delivery;
8. the development of new pedagogical or teaching approach(es) for the “3+3+4” curriculum;
9. the design of teaching and learning processes and evaluation mechanism that would assist in the implementation of outcomes-based learning; and
10. other possibilities or new initiatives.

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

This collection of papers is the second volume of reports from projects funded by the Teaching Development Grants of the Hong Kong Baptist University. In its recent report (2009) on the University Quality Audit, the Quality Assurance Council has acknowledged the first volume of papers as a good practice to be further encouraged. This volume serves to continue this good practice of sharing colleagues’ initiatives in their attempts to enhance teaching and learning.

The volume consists of 15 papers based on the final reports submitted by colleagues upon completion of their Teaching Development Grants projects. Following the practice of the first volume, two independent referees reviewed the reports. The papers are based on projects undertaken within ten departments and centres across four faculties/schools – Arts, Communication, Science and Social Sciences. Though each represents an individual or team initiative from a specific discipline, all papers address the significant issues of teaching and learning, and portray a range of pedagogies employed by colleagues. Following the format of Teaching Development Grants reports, the papers also indicate the effect of the various initiatives on student learning which is in line with the University’s focused efforts on outcome-based approach. As such, the projects can serve as examples for strategies to be employed in a range of contexts within different departments and faculties. The strategies used by colleagues include various forms of learning as well as utilization of media and information and telecommunication technology. These are: self- and practice-based learning (Chapters 1 to 3), skills, bridging workshops and experiments development and implementation (Chapters 4 to 6), associate teaching and transmitted assisted learning (Chapters 7 to 8), multi-media resources (Chapters 9 to 10), web-based and online learning (Chapters 11 to 14) and video illustrations (Chapter 15). Based on the feedback obtained on the first volume, each paper includes a preamble which could be helpful to readers from different disciplines.

The production of the volume involved collegial effort of both academics and administrators of the University. It serves as an important channel for sharing and disseminating good and innovative teaching – a practice which is highly encouraged by the University in its strategic plan.

It is hoped that insight gained from this volume will lead to more initiatives for the enhancement of teaching and learning.

Atara Sivan
Editor-in-chief
Professor, Department of Education Studies
Faculty of Social Sciences
Hong Kong Baptist University
May 2010
Contributors

- Elizabeth A Bankowski, Senior Lecturer, Language Centre, Faculty of Arts
- Edward W. K. Chan, Scientific Officer, Department of Physics, Faculty of Science
- Elsie C. H. Chan, Part-time Lecturer, Language Centre, Faculty of Arts
- Chan Wing Hong, Professor, Department of Chemistry, Faculty of Science
- Cheung Nai Ho, Professor, Department of Physics, Faculty of Science
- Cheung Siu Yin, Professor, Department of Physical Education, Faculty of Social Sciences
- Cheung Wai Chun, Associate Professor, Department of Education Studies, Faculty of Social Sciences
- Martin M. F. Choi, Associate Professor, Department of Chemistry, Faculty of Science
- Chow Bik Chu, Professor, Department of Physical Education, Faculty of Social Sciences
- Judith L. Clarke, Associate Professor, Department of Journalism, School of Communication
- Timothy F. Hamlett, Consultant, Department of Journalism, School of Communication
- Ho Wai Chung, Professor, Department of Music, Faculty of Arts
- Huang Yu, Professor, Department of Journalism, School of Communication
- Carmen W. K. Huie*, Professor, Department of Chemistry, Faculty of Science
- Hung Chun Wah, Lecturer, Department of Education Studies, Faculty of Social Sciences
- Lai Kwok Hung, Lecturer, Department of Education Studies, Faculty of Social Sciences
- Carol M. H. Lam, Lecturer, Language Centre, Faculty of Arts
- Amy W. S. Lee, Associate Professor, Department of English Language and Literature, Faculty of Arts
- Benson S. C. Leung, Scientific Officer, Department of Physics, Faculty of Science
- Leung Yin Bing, Associate Professor, Department of Education Studies, Faculty of Social Sciences
- Sandy S. C. Li, Associate Professor, Department of Education Studies, Faculty of Social Sciences
- Lo Ka Ming*, Research Assistant, Department of Physics, Faculty of Science
- Lobo H. T. Louie, Associate Professor, Department of Physical Education, Faculty of Social Sciences
- Lui Siu Lung*, Research Assistant, Department of Physics, Faculty of Science
- Clayton G. MacKenzie, Professor, Department of English Language and Literature, Faculty of Arts
- David K. C. Mak*, Associate Professor, Department of Physical Education, Faculty of Social Sciences
- Doris W. S. Ng*, Executive Officer, Institute for Natural Resources and Environmental Management**, Department of Biology, Faculty of Science
- Ng Wang Yip*, Research Assistant, Department of Physics, Faculty of Science
- Shiu Kwok Keung, Associate Professor, Department of Chemistry, Faculty of Science
- To Yu Ming, Assistant Professor, Department of Journalism, School of Communication
- Angela O. K. Tsun, Associate Professor, Department of Social Work, Faculty of Social Sciences
- Patricia Warren, Senior Lecturer, Language Centre, Faculty of Arts
- Angela W. M. Wong*, Research Assistant, Institute for Natural Resources and Environmental Management**, Department of Biology, Faculty of Science
- Wong Ming Hung, Professor, Institute for Natural Resources and Environmental Management**, Department of Biology, Faculty of Science
- Ricky M. S. Wong, Professor, Department of Chemistry, Faculty of Science
- Victor C. W. Wong, Professor, Department of Social Work, Faculty of Social Sciences
- Yeung Siu Wing, Senior Lecturer, Department of Education Studies, Faculty of Social Sciences
- Zhang Jianhua, Chair Professor, Department of Biology, Faculty of Science
- All teaching and technical staff, Department of Biology, Faculty of Science

*Departed from HKBU at the time of publishing
**Currently renamed Croucher Institute for Environmental Sciences
Acknowledgements

Membership of the Editorial Board
Atara Sivan (Chair)
Professor
Department of Education Studies
Faculty of Social Sciences

Dennis W K Chan
Associate Professor
Department of Education Studies
Faculty of Social Sciences

Chan Hing Lin
Associate Professor
Department of Economics
School of Business

Cheung Nai Ho
Professor
Department of Physics
Faculty of Science

Steve Z S Guo
Associate Professor
Department of Journalism
School of Communication

Christopher Rothermel
Associate Professor
Academy of Visual Arts

Terry S H Yip
Professor
Department of English Language and Literature
Faculty of Arts

Zhang Hong Qi
Associate Professor
School of Chinese Medicine

Reviewed by
Dennis W K Chan
Associate Professor
Department of Education Studies
Faculty of Social Sciences

Raymond M C Chan
Associate Professor
Department of Education Studies
Faculty of Social Sciences

Chan Wing Hong
Professor
Department of Chemistry
Faculty of Science

Cheung Nai Ho
Professor
Department of Physics
Faculty of Science

Stuart Christie
Associate Professor
Department of English Language and Literature
Faculty of Arts

Janet Draper
Professor
Department of Education Studies
Faculty of Social Sciences

Victor Forrester
Senior Lecturer
Department of Education Studies
Faculty of Social Sciences

Steve Z S Guo
Associate Professor
Department of Journalism
School of Communication

Mak Nai Ki
Professor
Department of Biology
Faculty of Science

Christopher Rothermel
Assistant Professor
Academy of Visual Arts

Atara Sivan
Professor
Department of Education Studies
Faculty of Social Sciences

Kenneth K K Wong
Professor
Department of Geography
Faculty of Social Sciences

Terry S H Yip
Professor
Department of English Language and Literature
Faculty of Arts

Yu Xu
Professor
Department of Journalism
School of Communication

Consultancy Service
Centre for Translation
Faculty of Arts

Administrative Support
Heather Fung
Executive Officer
Academic Quality Support Section
Academic Registry
Towards the Establishment of a “First-rate” Undergraduate Teaching Programme in Analytical Chemistry: Development of Innovative Multimedium Software Training Package

Chan Wing Hong, Carmen W K Huie, Shiu Kwok Keung, Martin M F Choi
Department of Chemistry, Faculty of Science

Preamble
In our B.Sc. (Hons) degree programme in Applied Chemistry, analytical chemistry is the essential part of the teaching programme. Students enrolled in the programme have to select two core courses (i.e. CHEM 1230 Analytical Chemistry and CHEM 2242 Instrumental Analysis) in this sub-discipline of chemical science. The course design entails the students not only acquiring basic principles in analytical chemistry, but also employing a variety of techniques in tackling real analytical problems. Apparently, problem-based teaching and learning is a viable approach for the course delivery. In that context, four real-life analytical problems pertaining to food, consumer and herbal product were identified. To enrich the learning experience as well as to cater for the self-learning mode of the students, a multimedium software incorporating texts, images and video-clips was designed and constructed. Four modern day instruments including atomic absorption spectrometry, gas chromatography-mass spectrometry, inductively coupled plasma and high-performance liquid chromatography were introduced with both the operation principle and sample measurement method. Detailed sample pretreatment procedures of oyster, cigarette, tea bag and American Ginseng sample were video-taped. The software could provide our undergraduate students with summative knowledge in these two courses.

Abstract
To introduce more fun and incentive for undergraduate students in learning analytical chemistry, the development of innovative multimedium software package that vividly illustrated the relationship between basic scientific principles in analytical chemistry and their applications
in solving real-life analytical problems relevant to Hong Kong was proposed. In this project, unique VCDs containing visual images and interesting stories were developed to allow for step-by-step explanation of the analytical procedures involved in the chemical analysis of four cases, viz cadmium in oyster, nicotine in cigarettes, metals in green tea leaves and ginsenosides in American Ginseng. To tackle the analytical problems, unique sample pretreatment techniques were presented in the VCDs. Four modern day instruments including atomic absorption spectroscopy, gas chromatography-mass spectrometry, inductive coupled plasma and high performance liquid chromatography were introduced. By directly connecting teaching materials to real-life problems in Hong Kong, the learning experience and interest of students were enhanced, as students could easily see that what they had learned in class could be immediately applied to solve some important practical problems of local relevance. Their understanding of the principle and practice of these essential pieces of instruments could lead them to better chances of finding rewarding employment after graduation.

Keywords
Cases studies, multimedium software, analytical chemistry, real-life samples

Introduction
A lack of interest in science among undergraduate students is a problem not just prevalent in Hong Kong universities but appears to be on the rise for many educational institutions worldwide. To solve this significant problem, educators realise that the teaching of science has to be connected to the “fun of learning”, especially for freshmen. 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. As such, the availability of teaching tools that would vividly illustrate and highlight the fun and practical aspect of science would be highly valuable.

In the area of chemistry, it is common knowledge that the sub-discipline of analytical chemistry is a favourite topic among many undergraduate students (at least in countries such as the U.S. and U.K.), since analytical chemistry is highly practical in nature and can be easily understood by students. What they learned in class can be immediately applied to solve problems encountered in society, enhancing their chances of obtaining fruitful employment (as in many fields of engineering). Unfortunately, in Hong Kong, the fun of learning and employment opportunities associated with the field of analytical chemistry appear to be not very appreciated by the undergraduate chemistry students. It is most likely due to the lack of suitable teaching materials that could be used to properly illustrate the relationship between subject matters taught in class and their practical usefulness in Hong Kong society.
The use of multimedium method has been proven to be an effective approach to assisting and enhancing teaching and learning. Unlike software packages that can be purchased commercially for the teaching of analytical chemistry, the software package developed in the project were unique and important in the sense that the working principles of various essential analytical techniques and chemical instrumentation were presented and explained alongside real-life analytical problems of direct relevance to Hong Kong. The VCDs containing visual images and step-by-step explanations of a real-life chemical analysis (just as that performed in local commercial testing laboratories) of cadmium in oyster, nicotine in cigarettes, metals in green tea leaves and ginsenosides in American Ginseng were produced. With the use of such innovative teaching materials, we hope that students would see more clearly the joy of learning analytical chemistry and that what they learned in class could really help them find jobs after graduation.

Our current undergraduate programme in Chemistry includes three analytical chemistry-related courses, namely Analytical Chemistry, Instrumental Analysis I & II, and two laboratories (Analytical Chemistry Laboratory and Instrumental Analysis Laboratory). One major objective of developing the innovative multimedium software training package in analytical chemistry was to enhance and stimulate students’ interest in learning the course materials, especially in laboratories involving the use of different chemical instruments. Four different instrumental techniques, namely high-performance liquid chromatography (HPLC), gas chromatography-mass spectrometry (GC-MS), flame atomic absorption spectrometry (FAAS) and inductively coupled plasma-optical emission spectrometry (ICP-OES) techniques were selected. These techniques are among the most commonly used instruments in commercial chemical testing laboratories and they offer wide applications in chemical analysis. Through the multimedium training programme, hopefully the students will be equipped with the knowledge and technical skills to solve their daily chemical analysis problems.

**Aims and Objectives**

1. Development of the innovative multimedium software training package focusing on the teaching and learning of the working principles of chemical instrumentation and analytical procedures typically employed for the chemical analysis of real-life analytical samples, as illustrated by case studies obtained from local chemical testing laboratories.

2. Dissemination of the training package to undergraduate chemistry students as supplementary teaching materials, with the aim of enhancing and stimulating their interest of learning, as well as providing students with the knowledge concerning employment opportunities associated with analytical chemistry and chemical testing laboratories located in Hong Kong/Mainland China.
**Methodology**

The Head of the Department served as the Coordinating Investigator for the project. Three other Chemistry faculty members specialising in teaching and research in analytical chemistry were engaged as Co-investigators.

**Division of Labour**

Team approach was adopted for the planning, selection of teaching materials, script writing, filming of laboratory demonstration, editing of the audio-visual materials, and the production of the VCD package. The Principal Investigator oversaw and coordinated the whole project. Co-investigators were responsible for the production of the VCDs regarding the four chosen instrumental techniques. In addition to recruiting a project assistant for the day-to-day operation of the project development, technical staff members of the Chemistry Department were called on occasionally to provide technical assistance in the handling of the instruments and the laboratory demonstration for video-recording.

Each investigator was responsible for the development of the multimedium package involving the four selected instrumental techniques in tackling of real-life analytical problems:

1. Analysis of Nicotine in Cigarettes
2. Analysis of Ginsenosides in American Ginseng
3. Analysis of Metals in Green Tea Leaves
4. Analysis of Cadmium in Oyster

**Contents of the VCDs**

A VCD was produced for each of the four selected instrumental techniques, namely HPLC, GC-MS, ICP, and AAS. A common format for each of the techniques was designed covering the following sections:

1. Principle: to provide a brief theoretical background of the instrumental technique (Skoog, et al., 1998).
2. Instrumentation: to provide basic understanding on the operation of the instrument (Currell, 2000).
3. Real-life Applications: the operation of the instrument was illustrated with the chemical analysis encountered in real life. Detailed analytical procedures for tackling daily problems including the sampling, sample pretreatment and analytical measurements were addressed. To consolidate the learning experience of the students, the sample pretreatment procedures were video-taped in the stepwise manner.

The run time for each section of the VCDs is approximately 40 minutes accompanied with English narration. Self-explanatory slides in Powerpoint format were incorporated with each distinctive instrumental technique including sample preparation and data analysis. Each technique was seen with the proper set up of glassware, chemicals and instrument.

**Results/Findings**

A total of four real-life analytical problems
were identified and the quantification of the toxic/bioactive materials from real samples was performed, using the state-of-the-art analytical instruments (Ram, 1999 & Cancilla, 2001). Real-life problems chosen were:

1. Cadmium in oyster obtained from local market: the key question borne in the mind of the students might be whether the toxic metal (i.e. Cd) concentration in oyster is high enough to make it not suitable to be consumed by the public.

2. Nicotine content in a common brand of cigarettes (Marsella, et al., 1999): the results of the finding would provide important data to support the expanding region of “non-smoking zone” in public places.

3. Metal ions content in tea bags: the interesting question borne in the students’ mind might be that whether the metal ions leaching from the tea bags are good or bad to our health.

4. Ginsenosides content in American Ginseng: the students should appreciate that the modern day analytical techniques enable TCM manufactures to produce health products with reliable quality assurance measures, they should thank the contribution of analytical chemists.

The VCD production of each of the cases comprised a Powerpoint presentation of 24-36 slides and a number of movie files in MPEG format. Each of the presentations contained the following sections which should have sufficient materials to be presented in one lecture:

1. The operation principle of the instrument was presented with the real instrument housed in our laboratory.

2. The sample pretreatment procedures (i.e. sample digestion, extraction, separation, etc.) were shown in the stepwise manner in the movie files.

3. Actual steps for taking measurements for various instruments were articulated in the presentation.

4. The findings and data treatment methodology were given as the last part of the presentation.

Key experimental findings in the activity were:

1. The mean concentration of Cd in dried oyster sample determined by AAS was 11.65 mg/Kg with a standard deviation of 0.18 mg/kg.

2. The mean nicotine content generated from one piece of cigarette determined by GCMS was 1.07 mg with a standard deviation of 0.031 mg.

3. The selected metal ion contents in a tea package were found by ICP and the results were compiled as below.
before going to the laboratory and using the instruments to acquire real hands-on experience. Thus, the malpractice by students on the operation of the sophisticated instruments could be greatly reduced.

With the operational principle clearly spelt out in the VCDs of these four important analytical techniques, the software served as an ideal teaching aid for the students before they had the chance to use them in the laboratory class (i.e. CHEM 2220 Instrumental Analysis Laboratory). Many commercial testing laboratories in Hong Kong heavily rely on the use of these instruments for their routine operation. It is absolutely essential for our students to fully master the instruments if they aspire to secure a technical job after their graduation. We believe that the VCDs produced by this project can be used to beef-up the background knowledge of the students before they go through the job interview in an analytical laboratory.

**Discussion**

The VCD production not only assisted our students in consolidating their knowledge of the four core analytical instrumentations (i.e. AAS, ICP, HPLC, GC-MS), but also taught them several common sample extraction techniques such as solvent, ultrasonic and microwave extraction.

In particular, the software emphasised the sample pretreatment techniques for real sample analysis. Such skills were difficult to be acquired through normal lecturing approach. In addition, the major steps in operating these expensive instruments were clearly articulated. The students could take time to review the materials before going to the laboratory and using the instruments to acquire real hands-on experience. Thus, the malpractice by students on the operation of the sophisticated instruments could be greatly reduced.

With the operational principle clearly spelt out in the VCDs of these four important analytical techniques, the software served as an ideal teaching aid for the students before they had the chance to use them in the laboratory class (i.e. CHEM 2220 Instrumental Analysis Laboratory). Many commercial testing laboratories in Hong Kong heavily rely on the use of these instruments for their routine operation. It is absolutely essential for our students to fully master the instruments if they aspire to secure a technical job after their graduation. We believe that the VCDs produced by this project can be used to beef-up the background knowledge of the students before they go through the job interview in an analytical laboratory.

**Enhancement on Teaching and Learning**

A lack of interest in science among undergraduate students is a problem not just prevalent in Hong Kong universities but appears to be a global concern for educationalists worldwide. To motivate the learning attitude of the students is a challenge to all teachers and university faculties. The production of the multimedium learning package was a reasonable solution to enhance students' learning interest. We used the software
in our CHEM 2242 Instrumental Analysis class. The real-life nature of the cases in the software enabled students to appreciate the powerfulness of the modern day instrumental techniques in protecting the well-being of the public. The movie files made the class presentation more appealing to the students and they started to feel the “fun of learning”, especially for students who grew 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 TDG. It vividly illustrated and highlighted the fun and practical aspect of science to the students.

To solicit feedback from the students, a questionnaire was drafted and completed by the year-two students. The result of the survey conducted is attached as appendix of the report. In general, the students agreed that the VCDs could

1. strengthen their understanding of the application aspects of analytical chemistry;
2. enhance their appreciation of sample digestion process;
3. extend their knowledge to other real-life case studies;
4. stimulate their interest in learning analytical chemistry;
5. assist them in understanding the proper operation procedure of AA, ICP, GC-MS and HPLC;
6. help them gain confidence in performing experiments more smoothly; and
7. appreciate how the Department’s in-house instrumentation can solve real-life analytical problems.

Specifically, the students claimed that after viewing the software, they were more confident in employing sample pretreatment techniques which had appeared to be very complicated before. As the content of the teaching materials was related strongly to their daily life experience, they recognised that learning analytical chemistry is of practical importance.

The software would be uploaded to the WebCT of other relevant courses of the Department, allowing students to review the materials on their own pace.

**Limitation/Difficulties**

To implement the development plan of the project, we were fortunate to recruit a fresh M.Phil. graduate of the Department to serve as the project assistant. With sufficient analytical chemistry knowledge, he helped us to prepare most of the content of the package. However, his computing skill is not professional. As a result, the content of the software certainly has room for improvement. If we could secure a bigger budget for the project, we would build up more real-life cases to cover not
only these four instrumentation techniques. Nevertheless, we are quite happy with the product generated from the project. For the information of the reviewer, the VCD product derived from the grant is enclosed for viewing.

Conclusion
This multimedium software training package was the first attempt of the Department to provide a multi-purpose teaching aid for both undergraduate and MSc in Analytical Chemistry students. As a follow-up to this teaching development activity, we established a few more real-life cases in environmental chemistry (i.e. Air Pollution by Nitrogen Oxides/Examination of Lead Contamination/Treatment of Industrial copper Wastewater/Degradation of Phenols in Wastewater Samples) so as to enhance the teaching and learning experience of our staff and students.

References


Appendix

Results of the student survey on “Advanced Analytical Instrumentation VCDs” conducted in Instrumental Analysis Class, returned by 30 year-two students.

Direction: Please check the appropriate box according to the following descriptions.

1. Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

1. The VCDs produced by the Department were suitable for undergraduate class teaching.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>0%</td>
<td>0%</td>
<td>60%</td>
<td>33.3%</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

2. The real-life case studies shown in the VCDs could strengthen my understanding in the application aspects of analytical chemistry.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.7%</td>
<td>56.7%</td>
<td>36.7%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

3. The sample digestion process was thorough and easy to follow.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>13.3%</td>
<td>36.7%</td>
<td>40%</td>
<td>6.7%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

4. The real-life case studies shown could apply to other similar samples.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.7%</td>
<td>40%</td>
<td>50%</td>
<td>3.3%</td>
<td>0%</td>
</tr>
</tbody>
</table>

5. I found the VCDs very informative and they stimulated my interest in learning analytical chemistry.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.7%</td>
<td>30%</td>
<td>33.3%</td>
<td>6.7%</td>
<td>0%</td>
</tr>
</tbody>
</table>

6. Real-life samples (e.g., oysters, cigarettes, green tea leaves & American Ginseng) were used in the demonstration which allowed me to appreciate the practicality of the analytical instruments.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>13.3%</td>
<td>60%</td>
<td>23.3%</td>
<td>3.53%</td>
<td>0%</td>
</tr>
</tbody>
</table>

7. After viewing the VCDs, I totally understood the proper operation procedure of AA, ICP, GC-Ms and HPLC.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>3.5%</td>
<td>46.7%</td>
<td>36.7%</td>
<td>13.3%</td>
<td>0%</td>
</tr>
</tbody>
</table>

8. By watching the VCDs before starting a new project which required the use of analytical instruments, it really helped me to perform the necessary experiments smoothly and reduced the amount of frustration.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.7%</td>
<td>50%</td>
<td>36.7%</td>
<td>6.7%</td>
<td>0%</td>
</tr>
</tbody>
</table>

9. I found the English narration easy to follow.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>10%</td>
<td>50%</td>
<td>40%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

10. I came to appreciate how our in-house instrumentation can solve real-life analytical problems.

<table>
<thead>
<tr>
<th></th>
<th>1 □</th>
<th>2 □</th>
<th>3 □</th>
<th>4 □</th>
<th>5 □</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.7%</td>
<td>40%</td>
<td>53.3%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
VCD on Common Laboratory Techniques in Analytical Chemistry and Organic Chemistry

Ricky M S Wong, Shiu Kwok Keung
Department of Chemistry, Faculty of Science

Preamble
Chemistry is considered to be an experimental science. Year-one Chemistry students may not have acquired the necessary basic laboratory skills training in secondary schools. Two multimedia VCDs were developed to provide detailed descriptions and demonstration of the basic laboratory skills in Analytical and Organic Chemistry. Students could learn the basic laboratory techniques on their own pace. After acquiring the proper laboratory skills, students could conduct experimental investigations and tackle various chemical problems in their future studies.

Abstract
The VCDs aiming to provide relevant self-learning materials for year-one Chemistry majored students to learn the basic laboratory techniques encountered in Analytical and Organic Chemistry laboratories were produced. To enhance teaching and learning, two different presentation approaches - role-playing and experiment demonstration - were adopted in the video. The first part of the video covers basic analytical chemistry techniques such as proper chemical weighing and handling, correct use of volumetric flasks, titration with standardised NaOH and accurate burette reading. The second part involves techniques commonly employed in an Organic Chemistry laboratory such as simple distillation, general reflux, liquid-liquid extraction, vacuum filtration and thin-layered chromatography.

Keywords
Laboratory techniques, low cost VCD, analytical chemistry, organic chemistry

Introduction
Year-one Chemistry majored students often have difficulties in conducting experiments properly in the laboratory. One of the reasons is their lack of necessary basic laboratory skills training in secondary schools. If our students do not possess the
necessary skills, they will be frustrated and suffer in their ongoing laboratory work. Most importantly, the success of their final year honor research project will very much depend on the skills acquired over the years.

In view of the above-mentioned factors, VCDs emphasising modern techniques in performing Analytical/Organic Chemistry experiments were produced to assist students in learning the basic laboratory techniques on their own pace and working efficiently in the laboratory.

Aims and Objectives

1. To produce VCDs on Analytical/Organic Chemistry laboratory techniques that are relevant to year-one Chemistry majored students.

2. To use the VCDs as a multimedia teaching tool, allowing students to learn at their own pace.

3. To explore the idea of distributing the VCDs to local high schools in the hope of getting the students better prepared for college laboratory work.

Methodology

In addition to the Principal Investigator and Co-investigator, the production team comprised a Project Assistant, a student helper and demonstrators/technicians of the Chemistry Department who had carried out all the planning, script-writing, preparation and demonstration work. CED staff was responsible for video-taping, editing and other technical support in video production.

To promote teaching and learning, two different presentation approaches - role-playing and experiment demonstration - were used in the illustration. In the first part of the video, the Analytical Chemistry techniques are demonstrated through a role-play in which an Analytical Chemistry experiment “Determination of Acid Content in Unknown Vinegar Sample” (Christian, 1994, Chapter 7) is featured. Two technicians acted as students to perform the experiment. One technician acted as the instructor to correct the mistakes made by the students and showed them the proper techniques. Techniques such as standardisation of NaOH with KHP, titration, and proper handling and weighing of chemicals were shown accordingly. (Skoog & West, 1988, Chapter 8 & 10)

The second part of the video features two common organic chemistry experiments, namely “Extraction of Caffeine from Coffee Beans” (Williamson, 1999, pp. 152-153 & pp. 160-163) and “Oxidation of Toluene with KMnO4”. (Gilbert & Martin, 1998 pp. 659-660) The Principal Investigator was responsible for the demonstration section while three technicians were responsible for the on-spot narration and material preparation during video-taping. The illustration was interspersed with slides on chemical structures and equations.

The beta version of the video was shown to our year-one Organic/Analytical/Chemistry
for Life Science students. In addition, our colleagues were invited to comment on our illustration. Student feedback and valuable comments from our colleagues on the beta version of the video had been collected and improvement had been made. The final version of the VCDs was made available for faculty-wide distribution.

**Results/Findings**

Several copies of the VCDs are available in the library for student access. Part of the video was broadcast again during the semester when specific techniques were called for.

We found that students had paid extra attention to the illustration for two main reasons. Firstly, the illustration was performed by the technicians and the instructor, who are familiar to the students. Secondly, the narration is in Chinese and captured some students’ attention as they came from Chinese-medium secondary schools. The material was easier to be understood and absorbed since it was in the students’ mother tongue.

We used the finished VCDs in our undergraduate laboratory teaching. However, we had decided not to issue the online questionnaire to our year-one or year-two students when they watched the VCDs due to technical difficulties.

**Discussion**

The organic chemistry experiments chosen for illustration, namely “Oxidation of Toluene by KMnO4” and “Extraction of Caffeine from Coffee” (Mayor, Pike & Trumper, 1994, pp. 232 – 241), were taken from the student laboratory manual. By demonstrating the same experiments in the VCDs, we hoped that the students would have a better understanding of the underlying principles and the required techniques involved. It would also enhance their interest in self-learning.

As for the analytical chemistry experiment “Determination of Acid Content in Unknown Vinegar Sample”, it was also taken from the undergraduate laboratory manual, which allowed our students to learn and prepare the basic analytical chemistry techniques before class.

Starting from next year, the VCDs will become part of the teaching materials in the laboratory classes and the video will be shown during the check-in period of Organic/Analytical/Chemistry for Life Science/Chemistry for Applied Physics in the first year. In addition, the VCDs will be continuously made available for students to check out.

We introduced the laboratory technique VCDs to local high school teachers at the International Conference on Micro-scale Chemistry organised by our Department. About 50 copies of the VCDs were made available for distribution to the local high school teachers during the conference. It is one of our goals to have high school teachers to adopt the video CD to their laboratory teaching. By watching the VCDs during class, the high school students would be better prepared for college
laboratory work after leaving secondary school. The tertiary education sector would be benefited as the new generation of students would be more proficient in performing experiments in a safe and efficient manner.

**Enhancement on Teaching and Learning**

Feedback evaluation on our newly developed VCD on organic laboratory techniques was carried out after the first view by the year-one Chemistry majored students. Results of the evaluation have been summarised and attached in Appendix A. It was encouraging to find that over 75% of the students agreed that it is more efficient/effective to learn laboratory techniques from the video demonstration than from the book. This confirmed the importance and need of this organic technique VCD production. In addition, the majority of students agreed that VCD is a good learning aid for self-learning and found the content of the VCD useful for them to learn and improve their organic laboratory skills.

In addition, feedback evaluation on our newly developed VCD on laboratory techniques in analytical chemistry was carried out after the first view by the Chemistry majored and non-Chemistry majored students. Results of the evaluation have been summarised and attached. Again, very positive response to the value of this analytical technique VCD was obtained. To our surprise, students did not agree that the use of Chinese narration could assist their understanding of the VCD presentation. They would like to see more teaching aids produced in the future.

Using VCD as a teaching tool/medium provided a great degree of flexibility and efficiency. It could allow students to learn the materials on their own pace, which is one of the effective means to promote teaching and learning.

**Limitations/Difficulties**

We planned to put the VCDs on the Department Homepage so that students can download them whenever and wherever they like. However, due to the size of the VCDs, this option was not viable at the moment. We may explore other alternatives in the near feature. Students expressed their interest in making use of the VCDs again; however, they were not very keen on checking out the VCDs from the library. This may be due to the busy schedule of students and the location of the University library. Our library is located in the Shaw Campus which is quite a distance from the Ho Sin Hang Campus where most of the lectures take place. We are planning to set up a check-out counter in the Department so that students can gain access easily.

**Conclusion**

In summary, the VCD project was a success and students will certainly benefit from it in the long run. Feedback from students affirmed an important value of these newly produced VCDs. Our products were the very first VCDs on Organic/Analytical
Chemistry laboratory techniques with Chinese narration. It is our utmost goal that local high school students can benefit from the VCDs and they can be used over and over again in local high schools and undergraduate laboratory teaching. Our effort to promote teaching and learning using this newly developed VCDs will continue.

References


Acknowledgements

We are grateful to the demonstrators/technicians involved including Ms April Lau, Mr Tommy Poon, Mr H P Yeung, Ms Anna Chan, Ms Agatha Siu and Mr Eric Jim and to the support of Prof W H Chan, the Head of Chemistry Department. A special thanks is given to Ms April Lau for her assistance in the preparation of this report.
Common Laboratory Techniques in Organic Chemistry

Experiment: Extraction of Caffeine from Coffee

Picture 1 - Pouring the dissolved caffeine into the separation funnel.

Picture 2 - Extraction of caffeine with dichloromethane in the separation funnel.

Picture 3 - Collection of extracted caffeine using a 250 mL Erlenmeyer flask.

Picture 4 - Pouring the dried extracted caffeine into a 250 mL round bottomed flask.

Picture 5 - Collection of crude caffeine after simple distillation.
**Common Laboratory Techniques in Analytical Chemistry**

Experiment: Standardisation of Sodium Hydroxide (NaOH) solution with Potassium Hydrogen Phthalate (KHP)

Picture 1 - Dissolve NaOH in deionized water.

Picture 2 - Transfer the NaOH solution into a 250 mL volumetric flask.

Picture 3 - Rinse and fill the burette with NaOH solution.

Picture 4 - Addition of phenolphthalein, indicator of the KHP solution.

Picture 5 - Titration of KHP with NaOH solution. The pink colour shows that the end point has been reached.
Appendix A
Results of Feedback Evaluation on Laboratory Techniques in Organic Chemistry VCD

Class No. of Students
Organic Chemistry Lab I 49

Question 1.
It is more efficient/effective to learn the laboratory techniques from video demonstration than from the book.

Question 2.
I find the content of this VCD useful in learning/improving my laboratory skills.

Question 3.
Chinese narration assists me in understanding the VCD presentation better.

Question 4.
I understand the VCD demonstration clearly.

Question 5.
I will check out from the library reserve and review the techniques again when needed.
Question 6.
VCD is a good learning aid for self-learning.

Question 7.
I would like to see more teaching aids produced in the future by the Department.

Results of Feedback Evaluation on Laboratory Techniques in Analytical Chemistry VCD

<table>
<thead>
<tr>
<th>Class</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Analysis Lab</td>
<td>46</td>
</tr>
<tr>
<td>Analytical Chemistry Lab</td>
<td>42</td>
</tr>
<tr>
<td>Chemistry for Apply Physics</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>112</strong></td>
</tr>
</tbody>
</table>

Question 1.
It is more efficient/effective to learn the laboratory techniques from video demonstration than from the book.

Question 2.
I find the content of this VCD useful in learning/improving my laboratory skills.
Question 3.
Chinese narration assists me in understanding the VCD presentation better.

Question 4.
I understand the VCD demonstration clearly.

Question 5.
I will check out from the library reserve and review the techniques again when needed.

Question 6.
VCD is good learning aid for self-learning.

Question 7.
I would like to see more teaching aids produced in the future by the Department.
The Teaching and Learning of Evidence-based Clinical Intervention

Angela O K Tsun, Victor CW Wong
Department of Social Work, Faculty of Social Sciences

Preamble
The demand for accountability and evidence-based practice in the past decade has called for growing interest in the teaching and learning of process-outcome links in social work education. As social work educators, we have been making great efforts to teach students important concepts and theories related to practice, and to help them integrate these theories into effective and efficient interventions. It is envisaged that student learning can take place with the students as a member of the collaborating team in the teaching and learning process. This project therefore aimed at promoting collaborative learning of clinical interventions with social work students, faculty members as well as practitioners in social services agencies.

Abstract
In collaboration with users, colleagues, students and local practitioners interested in this project, 12 individuals and families participated in consultations with a therapist and a reflecting team of one to four members. Altogether over 70 interviews were conducted with audio- and/or video-tapes transcribed verbatim.

Relevant cases, transcripts and interview sessions had been selected and shown to local practitioners as well as students of the Social Work programme taking different courses. The courses included Theories & Practice in Social Work (Individual Work), Social Work with Families, and other master courses. Students found this practice-based learning very helpful and the Department recruited a group of local practitioners for the development of indigenous skills-based intervention.

Keywords
Evidence-based clinical intervention
Introduction

The demand for accountability and evidence-based practice in the past decade has called for growing interest in the teaching and learning of process-outcome links in social work education. As social work educators, we have been making great efforts to teach students important concepts and theories related to practice, and to help them integrate these theories into effective and efficient interventions. The complexities of individual and family interventions are such that there are several dimensions in a continuous state of flux; for example, the content of interventions, the value-base of practitioners, the outcomes of practice, the perspectives of all the people involved, and the contexts of practice. The project therefore aimed at promoting collaborative learning of clinical interventions with social work students, faculty members as well as practitioners in social services agencies.

Aims and Objectives

1. To enhance good practice of teaching and learning;
2. To promote the teaching and learning of evidence-based social work practice; and
3. To enhance the teaching and learning of clinical social work intervention.

Methodology

This project aimed to promote and support the teaching and practice of evidence-based clinical work. It promoted the uptake of evidence with practice through education and implementation of clinical activities in a supportive environment. The single-system or single-case design (McLeod, 2000, 2003), believed to be a useful tool to evaluate how intervention processes and selected treatment modalities affect specific user systems, was adopted.

Recruitment

Individuals and families were recruited mainly through referral from individuals or social services agencies. Once a referral was received and if the user consented, the Principal Investigator then recruited colleagues, practitioners and sometimes students to be members of the reflecting team. Most of the interviews took place in the Skills Laboratory of the Department of Social Work.

Procedures

With the users’ consent, the interviews were audio- and/or video-taped, and the contents were transcribed verbatim. The transcripts were read through to see how and where the skills and intervention might be effective. The users were involved to express their views on the parts in the process of interviews that they found meaningful. They were also asked if the interviews were useful or not in dealing with the problems that were affecting them, and how they were able to manage the problems or to find satisfaction in life.

After the interviews, colleagues, students and practitioners formed a reflecting team to reflect on what they had learnt from
the users. In some occasions, the users also participated in the reflection team, and the whole group worked in partnership in sharing views, feelings and reflections about the interview.

Analysis
The transcripts were read through to develop themes and sub-themes of relevance to the users’ conversations.

Results/Findings
Of the 12 individuals and families, and over 70 interview sessions, around 60 audio- and video-tapes were available for process and content analysis. The interview transcripts were useful in showing and demonstrating how the user-worker relationship was built, how various concepts and skills were used to engage the users, and how different treatment models such as systemic family therapy and narrative therapy were selected for the therapies. Feedback from some users was also solicited for effective practice in future.

Some of the interview tapes and transcripts were selected for teaching and training purposes. Some cases were also used in two skills-based social work courses, *Theories and Practice in Social Work, and Social Work with Families*, and postgraduate programmes such as the Master of Social Sciences in Youth Counselling. Students then involved in role plays and they rehearsed the questions or skills learned. Very often, it was not the skills per se, but the attitudes that were important in good practice. The students found this very helpful in the learning of theories and skills in working with individuals and families.

In fact, several graduates who had participated in the reflecting team actively joined seminars on skills training expressed that the opportunities to participate in the team and the discussion after the interviews did help them learn the true meaning of “practice” and enhanced their motivation to acquire more knowledge and skills and reflect on their intervention.

The tapes and transcripts were also used in the training of social workers and practitioners in the helping fields and different professional disciplines.

Discussion
1. Enhancement of Good Practice of Teaching and Learning

With the rising demand for accountability and evidence of student learning, the ultimate purpose of teaching is to produce student learning. Apart from early efforts to improve the lecturers’ classroom instruction, and to develop our teaching skills, there arose the notions of non-threatening, learner-centered education (Braxton, Olson & Simmons, 1998; Lazerson, Wagener & Shumanis, 2000). It is through this collaborative process which students can learn and are empowered.

With respect to teaching and learning of theory integration into practice, according to Jacoby & Associates
(1996) and our experience, service-learning and group-based learning are particularly effective. Among the seven principles of good practice in undergraduate education (Chickering & Gamson, 1991), the encouragement of student-faculty contact, the encouragement of cooperation among students, the encouragement of active learning, and the provision of prompt feedback are four principles we want to enact in the teaching and learning of theory integration into practice.

When conducting the project, the students were invited to the interview sessions and to participate as members of the professional reflecting team. There were discussions before, during and after the sessions between students and faculty members about the knowledge, skills and attitudes in practice. In particular, attitudes remain an important element in counselling and social work practice. Much effort was put on this area in the discussions through which collaborative learning between students and faculty members was possible.

2. Teaching and Learning of Evidence-based Social Work Practice

Society is in the process of recognising both the importance of human resources and of providing human services in an efficient manner. The growing interest in evidence-based social work practice is the result of the call for accountability. Emerging from the medical field, evidence-based practice (EBP) is a process of “life-long, self-directed learning” in which caring for our users creates the need for clinically important information about assessment, treatment goals and therapy (Geddes, 2000; Lipman, 2000; Parry, 2000; Sackett, Richardson, Rosenberg & Haynes, 1997).

For instance, EBP research (Basham, 2000; Corcoran, 2000) has indicated that caseworkers with adequate training and supervision in behaviour parent training procedures and family therapy concepts contribute to therapeutic contacts and positive family changes. Hence, EBP is not simply about evaluating and implementing the findings of research. It is essentially an educational process which takes as its starting point the problems/needs brought to therapy by our users. It also transforms continuing professional education into the daily clinical routine. In the process of learning to produce evidence from their practice, our year-two and year-three students worked in partnership with the teaching staff and front-line practitioners in the field. This was made possible in the reflecting process in which students, faculty members as well as other helping professionals, and in many occasions the users joined together as a team to reflect on the process. Instead of the caseworker, counselor, or the interviewer who
assessed and determined the outcome of intervention, the team that included the users and other team members serving as witnesses (Carey & Russell, 2004; White, 2000) shared after the interview what the process was for the users, what worked for them and what they found most helpful in tackling with the problems that were affecting them.

3. **Teaching and Learning of Clinical Intervention**

Almost in all practice situations in which human service practitioners are involved, they are supposed to understand the user system and the situational context, and the current condition/problem/need, to make assessment by accessing, distilling and thinking about relevant theoretical knowledge that may be adopted; to decide on the practice goals and the practice behaviours and strategies; and, finally, to examine the effect of intervention effort. Social work students, therefore, need to access, order and collect information so that they can make assessments which produce practice responses capable of being evaluated or monitored. A central ingredient in the training of social workers is to enable them to make informed decisions within their own practices. These decisions, and the subsequent practice behaviours, are precisely the things that they need to justify and that other professionals want to study and assess. Figure 1 shows the four-step cycle of the teaching and learning process that was proposed and tried out in the project.

Figure 1
A Four-step Cycle of Teaching and Learning Evidence-based Clinical Intervention

Besides, the practice of evidence-based intervention involves a five-step process (Baker & Keijnen, 2000, pp.18-19): (1) formation of clinical questions, (2) search for the best evidence, (3) appraisal of that evidence for validity and importance, (4) application of clinical practice, and (5) evaluation of performance. With the advent of multimedia, it has become possible to stimulate and effect such learning and practice in the real environment other than classroom-based learning.
As mentioned above, faculty members and students worked in groups to go through the five-step process in which they determined the questions to ask, the methods to gather data, the ways to interpret the data obtained, the criteria of selection of theories, the practice behaviours or strategies to adopt and the effectiveness of such clinical intervention.

In relation to the four-step cycle, every student and professional team member had related programmes or completed courses on theories with individuals and families: The first step of the cycle - classroom teaching and learning took place before the interview sessions.

The second step - practice of clinical intervention that involved the conversations with the users and the reflecting process - was gone through in the team. The process involved the exploration of what and why questions to ask along the team members’ reflections and the users’ feedback on the interview process and what worked or were helpful to them. The collaborative process deconstructed the demarcation of power hierarchy and status between the service recipient and the professional team with the two groups uniting together to explore problem formation and resolution. The five-step evidence-based intervention was also carried out in the process. In addition, the attitude of user self-determination, and respect and trust for people was practiced in this phase of intervention.

The third step - process analysis - was done after the interview process was transcribed by the Hong Kong Blind Union. Contents of the interview process were analysed to develop themes and sub-themes of the lives of the users, and what they saw as important for their lives. With the users’ consent, some of the interviews were used in book chapters to illustrate knowledge and skills of certain theories such as narrative therapy.

The fourth step - evaluation of performance - was in fact carried out in step two when the group, including the users, reflected on the interview process as well as the knowledge, skills, attitudes and what was helpful after the conversation between the interviewer and the interviewee.

**Enhancement on Teaching and Learning**

Year-two and year-three social work students are being equipped with clinical concepts and skills in working with individuals and families in classroom teaching and learning, and in their fieldwork practice. In this project, students were invited as reflecting team members in clinical interventions. Through witnessing the interviews and reflection of the things/issues that struck them, students played active parts in the collaborative intervention process. The analyses and
sharing after the interviews served to enhance not only students’ theory integration and skills practice, but also their personal and professional development. In the process, the students reflected upon their own attitudes as a social worker and their own history which might have impact on clinical intervention. The evaluation of performance that involved the user systems provided invaluable information or evidence of good practice. Students’ involvement in clinical practice and their feedback about the process also suggested ways for alternative platforms to enhance teaching and learning.

As the four-step cycle proved to be useful for collaborative teaching, learning and intervention, it could be adopted in courses such as Theory & Practice core courses in both the undergraduate and postgraduate programmes. Examples include Theory & Practice in Social Work (Individual Work) and Social Work with Families.

**Limitations/Difficulties**

The involvement of students in the project was on a voluntary basis, with less than 10 students participated in the interviews with users and the reflecting professional team. There might be several reasons for students’ lack of involvement:

1. The students could be involved in the planning stage and more in the analysis of the transcripts and interview process afterwards to enhance a sense of ownership;

2. More involvement would mean a devotion of extra time and energy in the process. The social work students are very busy, particularly during the fieldwork placement period.

3. Some students reiterated that despite the invaluable learning opportunities in the reflecting team and the process, the participation of other colleagues and professionals of comparatively higher status did create pressure on them to express their opinions and views. This position did not change much with encouragement. More efforts to make collaboration an equal and mutual learning process with change of attitudes in the status quo would be necessary.

4. The attempt to involve the users that the students were serving was unsuccessful as it was really difficult to convince the agencies or the service units to allow interviews with their users to be carried out at another place.

**Conclusion**

This project supported the practice of evidence-based clinical intervention where the users and the helping professionals (including the social work students) worked as a team to reflect upon the interview process, the exact questions that worked and helped the users, the exploration and practice of knowledge, skills and, most importantly, attitudes that allow respect and equality among team members.
The service recipients, or the users, not only received services but also contributed to the production of knowledge and skills. The students involved in the process could witness the practice of collaborative work with the users at the centre, and the mutual learning process served as invaluable examples of practice in teaching of individual and family work in the undergraduate, postgraduate and other social work training programmes offered by the Department of Social Work.

Students of our BSW and master programmes, and participants of our training courses found this practice-based learning very helpful and the Department has recruited a group of local practitioners for the development of indigenous skills-based intervention.

Further exploration of this model of teaching and learning could be made possible, with the students being informed earlier of the whole project so that they could determine how much they could involve and contribute in the planning, application and evaluation stages in the intervention cycle.

References


Preparing Students for the Challenges of the Academic Study

Elizabeth A Bankowski, Elsie C H Chan, Carol M H Lam, Patricia Warren
Language Centre, Faculty of Arts

Preamble
It is vital for year-one university students to be able to function in an unfamiliar learning environment and cope with new challenges and different academic tasks without much guidance from their lecturers. Hong Kong secondary schools, being examination-oriented, have not trained students for tasks requiring an independent and creative approach, and, therefore, not prepared them adequately for the challenges of the inquisitive style of tertiary education. The dramatic change in the structure of the learning tasks at university level leaves Hong Kong year-one undergraduates confused and often unable to achieve their maximum academic performance.

Abstract
When Hong Kong students first enter university, they often come with ineffective learning habits and have to adjust to a new study environment. They have to develop critical, analytical and independent thinking skills which were rarely nurtured in their previous schooling. This project was motivated by a belief that, in order to function effectively in a higher educational institution, students must gain independence in their study. To aid students in this process, the gap or discontinuity in their abilities has to be identified first. This was done through the comparison of study skills students were trained during their secondary schooling and the skills expected to be displayed in the assignments and examinations at university. Having established which study and language skills were relevant and needed to successfully perform academic tasks, specific instructional materials were created for the inclusion in English for Academic Purposes (EAP) courses.

Keywords
Study skills in English, transition to tertiary education, coping with academic tasks, academic skills
Introduction

For many year-one undergraduates, the transition from secondary to tertiary study is a difficult one involving a dramatic change in the structure of learning tasks (Ramsden, Martin & Bowden, 1987). In Hong Kong, students move from a secondary system in which success is exam-based and depends little on independence and creativity, into university study which requires them to be inquiring, self-motivated and self-directed (Kember, 1996). Current literature and the investigator’s own studies suggest that, at the beginning of their first year at university, most students lack both the skills and the confidence to conduct independent research at a university level (Bankowski & Cotton, 1997) and that student’s learning at secondary level would involve limited choice of resources and a high degree of teacher’s guidance (Bankowski & Cotton, 1997).

As a result, many year-one students at Hong Kong Baptist University are unable to analyse some academic tasks and have great difficulty in carrying out assignments involving independent enquiry in English. They have little idea of how to identify and locate suitable resources for their academic tasks, to select and use materials, and to present the results in their own words and in an appropriate academic form. They are often confused and passive in the face of the new demands placed upon them and many are unable to reach their full academic potential.

Aims and Objectives

The objectives of this project were:

1. to analyse the nature and extent of the difficulties students encounter when handling research related tasks in their first year at university;

2. to make recommendations on how educators and institutions can help students develop skills, which will enable students to become more independent learners; and

3. to develop relevant instructional materials for study skills in English for students undertaking first year study in the Faculties of Arts and Social Sciences at HKBU.

It was intended that the instructional materials would cover the steps needed to produce a research paper, as well as provide practice in attendant skills such as incorporating the work of other writers, writing a bibliography, etc. These materials supplemented and expanded the existing EAP course materials. While some materials were written by this project team from scratch, others were selected from existing sources and in some cases adapted to make them more relevant to Hong Kong students. Due to the large volume involved (267 pages), the teaching materials developed as part of this project are not included in this report. They are however available in the HKBU Library and the Language Centre.
Methodology

Survey
A survey was conducted to give HKBU students an opportunity to indicate the areas in which, and to what extent, they experienced difficulty when handling research work or other assignments involving the use of research related skills. The questionnaire survey was administered to all year-one HKBU students enrolled in the Arts and Social Sciences Faculties. It was conducted during the EAP class and completed by 252 students.

The questionnaire consisted of 21 questions which took various forms. Student information questions such as their major, and medium of instruction at secondary school were asked in multiple-choice format, but the majority of the questions were a Likert-type scale. The final two questions were open-ended. Students wrote their answers directly onto the answer sheets which were then read and statistically analysed using the SPSS software. The results from this questionnaire are presented in the Results/Findings section of this report.

The analysis of the data produced in the survey indicated areas in which students felt they had particular difficulty, and these, combined with the list of skills considered by EAP instructors as essential for carrying out academic tasks in English, formed the basis for the development of the instructional materials.

Preparation of instructional materials
Once the topics had been identified, the relevant instructional materials were selected, adapted and in some cases developed. For some areas, adequate instructions were already in use in EAP courses, so they were carefully examined and possibly adjusted to match the style of other resources. Where no instructions existed, materials were either adapted from the work of other writers or developed by the members of the project team. Examples and models were derived from a variety of sources, such as local newspapers, areas of interest indicated by students and the project team’s own experience of Asia in general and Hong Kong in particular.

All materials, old and new, were combined and skills arranged to logically follow the sequence needed when researching and writing an academic paper. Extra weight was given to topics that many students indicated as problematic in the survey (e.g. finding information and using the work of other writers).

Results/Findings

Survey
The results obtained from the survey showed that a large majority of the year-one students at HKBU experienced problems with a wide array of university level skills. Students readily admitted that they had a substantial amount of difficulty with skills ranging from the more technical library skills to intellectual skills such as critical analysis.
When being asked about the level of difficulty they encountered when first required to critically analyse issues, only a handful of the students replied that they found this task easy. As many as 62.8% of them found critical analysis to be a very difficult skill while 33.6% found it moderately difficult (Table 1). The second skill identified by students as problematic was creating supporting arguments in their written and oral assignments. More than half of the students responded that they found this skill very difficult to put into practice. Similar responses were given to a question about the comfort students felt in drawing conclusions. While 48% of them reported some difficulty with this task, 40.1% found drawing conclusions very challenging, only a small number found this skill easy.

Problems adapting to ways of studying that were new and different from those used at secondary school were also reported by most of the year-one students. This transition was very difficult for just over half of the students and moderately difficult for the rest of the respondents. Interestingly, while most of the students (88.4%) felt that they had to study in ways that were different from those at secondary school, up to 11.6% of the students surveyed did not perceive the need to reform their study techniques. This group of students may have already been using advanced

<table>
<thead>
<tr>
<th>Table 1. General Academic Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>In some university courses, I was required to critically analyse issues.</td>
</tr>
<tr>
<td>At university, I was required to be more creative than I was in secondary school.</td>
</tr>
<tr>
<td>At university, I have to study in different ways than I did at secondary school.</td>
</tr>
<tr>
<td>I was required to draw conclusions about a subject.</td>
</tr>
<tr>
<td>I was required to create supporting arguments in my written or oral assignments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strongly Agree/ Agree (%)</th>
<th>Neutral (%)</th>
<th>Disagree/ Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I could not think of enough ideas to write about.</td>
<td>59.4</td>
<td>30.3</td>
</tr>
<tr>
<td>At university, I had difficulty organising ideas for my assignments.</td>
<td>46.8</td>
<td>39.6</td>
</tr>
</tbody>
</table>
study techniques or continued to apply the same study tactics in a university setting.

Responses to questions about producing and organising ideas suggested that year-one students are not accustomed to working with their own ideas or creating their own lines of thought. A modest 10.4% of students felt able to produce enough ideas for their written assignments, while 59.4% of students admitted that thinking up ideas was an area in which they experienced problems. Although a slightly greater proportion of students (13.6%) felt at ease organising ideas for their assignments, almost half indicated that this task was a difficult one.

Table 2. Working with Resources

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very Difficult/Difficult (%)</th>
<th>Moderately Difficult (%)</th>
<th>Quite Easy/Very Easy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was required to search independently for information using the library facilities.</td>
<td>54.1</td>
<td>42.4</td>
<td>3.5</td>
</tr>
<tr>
<td>I had to determine by myself which information was relevant or useful for a project.</td>
<td>48.6</td>
<td>47.3</td>
<td>4.2</td>
</tr>
<tr>
<td>I had to combine information from two or more different resources into one project/assignment.</td>
<td>54.6</td>
<td>41.1</td>
<td>4.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Strongly Agree/Agree (%)</th>
<th>Neutral (%)</th>
<th>Disagree/Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At first, completing assignments was difficult for me because I didn’t know how to find the necessary information.</td>
<td>67.4</td>
<td>24.7</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Prior research by the Principal Investigator highlighted the fact that students in their secondary schools, for a variety of reasons (e.g. both inadequate facilities and the exam-oriented nature of the curriculum), have little opportunity to discover or to work with library resources or other materials (Bankowski, 1998). This lack of experience is evident in the responses of the students to this survey’s questions about working with resources (Table 2).

Almost all students who were required to search independently in the library for information for their assignments found such a task difficult. Only 3.5% of the students found searching independently relatively easy. They also found it difficult to determine which information was relevant or useful for a project. Selecting useful information was very difficult for almost half of the students who were required to do so and somewhat difficult for 47.3% of the students. In general, many students (67.4%) felt that one of the reasons that assignments at the university level seemed difficult was that they did not know how to find the information to use it for their assignments. Even combining information from different resources for a project was an exercise that almost half the students surveyed found problematic.
Many students struggled with their English language skills at university (Table 3). A majority of them (62.5%) admitted that they had difficulty expressing themselves in English and many (40.4%) found it difficult to use information that was conveyed in English.

In general, the majority of students had problems expressing themselves in their work, whether it involved their own opinions or a restatement of others’. Paraphrasing was almost as troublesome as expressing their own opinions when preparing assignments.

As many as 70.4% of the students surveyed were quick to identify the relatively lower level of teacher guidance at university as one of the reasons that they had difficulty with their assignments (Table 4). However, the responses for another question suggested that the students did not necessarily feel that teachers ought to be giving them more help. Many of the students seemed to understand that in the university environment they are expected to accept challenge without being spoon-fed by teachers as they used to be in secondary school.
Discussion

The survey confirmed that the majority of students lacked confidence in tackling independent research because of their lack of previous experience. Particular areas of concern were highlighted by the survey, such as using the library, selecting appropriate material, using resources, etc.

In an attempt to help these students, the project team has compiled a series of units covering the steps required to produce a research paper/essay. From the initial stage of deciding on a topic, the students are guided through the stages of using the library to find information, choosing appropriate materials, arranging them into essay form with the students' own original ideas, to finally producing a polished academic paper. Emphasis has been placed on those topics which the students found difficult - as indicated by their own admission (e.g. paraphrasing) or as demonstrated in their assignments (e.g. writing paragraphs). EAP instructors were able to comment on the materials and offer suggestions for improvement (e.g. changes in the order of exercises, additions, etc.). Alterations were subsequently made before the completion of the units for binding. All 10 units were bound together to form a 267-page EAP course manual providing a step-by-step guide to academic skills in English, including small scale research. This course manual was used in EAP classes with all students majoring in Arts and Social Sciences. The manual could also be used for self-study and by EAP instructors in other disciplines to refer students to the appropriate units for help with basic queries on research or essay writing.

Included in the manual are units on report writing and oral presentations, as well as the research project models. Teacher's notes, containing possible answers to some of the exercises, were prepared but not included in the final bound volume designed for student use. They were given to the instructors separately for use in class or in individual consultations. Many of the EAP materials developed in this project had been adapted from available resources and made more relevant to Hong Kong students. These changes ranged from minor word alterations to the inclusion of Asian news stories. It was hoped that the inclusion of materials familiar to students' own situation would enable them to accept more readily the concepts and ideas these examples and exercises illustrated.

The contents of EAP course for Arts and Social Sciences manual consist of 10 units developed under this project are listed in Table 5. The actual course manual is not reprinted here due to its volume but copies are available from the Library, the Self-Access Learning Centre and the Language Centre office.
<table>
<thead>
<tr>
<th>Table 5</th>
<th>Table of Contents - EAP Course manual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 1</strong></td>
<td><strong>Choosing and Researching a Topic for an Academic Paper</strong></td>
</tr>
<tr>
<td></td>
<td>Carrying out small scale research in English</td>
</tr>
<tr>
<td></td>
<td>Choosing a suitable research topic</td>
</tr>
<tr>
<td></td>
<td>Using HKBU Library</td>
</tr>
<tr>
<td></td>
<td>Finding books and reference materials</td>
</tr>
<tr>
<td></td>
<td>Narrowing your topic</td>
</tr>
<tr>
<td></td>
<td>Evaluating resources</td>
</tr>
<tr>
<td></td>
<td>What to put in and what to leave out</td>
</tr>
<tr>
<td></td>
<td>Gathering information</td>
</tr>
<tr>
<td></td>
<td>Using resources in your writing</td>
</tr>
<tr>
<td></td>
<td>Practice in library research</td>
</tr>
<tr>
<td></td>
<td>Referencing and bibliographies</td>
</tr>
<tr>
<td></td>
<td>Sample paper / bibliography in APA style</td>
</tr>
<tr>
<td><strong>Unit 2</strong></td>
<td><strong>Integrating other writers’ work</strong></td>
</tr>
<tr>
<td></td>
<td>Plagiarism</td>
</tr>
<tr>
<td></td>
<td>Paraphrasing</td>
</tr>
<tr>
<td></td>
<td>Summarizing</td>
</tr>
<tr>
<td></td>
<td>Paraphrasing and summarizing exercise</td>
</tr>
<tr>
<td></td>
<td>Further practice in paraphrasing</td>
</tr>
<tr>
<td></td>
<td>Synthesizing</td>
</tr>
<tr>
<td></td>
<td>Using source material - practising skills of summarizing, paraphrasing and synthesizing</td>
</tr>
<tr>
<td><strong>Unit 3</strong></td>
<td><strong>Paragraph writing</strong></td>
</tr>
<tr>
<td></td>
<td>What is a paragraph?</td>
</tr>
<tr>
<td></td>
<td>Topic introducer</td>
</tr>
<tr>
<td></td>
<td>Topic sentence</td>
</tr>
<tr>
<td></td>
<td>Developing and supporting sentence</td>
</tr>
<tr>
<td></td>
<td>Concluding sentence</td>
</tr>
<tr>
<td></td>
<td>Practice paragraph writing</td>
</tr>
<tr>
<td></td>
<td>Developing clarity and exactness</td>
</tr>
<tr>
<td></td>
<td>Distinguishing general and specific statement</td>
</tr>
<tr>
<td></td>
<td>Making general statement more specific</td>
</tr>
<tr>
<td></td>
<td>Narrowing ideas for topic sentences</td>
</tr>
<tr>
<td></td>
<td>Practice in editing paragraph</td>
</tr>
<tr>
<td><strong>Unit 4</strong></td>
<td><strong>Writing outlines</strong></td>
</tr>
<tr>
<td></td>
<td>What is an outline?</td>
</tr>
<tr>
<td></td>
<td>Organising ideas</td>
</tr>
<tr>
<td></td>
<td>Purpose of outlines</td>
</tr>
<tr>
<td><strong>Unit 5</strong></td>
<td><strong>Essay writing</strong></td>
</tr>
<tr>
<td></td>
<td>Essay structure</td>
</tr>
<tr>
<td></td>
<td>Thesis statement</td>
</tr>
<tr>
<td></td>
<td>Introductory paragraphs</td>
</tr>
<tr>
<td></td>
<td>Concluding paragraphs</td>
</tr>
<tr>
<td><strong>Unit 6</strong></td>
<td><strong>Patterns of development in essay writing, cohesion and style</strong></td>
</tr>
<tr>
<td></td>
<td>Comparison and contrast</td>
</tr>
<tr>
<td></td>
<td>Cause and effect</td>
</tr>
<tr>
<td></td>
<td>Time relationship</td>
</tr>
<tr>
<td></td>
<td>Transitions</td>
</tr>
<tr>
<td></td>
<td>Using transitional words or phrases</td>
</tr>
<tr>
<td></td>
<td>Using parallelism</td>
</tr>
<tr>
<td></td>
<td>Transitional paragraph that summarizes</td>
</tr>
<tr>
<td></td>
<td>Using adjective clauses</td>
</tr>
<tr>
<td><strong>Unit 7</strong></td>
<td><strong>Writing, revising and editing an academic paper</strong></td>
</tr>
<tr>
<td></td>
<td>Writing the first draft</td>
</tr>
<tr>
<td></td>
<td>Revising and editing: what, when and how?</td>
</tr>
<tr>
<td></td>
<td>Proofreading and its importance</td>
</tr>
<tr>
<td></td>
<td>Some strategies to use when proofreading</td>
</tr>
<tr>
<td></td>
<td>Practice in proofreading</td>
</tr>
<tr>
<td><strong>Unit 8</strong></td>
<td><strong>Abstracts</strong></td>
</tr>
<tr>
<td></td>
<td>Writing abstracts</td>
</tr>
<tr>
<td></td>
<td>Models and exercises</td>
</tr>
<tr>
<td><strong>Unit 9</strong></td>
<td><strong>Making oral presentation</strong></td>
</tr>
<tr>
<td></td>
<td>Phase 1: Ideas / information gathering</td>
</tr>
<tr>
<td></td>
<td>Phase 2: Planning / organisation</td>
</tr>
<tr>
<td></td>
<td>Phase 3: Delivery / presentation</td>
</tr>
<tr>
<td><strong>Unit 10</strong></td>
<td><strong>Primary research and report writing</strong></td>
</tr>
<tr>
<td></td>
<td>Data collection method</td>
</tr>
<tr>
<td></td>
<td>Questionnaire design (opinion survey)</td>
</tr>
<tr>
<td></td>
<td>Short report - format and structure</td>
</tr>
<tr>
<td></td>
<td>Language of the report</td>
</tr>
<tr>
<td></td>
<td>Using graphs and tables in report</td>
</tr>
<tr>
<td></td>
<td>Generalisations and facts</td>
</tr>
<tr>
<td></td>
<td>Example of the report</td>
</tr>
</tbody>
</table>
Enhancement on Teaching and Learning

Though a formal study of the effectiveness of these materials was not conducted, it was apparent that students responded well to the instructions. In the course and the teaching evaluations, students commented that they recognised the benefits of EAP course materials. They highly endorsed the components of the course that tackled specific skills such as finding and using resources, preparing oral presentations, using an appropriate format for writing academic papers and presenting ideas in a logical order. They appreciated the shift in emphasis towards Asian concerns, and showed themselves well able to face the challenge of more demanding materials. These perceptions of benefit corresponded to the improvements evident in the work that students submitted under the programme.

Overall students’ response to the new materials was positive, conveying a significant degree of interest and enthusiasm. It was apparent that most students gained a real sense of achievement and satisfaction from the work in which they had engaged using the new course materials. The common perception was that the skills acquired in the course were applicable and transferable to other subjects and that they helped students to learn how to study independently. Students indicated that they enjoyed the materials and the method; that they found them interesting and appreciated the opportunity of creative thought and work.

Limitations/Difficulties

Some limitations were imposed by circumstances, timing and design. In retrospect, it has emerged that a number of elements in the project design which initially did not seem important have proved to be significant when subjected to more detailed analysis.

Whilst enabling the use of a large sample, the questionnaire did not allow for the open or multiple responses which in turn might have clarified answers or suggested ways in which the programme could be extended or modified. Interviews did serve to fill this gap to some degree. However, the small sample used and the need for those students to be reasonably confident and proficient in their use of English meant that responses could not necessarily be generalised to the wider sample population.

In collating the data from the survey, it became evident that some questions should have been presented to invite scaled responses and that the format used in the survey yielded results which were limited in their application. Despite careful piloting, these shortcomings had not come to light earlier.

Conclusion

It is impossible to confirm the direct enhancement this project made on the development of the English skills and independent learning skills of the students involved; a longitudinal study would need to be carried out to positively establish a change. However, the results of the
investigations throughout this project supported previous informal observations that confirmed the educational dichotomy faced by year-one undergraduate students in Hong Kong. This has been noted by other researchers (Biggs, 1992; Cheng, 1995; Hamp-Lyons, 1998) and was outlined in the Education Commission’s report on Higher Education (1996, 2000) and the Education Commission Blueprint (1999).

It is clear that, given their lack of confidence in English and lack of experience in investigative tasks, year-one students may be limited in achieving their maximum academic potential and that one of the roles of tertiary teachers is to help them acquire relevant skills and strategies for learning. The training materials that formed the basis of this project were designed to that end.

It is the investigator’s hope that this project will provide encouragement and assistance to teachers as they endeavour to help current students make the demanding transition to the tertiary level of study, and from one learning style to another. It is also hoped that this project will serve to guide the development of new programmes, and will thereby encourage in future students the curiosity, independence of thought and skills needed for life-long learning.

That being the case, on the basis of the findings, it is highly recommended that the educational authorities acknowledge the role that independence plays in such learning and that they provide the resources necessary to facilitate changes in learning and teaching environments within Hong Kong’s educational institutions. These proposed changes should concentrate on providing a favourable learning environment to foster independence and help students become more self-directed and more effective learners. Learners need to be supported and encouraged in their efforts to take individual responsibility for their own learning. They should be helped to develop, strengthen and understand their own learning styles and learning goals.

The design of the curriculum and the application of the teaching and learning methods should facilitate the development of students’ critical and analytical abilities, assisting them to become aware of the contexts and promoting interest in disciplinary inquiry. Training courses should be offered to help students develop skills needed to successfully perform academic tasks and better prepare them for the challenges of living and working in the ever-changing world. To help bridge the gap in students’ study habits, a choice of supporting and elective subjects covering study skills, learning strategies, project-work skills and library research skills should be made available to students in their first and second years at university.

Lecturers should give structured feedback to students and consider innovative forms of teaching, encouraging them to use their creativity and imagination, and helping them to develop resourcefulness. Students should be helped to develop their problem-
solving and critical thinking potential. There is a need to allow time for students to contemplate knowledge in order to develop original and creative thoughts. This could be achieved through well-thought-out and well-planned assignments. The importance of project work or other academic tasks requiring researching should be viewed as the main vehicle through which students develop skills that could be transformed to a life-long learning pattern.

Space is at premium at the University but dedicating some areas for students to set up “information sharing” or “experimental stations” would be a long-term investment that would benefit the educational outcomes. The purpose of these would be for students to help, advise and support each other and to promote team research and experimentation. Independent thoughts, creativity and techniques for self-study could be fostered through peer support and discussion groups. Institutions should provide settings where students could gather to support each other and share resources.

References


Bridging Workshop on Practical Skills for Year-one Biology Students

Zhang Jianhua, all teaching and technical staff
Department of Biology, Faculty of Science

Preamble
This Teaching Development Grants project aimed to organise a training workshop for freshmen (i.e. Year-one Biology students) to better equip them with essential technical skills that were required for the three-year BSc programme.

It has been noticed in recent years that year-one undergraduate students generally lacked proficiency in technical skills for undertaking and performing experiments. This could be attributed to the abolishment of the A-Level Practical Examinations as well as the limited exposure to the use of advanced instruments in secondary schools. To make up for the deficiency, it is recommended to organise a three-day workshop before the commencement of the academic period of undergraduate studies at the end of August. The workshop will be delivered via a series of learning activities of lectures sessions, practical classes, demonstrations as well as field trip.

Results and findings from the past Bridging Workshops showed that students and demonstrators were supportive to such workshops and positive responses were received for its effectiveness. It is believed that the Bridging Workshop would be beneficial in improving both teaching and learning processes.

Abstract
In recent years, our staff have noticed that most year-one students were not competent to perform experiments. One of the reasons might be due to the discontinuation of the previous A-Level Practical Examination after adopting the Teacher Assessment Scheme (TAS) in secondary schools. In order to compensate for this deficiency, a three-day "Bridging Workshop" was proposed for the year-one biology students.

In this workshop, the students had a chance to expose themselves to basic practical skills through a series of learning activities, such as brief lectures, practical classes, demonstrations and field trip. At the end of the workshop, an assessment was carried out to measure the learning outcome of the students.
Keywords
Bridging Workshop, practical skills, Biology

Introduction
It has been noticed in recent years that there are generally a lack of proficiency in technical skills among year-one university students. This could be attributed to the fact that historically A-Level students were required to take the A-Level Practical Examination, which focused on assessing their technical skills. Ever since the TAS was adopted, the practical examination was abolished. Furthermore, there are limitations to the use of more advanced laboratory instruments in secondary schools, which limits students’ exposure to these instruments and the ability to develop advanced techniques involved. A gap is therefore created when they enter their first year of university education. Not only does this pose difficulties to the teachers in universities, in which extra time is required to polish the students' skills, students also found it difficult to adapt to and learn the basic skills again.

Aims and Objectives
The major purpose of this teaching grant was to organise a workshop so as to bridge the existing gap and to better equip students with the necessary technical skills required for the three-year university education.

After completing the workshop, it was expected that the students would be better equipped to embark on their BSc degree programme and have a better understanding in handling the instruments and chemicals in a safe manner. Also, through the demonstration of some advanced instruments in biological science, students would have an earlier exposure to foster more enthusiasm in the study of Biology.

Methodology
This programme was a three-day workshop offered to year-one students before the classes began. Held in our campus, the workshop consisted of different learning activities such as practical class, brief lectures, demonstration, discussion and field trip. In the first half of this workshop, a wide variety of skills and knowledge to be used in the coming semester, such as review of common lab techniques and correct methods in using lab equipment, were covered. The students were also aware of the need for appropriate safety procedures in handling chemicals. In the second half, demonstration of advanced instruments in biotechnology and environmental science was organised. We wished to show our students that our daily life had been benefited much from the advanced development in biological science. The main purposes were

1. to teach the students some basic techniques in Biology and refresh their memory;
2. to keep the students abreast of the latest scientific and technological development in biological instrumentation; and

3. to allow the students to develop and sustain the curiosity to learn and explore.

At the end of this workshop, a field trip was organised. This gave an opportunity for students to further discover Biology through outdoor studies, particularly they could develop their interests in the relationships among organisms. During the field trip, the students were more aware of (1) the need for appropriate safety measures in ecological field studies, and (2) a respect of life and the environment while carrying out ecological field studies.

The daily programme was subdivided into many topics. Each session took about one hour and was taught by our staff members who are experienced in the relevant topic. At the end of each day, a session was reserved for review and feedback on the training. A rundown of this workshop is shown below:

### Schedule of Bridging Workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Day One</th>
<th>Staff in-charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM</td>
<td>Welcome Session (Registration and grouping)</td>
<td>Head of Department</td>
</tr>
<tr>
<td>10:15 AM</td>
<td>Departmental Tour (Room T1006)</td>
<td>All technicians</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Introduction to Lab Safety - by BU Safety Unit (Part 1) (Oen Hall E1017)</td>
<td>Thomas Tse (EHSU)</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Use of Fume Cupboard - by Biology Dept (Room T1006)</td>
<td>WK Ip</td>
</tr>
<tr>
<td>12:15 PM</td>
<td>Lunch Time</td>
<td></td>
</tr>
<tr>
<td>2:00 PM</td>
<td>Introduction to Lab Safety - by Biology Dept (Part 2) (Room T1006) (Safe use of Bunsen burner, Oven, Flammable Liquid, Corrosive Chemicals and Heat Generating Instrument)</td>
<td>WK Ip</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>Basic animal dissection technique (Room T1006)</td>
<td>KW Chan</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Use of Pipetter, hot plates, balance, centrifuge &amp; pH meter (Rooms T1006 &amp; T1008)</td>
<td>Louise Ng, LY Man, KW Chan &amp; CK Leung</td>
</tr>
<tr>
<td>4:15 PM</td>
<td>Review and Feedback Session (Rooms T1006 &amp; T1008)</td>
<td>All Technicians</td>
</tr>
<tr>
<td>Time</td>
<td>Day Two</td>
<td>Staff In-charge</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>10:00 AM to 11:00 AM</td>
<td>Use of Microscope, basic plant sectioning technique &amp; wet-mount technique (Rooms T1006 &amp; T1008)</td>
<td>Olivia Chau &amp; Louise Ng</td>
</tr>
<tr>
<td>11:00 AM to 11:15 AM</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:15 AM to 12:15 PM</td>
<td>Biological Drawing Technique and Lab Report Writing Skill (Part 1) (Room T1006)</td>
<td>Olivia Chau &amp; CK Leung</td>
</tr>
<tr>
<td>12:15 PM to 2:00 PM</td>
<td>Lunch Time</td>
<td></td>
</tr>
<tr>
<td>2:00 PM to 2:30 PM</td>
<td>Lab Report Writing Skill (Part 2) (Room T1006)</td>
<td>Olivia Chau &amp; CK Leung</td>
</tr>
<tr>
<td>2:30 PM to 3:00 PM</td>
<td>Demonstration of advanced development in Biology (Part 1) (Room T1109) (Gel Electrophoresis)</td>
<td>Fiona Luong</td>
</tr>
<tr>
<td>3:00 PM to 3:15 PM</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:15 PM to 4:15 PM</td>
<td>Demonstration of advanced development in Biology (Part 2) (Rooms T1101 &amp; T1118) (Real-Time PCR &amp; Flow Cytometer)</td>
<td>Fiona Luong &amp; LY Man</td>
</tr>
<tr>
<td>4:15 PM to 4:30 PM</td>
<td>Review and Feedback Session (Rooms T1107 &amp; T1109)</td>
<td>All Technicians</td>
</tr>
<tr>
<td>Time</td>
<td>Day Three</td>
<td>Staff In-charge</td>
</tr>
<tr>
<td>10:00 AM to 11:45 AM</td>
<td>Demonstration of advanced development in Biology (Part 3) (Rooms T1006A, T1011 &amp; T1110) (Confocal Laser Microscope, Atomic Absorption Spectrometer &amp; Gas Chromatography System)</td>
<td>LY Man, KK Ma &amp; KW Chan</td>
</tr>
<tr>
<td>11:45 AM to 12:00 PM</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>12:00 PM to 12:30 PM</td>
<td>Review, Feedback and Assessment Session (Rooms T1006 &amp; T1008)</td>
<td>All Technicians</td>
</tr>
<tr>
<td>12:30 PM to 1:30 PM</td>
<td>Lunch Time</td>
<td></td>
</tr>
<tr>
<td>1:30 PM to 5:30 PM</td>
<td>Field Trip (Mai Po Nature Reserve)</td>
<td>KK Ma</td>
</tr>
</tbody>
</table>
To monitor the effectiveness of the project, students and demonstrators were asked to fill in assessment forms (see attached copy of the questionnaires in Appendix) to evaluate the usefulness of the project. The assessment was conducted at three levels during the course of the project:

1. Student evaluation at the end of the training.
2. Student evaluation after they have taken laboratory courses for one semester.
3. Demonstrator evaluation of the cohort, who had completed the training, after taken laboratory courses for one semester.

In the first evaluation, the background of the students and their views of the training course were summarised. This helped evaluate whether it was necessary to continue giving pre-university training to the students. Also, information was collected to improve the content of the training course.

In the second evaluation, students having completed the training were asked of their views of the workshop.

Finally, demonstrators, who had been teaching the same laboratory course for many years, shared their views on the quality of the students who had taken the training course prior to entering the laboratory.

**Results/Findings**

In order to acquire more data for analysis and evaluation, the workshop was organised twice for two different groups of freshmen in two consecutive years. Two copies of questionnaire for practical class demonstrators and year-one students were issued and collected in both years’ Bridging Workshops in order to review and assess the helpfulness and usefulness of the workshop in improving the learning performance of year-one students in practical classes and reducing the difficulty in teaching year-one students with low proficiency in laboratory technical skills. After analysing the questionnaires, conclusions of the outcomes of this project are illustrated in the following paragraphs.

**Evaluation and Feedback from Students on the Workshop before the Semester**

1. 82% and 97% of students, in the two consecutive years, reported that the workshop was useful and helpful to them. The workshop not only provided them with some basic concepts of the equipment and technology, but also enabled them to adapt to the laboratory environment and made them feel more comfortable with the laboratory before the class began.

![Graph showing evaluation results]

**First Year**
- Useful 82%
- Not Useful 18%
- Not Useful 3%

**Second Year**
- Useful 97%

55
2. Over 30% of students found that the contents of some training topics in the workshop were difficult to understand in the first year. The topics were mainly about the theory and application of the advanced instruments used in biological science. The second difficulty was that the majority of our training materials and technical terms were delivered in English. This may be a great barrier for students coming from Chinese-Medium School. After re-designing the contents of some difficult topics and using more Chinese technical terms, only 13% of the freshmen had difficulty in understanding in our workshop organised in the second year:

First Year  
- Difficult: 37%  
- Easy: 63%

Second Year  
- Difficult: 13%  
- Easy: 87%

3. After re-designing the contents of some training topics in the second year, the percentage of students who fully understood the presentation raised from 37% to 87%.

First Year  
- Fully Understand: 57%  
- Not Fully Understand: 43%

Second Year  
- Fully Understand: 87%  
- Not Fully Understand: 13%

4. In the first year, only 39% of the students were satisfied with the duration of the workshop. They expressed that the duration of some topics was too long but the duration of some other topics was too short. After reviewing their feedback, it was found that there was not enough time for them to follow the contents of some topics, such as learning the theory of advanced instruments and practicing the use of some laboratory equipment. Some freshmen complained that they spent a long time on waiting for trying the instruments. In order to tackle these problems, we re-adjusted the duration of some training topics and provided more instruments for them in order to cut down their waiting time in the workshop held in the following year. Thus, after making such improvement, the percentage of students who found the duration of workshop suitable increased to nearly 60% in the second year:

First Year  
- Satisfied: 39%  
- Not Satisfied: 61%

Second Year  
- Satisfied: 59%  
- Not Satisfied: 41%

5. According to their feedback, the majority of them (around 90% in both years) had not attended this kind of workshop before. That was why they felt difficult in understanding some
training topics such as the use of some common laboratory instruments (e.g. pipette and pH meter) as well as learning the theory and application of the advanced instruments. This implied that there was a great need for our Department to continue offering this kind of training workshop to the freshmen in the future.

6. Finally, over 90% and about 79% of the students in the first and second years replied that they would attend another workshop at a “higher level” if we were going to organise and offer it in the future. This information was a clear indication that the workshop not only offered a good training to the freshmen in smoothly transiting from secondary school to university, but also stimulated and enhanced their interest in exploring the knowledge and new development in biological science.

Evaluation and Feedback from Students after the Semesters

1. About 90% of the students attending both years' workshops found that the skills and knowledge acquired from the workshop were applicable in the year-one lab class, e.g. the use of pipette, hot plate, balance, centrifuge, pH meter, microscope, plant sectioning and wet-mount technique, biological drawing technique, lab report writing skill, etc.

2. Over 80% of students found that the lab classes were easier to understand after attending the workshop in both years, such as using microscope, learning gel electrophoresis and flow cytometer.
3. The percentage of students thinking that the workshop could raise their awareness of laboratory safety when carrying out experiments increased from 70% to 96% in the second year compared to that in the first year, particularly when (1) using Bunsen burner, oven, centrifuge and hot plate, and (2) handling flammable liquid, corrosive chemicals and toxic chemicals. During lab class, using fume cupboard and wearing personal protective equipment (e.g. gloves and glasses) became their normal practice when handling dangerous chemicals.

4. In the first year, about 70% of the students found the workshop was useful in avoiding damaging the delicate laboratory equipment during practical class, e.g. pipette, balance, centrifuge, pH meter and microscope. In the second year, over 90% of the students had the same feedback that the workshop could teach them how to avoid damaging delicate equipment in their year-one lab class.

5. However, half the students (50%) in the second year commented the workshop was not helpful for them to acquire the skill of getting accurate experimental results in practical class, even though the percentage dropped down to 36% in the following year. It could be considered as a weakness of the workshop.

6. In the first year, over 50% of the students said that the workshop did not increase their confidence in solving problems encountered in the lab class, especially in (1) interpretation of experimental results, (2) finding experimental error, and (3) drawing conclusions on the results. The percentage of students who did not feel more confident decreased to 40% in the second year.
7. Apart from the above feedback, the students expressed that the following topics of the workshop were very useful in the year-one lab classes, but not detailed enough:
   • calibration and use of pH meter,
   • use of centrifuge,
   • use of Bunsen burner,
   • use of pipette,
   • skill of gel electrophoresis,
   • biological drawing and plant sectioning technique,
   • lab report writing skills, especially in the area of experiment result and discussion,
   • use of microscope (apart from bright field), and
   • the principle of flow cytometer and real-time PCR.

8. Moreover, some students recommended the topics or lab skills listed below should be included in future workshop or training course:
   • dissection technique,
   • problem solving skills,
   • technique of getting accurate experimental results,
   • techniques of plotting graphs,
   • field trip sampling techniques,
   • result interpretation,
   • lab techniques in microbiology, such as serial dilution, disposal of used pipette and agar plates, aseptic transfer of bacteria, Gram stain, sterilisation, using oil immersion lens and cell counter as well as the examination of water sample.

**Evaluation and Feedback from Demonstrators after the Semesters**

The following paragraphs describe the experience of and feedback from the demonstrators after teaching the practical classes involving students who had attended the Bridging Workshop. The practical classes monitored for enhancement on teaching and learning in the two consecutive academic years were **Cell Biology, Microbiology, Plant Diversity, Animal Diversity, Biodiversity, Field Biology, Genetics, Animal Physiology and Plant Physiology.**

1. All demonstrators found that the students could apply the skills and knowledge acquired from the workshop during the semester, e.g. using pipette, pH meter, microscope and animal dissection tools as well as performing biological drawing.
2. Moreover, all demonstrators found that the students understood the lab briefing and demonstration to a greater extent than before and thus the practical classes were easier to teach, particularly in some advanced topics such as serum protein gel electrophoresis and flow cytometer.

3. Over 80% of the demonstrators in both years realised that the workshop could raise the students’ awareness of laboratory safety when carrying out experiments since the number of accidents and seriousness of injury during lab classes were lower than that before, such as injury caused by spillage of acid into eye, Bunsen burner and corrosive chemicals.

4. Similarly, over 80% of our demonstrators found the two years’ workshops were useful in teaching the students using and handling the delicate equipment properly so as to avoid damaging the equipment in classes. For instance, the occurrence of cracking the glass slides and scratching the microscope lens decreased in the past two years.

5. Nevertheless, over 60% of the demonstrators in both years realised that even though the students had attended the workshop before, they could not complete the experiments faster than those not attending the workshop in previous years. Yet the demonstrators admitted that the students had already acquired the lab techniques and made fewer mistakes than before.
6. Although the students had already attended the training courses, half of our demonstrators (i.e. 50%) in both years found that the students could not get accurate experimental results during their practical classes. In other words, they could not correctly and accurately measure and interpret the experiment results.

Discussion
Among the feedback from the students mentioned above, some topics of the workshop training were very useful in the year-one lab classes, but the explanations were not detailed enough, such as (1) calibration and use of pH meter; (2) use of centrifuge, (3) use of Bunsen burner; (4) use of pipette, (5) skill of gel electrophoresis, (6) biological drawing and plant sectioning technique, (7) lab report writing skill, especially in the area of result and discussion, (8) use of microscope (including the oil immersion lens), (9) the principle of flow cytometer and real-time PCR, (10) dissection technique, (11) techniques of measuring accurate experimental results, (12) field trip sampling techniques and (13) lab techniques in microbiology (e.g. serial dilution). We should reserve the first lab lesson for each course to cover the above topics at the beginning of each semester.

Apart from the above feedback, some students also recommended the following topics to be included in our future workshop or training course. They were (1) problem solving skills, (2) techniques of plotting graphs, and (3) result interpretation/data analysis. This recommendation from students was supported by their feedback shown in the questionnaire given to them after the semester as about 50% of them found our workshop could not help them to get accurate experimental results and did not strengthen their confidence in solving problems encountered in the lab classes. Similarly, only 50% of our demonstrators pointed out that the students could not correctly and accurately measure and interpret the experiment results. Therefore, there was a need of improvement to be made in the future bridging workshop which should devote some time to delivering the skills of problem solving, experimental result measurement, results presentation, interpretation and analysis. However, if the schedule of the bridging workshop was very tight, we could include these topics in the first lab sessions (i.e. briefing session) of some practical classes.

Nevertheless, about two-thirds (i.e. 66%) of the demonstrators found that the workshop training could not help the students to complete the experiments earlier even though the students were able to apply the lab skills they had learnt in the
workshop before. It was because (1) some students needed to repeat the experiments which were interrupted by mistakes and (2) they spent a lot of time on reading the lab manual procedure during lab class before starting the experiments. These might be caused by their insufficient preparation work and carelessness.

**Enhancement on Teaching and Learning**

The proposed three-day workshop was tailor-made for year-one students, aiming to give them a general exposure and an overview on the practical skills required for their three-year BSc programme. The workshop was delivered via various teaching formats, e.g. demonstrations, field trips, hands-on experience etc. Using an interactive approach helped to arouse students’ interest, hence speeding up the process of mastering the skills required. The value of the workshop could not be underestimated. Students and demonstrators also gained substantial benefits. This workshop could be used as an introductory course for students to acquire a higher level of skills required for university education. Demonstrators, on the other hand, were able to relieve their time from teaching basic lab skills, experimental procedures and safety issues; hence improving the quality of teaching and learning. For example, the demonstrators had much more time to discuss with students the experimental results interpretation, presentation and analysis, and to solve the problems encountered during the lab classes. The workshop could also be incorporated into a routine orientation programme hosted by the Department to increase the communication and interaction between students and teachers. As no other workshop of similar nature existed at that time, this workshop provided long term benefits and prepared students to become life-long learners in the biological science field.

**Limitation/Difficulties**

When organising the Bridging Workshop, it was difficult to find a suitable time slot to hold the workshop for all the freshmen as they might engage in other orientation activities (e.g. O-Camp, O-Day), bridging workshops organised by other departments (e.g. English training course and IT training course) and so on. Since our workshop was delivered to the students at the beginning of the first semester, another difficulty was that they might forget most lab skills and knowledge after the semester. Therefore, it might be better to split our training workshop into two parts and offer them at the beginning of each semester in the first year.

**Conclusion**

In summary, the Bridging Workshop served its function by providing a brief introduction of common laboratory equipment and safety to the freshmen as some apparatus and equipment were seldom used in secondary schools but were commonly used in the practical classes of university undergraduate teaching, such as pipettes.
and pH meters. This could surely help the students to understand the practical classes easily and perform the experiments in a proper and safe way. On the other hand, it shortened the briefing time used by the demonstrators during lab sessions. Moreover, the lab safety briefing was able to raise the students' awareness of laboratory safety as required by our Department and the University.

Since students coming from various secondary schools might have different levels of technical skills, one of the aims of the workshop was to help all freshmen to gain the same level of basic skills required for further studies in Biology, such as the proper use of microscopes and basic plant and animal sectioning techniques.

Furthermore, demonstration of advanced instruments in biological science could arouse the interest and curiosity of freshmen in studying Biology.

Appendixes:

Appendix A1-4: Questionnaires for students and demonstrators
Appendix B: Photos of the Bridging Workshop
Bridging Workshop on Practical Skills for Year-one Biology Students
(First Year)
Questionnaire

(1) Is the workshop useful for you?
Not Useful 1 2 3 4 5 Very Useful

(2) Did you find the level of Biology introduced in this workshop difficult?
Easy 1 2 3 4 5 Difficult

(3) Did you understand the presentations given?
Not Understand 1 2 3 4 5 Fully Understand

(4) Did you find the duration of the workshop suitable?
Not Satisfy 1 2 3 4 5 Very Satisfy

(5) Have you attended this kind of workshop before?
Yes No
(Remarks: delete the answer where not appropriate)

(6) If we organise another “advanced level” workshop, would you like to attend?
Yes No
(Remarks: delete the answer where not appropriate)

(7) Which topic(s) in the workshop puzzle you and need further elaboration?

(8) Which part of the workshop did you find most enjoyable?

(9) Do you recommend any other topics/aspects to be included in future workshop?

(10) Please give your overall comment on this workshop.

## The End ##
DEPARTMENT OF BIOLOGY
Bridging Workshop on Practical Skills for Year-one Biology Students
(Second Year)
Questionnaire

Please answer the following questions and put a "√" in the appropriate box.

(1) Is the workshop useful for you?
   Not Useful -10 -5 0 5 10 Very Useful

(2) How did you find the topics covered in this workshop?
   Difficult -10 -5 0 5 10 Easy

(3) Did you understand the presentations given?
   Not Understand -10 -5 0 5 10 Fully Understand

(4) (a) Did you find the duration of the workshop suitable?
   Not Suitable -10 -5 0 5 10 Suitable
   (b) If your answer is “Not Suitable”, it is because the workshop duration was
       Too Short Too Long

(5) (a) Would you prefer more in-depth topics for this workshop?
   Yes No
   (b) If your answer is “Yes”, please state one (or more) topic you prefer to be elaborated in depth.

(6) Have you attended this kind of workshop before?
   Yes No

(7) If we give another “advanced level” workshop, would you like to attend?
   Yes No

(8) Which topic(s) of the workshop puzzle you and need further elaboration?

(9) Which part of the workshop did you find most enjoyable?

(10) Do you recommend any other topics/aspects to be included in this workshop next year?

(11) Please give your overall comment on this workshop.

## The End ##
DEPARTMENT OF BIOLOGY

Bridging Workshop on Practical Skills for Year-one Biology Students

Questionnaire for Practical Class Demonstrators

(1) Did the students complete the experiments in shorter time compared with those students from previous years after taking the workshop? (Remarks: delete the answer where not appropriate)

| Yes | No |

(2) Did the students apply the skills and knowledge acquired from the workshop during the semester?

Not Applicable 1 2 3 4 5 Very Applicable

(3) Did you find the lab classes easier to teach because of the workshop? (Remarks: delete the answer where not appropriate)

| Yes | No |

(4) Did the workshop raise the students' awareness of laboratory safety when carrying out experiments? (Remarks: delete the answer where not appropriate)

| Yes | No |

(5) Did you find the workshop useful in avoiding damaging the laboratory equipment? (Remarks: delete the answer where not appropriate)

| Yes | No |

(6) Did you find the workshop useful for the students in acquiring more accurate results from the experiments? (Remarks: delete the answer where not appropriate)

| Yes | No |

### The End ###
DEPARTMENT OF BIOLOGY

Bridging Workshop on Practical Skills for Year-one Biology Students

Questionnaire given to students after 1st Semester

(1) Did you find the skills and knowledge acquired from the workshop applicable in the lab class of this semester? (e.g. Use of Pipetter, hot plates, balance, centrifuge, pH meter, microscope, plant sectioning and wet-mount technique, biological drawing technique, lab report writing skill, etc.)

(Remarks: put a "√" in the appropriate box)

Not Applicable 1 2 3 4 5 Very Applicable

(2) Did you find the lab classes easier to understand because of the workshop? (e.g. Use of microscope, learning gel electrophoresis and flow cytometer, etc.)

Yes No (Remarks: delete the answer where not appropriate)

(3) Did the workshop raise your awareness of laboratory safety when carrying out experiments? (e.g. (1) Use of Bunsen burner, oven, centrifuge and hot plate, (2) Handling flammable liquid as well as (3) Using fume cupboard and wearing personal protective equipment such as gloves when handling corrosive/toxic chemicals)

Yes No (Remarks: delete the answer where not appropriate)

(4) Did you find the workshop useful in avoiding damaging the laboratory equipment? (e.g. Use of Pipetter, balance, centrifuge, pH meter and microscope)

Yes No (Remarks: delete the answer where not appropriate)

(5) Did you find the workshop useful in acquiring more accurate results from the experiments?

Yes No (Remarks: delete the answer where not appropriate)

(6) After attending the workshop, have your confidence in solving problems encountered in the lab class been strengthened? (e.g. Interpretation of experiment results, find out experimental error and conclusion of results)

Yes No (Remarks: delete the answer where not appropriate)

(7) Which topic(s) of the workshop you found very useful in the first semester lab class but not detailed enough?

_____________________________________________________________________

(8) Do you recommend any other topics/lab skills to be included in future workshop?

_____________________________________________________________________

## The End ##
Appendix B: Photos of the Bridging Workshop

Day One
Day One
Day Two
Day Two
Day Two

Day Three
Day Three
Day Three - Field Trip
Mission-oriented Experiments for Year-one Physics Students

Cheung Nai Ho, Edward W K Chan, Benson S C Leung, Lui Siu Lung, Ng Wang Yip, Lo Ka Ming
Department of Physics, Faculty of Science

Preamble

Year-one Physics students normally do experiments which illustrate the theory learned in lectures. For example, the falling of objects under the pull of gravity may be observed in so-called projectile experiments when a marble is thrown horizontally at some height. The marble finally hits the ground after traveling some range, much like a canon ball. Conventionally, students are asked to vary the height and measure the range in order to verify the law of projectile motion. This kind of measure-it assignments can be rather mechanical, so the student tends to “turn off his brain” while going through the routine in the lab. When he finally “uses his brain” to do the analysis at home, insights cannot be tested because he no longer has the apparatus.

Now imagine the experiment is done this way. The student is given a target on the floor. He has to adjust the height and speed of his “canon ball” to hit the target. With such a well-defined mission, all adjustments and measurements suddenly make sense, and the experimentation is anything but dull. The use of hands and brain in a feedback loop becomes a must, which is exactly what we hope to encourage. This report describes how we designed and implemented such mission-oriented experiments.

Abstract

Two new experiments, mechanical oscillations and kinetic theory of gas, were designed and implemented in undergraduate physics labs. A third experiment on heat transfer was also designed though not yet realised. Each of the three experiments carried missions that tested the fundamental concepts of the physics involved. The associated hardware and software were proven reliable and error-free. All experiments were executed through graphic-user-interfaces that featured standardised windows, much like playing games.
Keywords
Undergraduate physics experiments, mission-oriented experiments, game, mechanical oscillations, kinetic theory of gas, heat transfer

Introduction
Year-one Physics students are typically asked to verify known physical laws or operate sophisticated instruments in their lab assignments. The curiosity and problem-solving elements are usually absent. Compounded by recipe-like instructions, students tend to “turn off their brains” in the lab. And being devoid of the apparatus, they are forced to “turn off their hands” when writing reports at home. The experimental spirit, or the curiosity-driven problem solving by using the brain-hand feedback loop, is unfortunately missing. We tried to address the problem by introducing mission-oriented experiments a few years before. The essence was to ask students to fulfill well-defined missions in the lab that required good conceptual understanding and hand-brain collaboration. Encouraged by the positive results, this project aimed at introducing more experiments of this kind to cover the range of theoretical topics taught in year-one general Physics courses. Systematic evaluation of the pedagogical benefits was also undertaken.

Aims and Objectives
There were three objectives:

1. To design one or more mission-oriented experiments to cover
   • mechanical oscillations;
   • heat;
   • kinetic theory of gas; and
   • electromagnetic induction.
2. To have the experiments ready for students’ use in the teaching lab.
3. To evaluate the pedagogical effectiveness of the experiments.

Methodology
The three objectives listed above were achieved in three stages, each called for different methodologies.

Experimental design stage
1. For each of the new experiments, the Principal Investigator first identified the key physics concepts to be learned. He then designed specific missions, and finally outlined the required hardware and software.
2. The Principal Investigator then presented his initial plans to the project team for criticism and revision. That typically involved three rounds of review.
3. Various members of the team then started assembling the apparatus, writing the software and doing test runs. The Principal Investigator was constantly involved in solving problems and giving suggestions throughout the process.
Results/Findings

There were two kinds of results:

1. the readiness of three new mission-oriented experiments; and
2. their pedagogical effectiveness.

New Experiments Ready. We had three new experiments ready: (a) mechanical oscillations, (b) heat transfer, and (c) kinetic theory of gas. The physical setups of the first two are shown in Figure 1. The third one is a computer simulation experiment requiring no apparatus other than the computer.

Evaluating pedagogical effectiveness

In the second semester of the first year study, two out of the three new experiments, mechanical oscillations and kinetic theory of gas, were adopted for Experimental Physics II, a lab course for year-one Physics students.

The effectiveness of these mission-oriented experiments was evaluated in two ways:

1. Students were asked in a questionnaire to evaluate the usefulness of the game elements in the experiments.
2. Students were asked to do a multiple-choice quiz at the end of the mechanical oscillations experiment. Their quiz scores were compared against those in the previous year when game elements were not yet introduced. The quiz, set by another Physics faculty member, tested the key concepts of mechanical oscillation. Although the same quiz was used for the two years, its contents were neither disclosed to the Principal Investigator nor the students beforehand.

Instead of going into the technical details, we listed four general observations below.

1. Key physics concepts: In the process of designing the missions, the team debated and finally agreed on including just a few important concepts for each experiment. This focusing exercise was very beneficial in terms of sharpening the educational objectives. For example,
in Mechanical Oscillation, the student was asked to pick his combination of oscillator mass and spring stiffness in order to minimise the shaking effect of a vibrator.

2. Improvement of hardware: As students were required to produce quantitative results when they tried to fulfill the lab missions, the reliability, accuracy and consistency of the apparatus became more demanding than the conventional “measure and analyse” experiments. Much had gone into designing and improving the setups for the various mission experiments.

3. Software design: We aimed at giving students a uniform graphic-user-interface (GUI) for various experiments. For example, all GUIs comprised the following four windows: (a) student input, (b) experimental runs, (c) model answer and analysis, and (d) game scores. They were designed in such a way that students would be motivated to learn the correct approach (part c) once they saw how the actual empirical results (part b) deviated from their predictions (part a).

4. Game scores: Scores were computed in part (c) of the GUI. Again, much thought had gone into designing the score to reward sound concepts and careful experimentation yet without being discouraging. The team had repeatedly played the games themselves to guarantee the practicality.

Pedagogical Effectiveness. As explained in Methodology, students were asked to evaluate the game elements of the mission-oriented experiments. In particular, they were asked to compare the game experiments against conventional “measure and analyse” experiments under five headings:

1. Are they more interesting and exciting?
2. Do they help the students understand the physics concepts better?
3. Do they help the students’ experimental skills?
4. Do they help the students integrate their analytical and hands-on skills?
5. Do they encourage team work?

The student response was summarised in Figure 2. The class size was 43. Two observations could be drawn. First, the responses were positive for all five categories. Second, it was considered the most effective in making the labs more interesting and exciting, as well as encouraging team work.

Again, as mentioned in Methodology, students were given a quiz immediately after the Mechanical Oscillation experiment. Quiz scores in the previous year (when game elements were not introduced) and the year in which game elements were included were compared in Figure 3. Full mark was 3 out of 3. The class which had game elements included in experiments did visibly better. Their average score was 3 points above the previous year, or about 10% higher.
Discussion

It is interesting to compare the students’ evaluation of the new labs against our observations as lab instructors. As seen from Figure 2, the most apparent advantage of the new labs, according to the students, was the added motivation and excitement. This correlated well with our observations during lab time. Students were more punctual to labs, and were much more attentive and focused. We also found them better prepared. For example, they indicated that they had carefully read the lab manuals and were asking more questions.

Figure 2. Students’ evaluation of game experiments. Class size was 43.
The next apparent advantage was that students thought it improved team work. This again was consistent with our observations. Now, we could see complementarities and synergism. Previously, it was more leader-follower mode or the simple work-partition mode.

The aiding of skills and brain-hand integration was not as apparent to the students. Although students were not aware of their improved ability to apply theory to solve practical problems, we as instructors felt that the improvement was real. For example, for the projectile experiment, if the current students were to enter into a competition on hitting the target, they would most probably have had scored higher than before because they would think about how to apply the theory of projectile motion to accurately deliver the marbles.

As for the final aspect of helping conceptual understanding, the students’ impression of marginal gain seemed to agree with the findings shown in Figure 3, when the improvement in quiz results was only minimal. We attributed the small improvement to two reasons:

1. each lab mission could only focus on limited aspects of the many applications of a physics theory; and
2. the intense focusing on these narrow aspects, as required by playing a game, might box the student in.

As explained earlier, the quiz was set by another faculty member who did not know the lab contents while the quiz questions were not made known to the Principal Investigator. Under this kind of double-blind conditions, the marginal (10%) improvement in quiz results was already remarkable.
Enhancement on Teaching and Learning

As seen from the previous sections, the mission-oriented experiments enhanced teaching and learning in the following four ways:

1. By defining the mission of each lab assignment, it helped to sharpen the learning objectives. Again using the projectile experiment as an example, if students were asked to measure vertical versus longitudinal displacements, as in a conventional “measure and analyse” experiment, they would have had perceived this as an assignment without being aware of the “why”. If they were to deliver the marble to the target, the motivation and the “why” would become clear.

2. They made the experiments more interesting and exciting, as perceived by the students and the instructors.

3. They helped the students to apply their theoretical knowledge to solve practical problems, an aspect that was not apparent to students though borne out in their game scores.

4. They helped the students to better learn some aspects of the physics theory but might not enhance their overall conceptual understanding. We will try to address this shortcoming in future lab design.

Limitations/Difficulties

We came across two technical difficulties:

1. We originally planned to use the Thomson jumping ring experiment to illustrate the concepts of electromagnetic induction. However, we came across technical difficulties that required a major redesign of the setup. We had to postpone the experiment.

2. As mentioned above, although the hardware and software were ready, we had to postpone the heat experiment because of lab scheduling. Evaluation of its teaching effectiveness had to be delayed.

Conclusion

Two new mission-oriented experiments: mechanical oscillations and kinetic theory of gas, were designed and used in the undergraduate physics lab. The game elements were favorably received by the students, and their performance in lab quiz was visibly better than that before game elements were introduced. A third experiment on heat transfer was also ready and will be used in class starting early next year.
The Implementation of Associate-teaching in the Whole-class Teaching Environment to Enhance Classroom Interaction

Hung Chun Wah
Department of Education Studies, Faculty of Social Sciences

Preamble
It is generally considered that teaching and learning, in practice, is the works of two different parties even though one may maintain that teaching and learning are reciprocal in nature. What would happen when we blur the boundary between teaching and learning in the actual implementation of classroom instruction? This redefinition of teaching and learning may provide practical insights into the instructional approaches. Drawing from this direction, a different kind of group-based learning initiative — associate-teaching — was implemented in a whole-class manner.

Abstract
The usual practice of group presentation is aimed at enhancing students’ participation. Group learning culminating in a presentation of group endeavors has its own educational values. Yet in a whole-class teaching and learning environment, how the group presentation is incorporated in the flow of the course with limited lesson time is a challenge many instructors have to tackle. In this vein, a possible solution is to redefine the relationship between teaching and learning. The value of group learning is not limited to individual members of each group. Student groups work with the instructor to form a co-teaching group for a quality presentation to the whole class. Every student has the opportunity to teach in this associate manner. Group learning and mass teaching is thus integrated. Classroom interaction is enhanced.

Keywords
Associate teaching, social constructivism, scaffolding, group learning, teacher education
**Introduction**

Curriculum Studies, as an overarching study of various courses and curriculum perspectives, is known for its abstract concepts and models. As the course EDUC 4060 Curriculum Studies is a core course for all those pre-service teachers taking Post-graduate diploma of education (PGDE), implementing Associate-teaching may help in this strand of development. The project aimed at studying the effectiveness of the implementation of Associate-teaching in a usual whole-class situation.

Associate-teaching (AT) means the teaching of a mini-lesson of around 30 minutes coordinated by the instructor together with a student group. The class was divided into teaching groups of four. Each group was assigned an article from the reading list to present and the articles were prepared in advance for the students.

AT is different from the usual group presentation in the way the groups participate. (Holt & Kysilka, 2006) First, each AT group met the instructor to discuss the flow of the coming mini-lesson, making the AT presentation and the lesson prepared by the instructor a coherent whole. Second, the quality of the AT group presentation was judged based on two criteria, namely the involvement of the whole class and the new perspective discovered about the reading article assigned, putting the AT group in a facilitator role just as the instructor was in charge. Each AT group was rated by the instructor and the other groups in the class. Third, as planning is learning and teaching is learning too, the pre-lesson meeting was as important as the mini-lesson. The group, the instructor and the class were benefited from the process.

Each mini-lesson and the pre-lesson discussion were taped. Questionnaires on classroom interaction were sent to each student. Interviews were conducted in group basis. Through a systematic analysis of the video clips and the data collected, this project:

1. provided evidences for the effectiveness of the implementation of AT.
2. built up a set of interaction models of AT (e.g. metaphorical learning, graphical learning, personalized learning, etc.) to fuel the implementation.

The interaction models together with the video clips were discussed in the last lesson of the course for students to reflect on promoting classroom interaction in their teaching career.

**Aims and Objectives**

The primary aim of the project was to study the implementation of AT in whole-class learning environment to enhance classroom and thus teaching effectiveness. While the presentation of the student groups were incorporated in the lessons of the course to promote learning through interaction, different interaction models of AT were developed. This experience was expected to be of great value to the graduate pre-service school teachers as it is transferable to their teaching job. The
initiative together with the teaching models may also be valuable to other University instructors in their whole-class teaching environment.

The objectives included:

1. To provide a rich resource for design of teaching
2. To enrich the repertoire of teaching and to increase teaching ability
3. To share the project which may promote classroom interaction research
4. To nurture a positive classroom environment which in turn can build up a positive learning culture for students
5. To make the teaching and learning enjoyable to both parties

**Methodology**

Three sessions of EDUC 4060 Curriculum Studies taught by the investigator were selected. For each of the student cohorts, materials needed for AT approach were prepared. In the first lesson of the course, students were briefed about the initiative and group arrangements were made.

Starting from the second lesson, a pre-lesson discussion chaired by the instructor (about 30-45 minutes) with each of the AT group for each lesson was conducted to discuss the content coverage and the teaching strategies for enhancing interaction. AT group then prepared and conducted the coming mini-lesson while other participating groups were responsible for evaluating the AT group. At the end of each lesson, the instructor debriefed the AT group using the feedback forms from the instructor and the participating groups.

During the process, videos were taken for the AT mini-lessons together with the pre-lesson discussion. The prominent interaction features were extracted and analysed. On the whole, features were categorised and classroom interaction models were built up in a digital version of the video clips produced.

In the project, both qualitative and quantitative methods were adopted in monitoring the qualities of AT initiative. The well-established SEEQ (Student’s Evaluation of Educational Quality) questionnaires from the Centre for Educational Development were adopted to gather data about classroom effectiveness. Group interviews were conducted to investigate further perspectives in the implementation. It was intended that the results of the project would fuel further investigation on classroom interactions promoting constructive learning. (Johnson, Johnson & Holubec, 1994)

**Results/Findings**

Based on the implementation of the AT mini-lesson in the 10 lessons of the course EDUC 4060 Curriculum Studies, the following topics were covered:

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Definitions of curriculum</td>
</tr>
<tr>
<td>2</td>
<td>Conceptions of curriculum</td>
</tr>
</tbody>
</table>
Lesson 3: Definitions of curriculum

A collection of courses, a plan with targets, total experience, a process of transformation

Lesson 2: Conceptions of curriculum

Social, Experience, Academic, Technology

Lesson 3: Aims

Different levels of specificity (aims, goals, objectives)
Lesson 4: Content & content organisation
Nine criteria for content selection and two-dimensional curriculum organisation

Lesson 5: Methods and evaluation
Role of evaluation in curriculum

Lesson 6: Workshop on curriculum integration
Different approaches, pros and cons, Hong Kong’s current situation
Lesson 7: Curriculum development

School-based vs. centrally-based

Lesson 8: Curriculum planning

Tyler vs. Walker and an overview of different models

Lesson 9: Curriculum implementation

Factors affecting success of implementation (change, strategy of implementation, context of change)
Lesson 10: Curriculum evaluation

Models of curriculum evaluation

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lecture</td>
<td>Curriculum Evaluation</td>
<td>30mins</td>
</tr>
<tr>
<td>2. Evaluation</td>
<td>Course questionnaires</td>
<td>15mins</td>
</tr>
<tr>
<td>3. Course round up</td>
<td>Activity: teachers' stand point</td>
<td>20mins</td>
</tr>
<tr>
<td>4. Term paper</td>
<td>Tips on writing term paper</td>
<td>15mins</td>
</tr>
<tr>
<td>5. In-Class Exercise</td>
<td>General curriculum questions</td>
<td>30mins</td>
</tr>
</tbody>
</table>

All these classroom interactive presentations and activities were collaborative products of each individual AT group and the instructor. Through the pre-lesson discussion with each group, the mini-lesson of AT presentation fitted well with the flow of each lesson, making the course a coherent work. Each student shared the course design by participating in the AT mini-lesson presentation.

In the 5th and 10th lessons of the course, identical SEEQ questionnaires about teaching effectiveness were dispatched to students from different sessions of the course. The questions closely related to the AT initiative included the group interaction and overall class rating. The overall class rating was the overall weighted mean of different factors and the group interaction factor comprised four question stems:

- Students were encouraged to participate in class.
- Students were invited to share ideas and knowledge.
- Students were asked questions and given answers.
- Students were encouraged to express their own ideas.

The following tables summarise the results of two questionnaires using a 9-point scale, with 1 as the lowest and 9 as the highest score, among three cohorts of students in the course.

Survey in the 5th lesson

<table>
<thead>
<tr>
<th></th>
<th>Cohort 1</th>
<th>Cohort 2</th>
<th>Cohort 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 22)</td>
<td>(n = 26)</td>
<td>(n = 31)</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Mean</td>
<td>SE</td>
<td>SE</td>
</tr>
<tr>
<td>Group interaction</td>
<td>7.81</td>
<td>0.86</td>
<td>7.68</td>
</tr>
<tr>
<td>Overall class rating</td>
<td>7.50</td>
<td>0.25</td>
<td>8.28</td>
</tr>
</tbody>
</table>

10th lesson

<table>
<thead>
<tr>
<th></th>
<th>Cohort 1</th>
<th>Cohort 2</th>
<th>Cohort 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 20)</td>
<td>(n = 25)</td>
<td>(n = 31)</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Mean</td>
<td>SE</td>
<td>SE</td>
</tr>
<tr>
<td>Group interaction</td>
<td>7.91</td>
<td>0.73</td>
<td>7.77</td>
</tr>
<tr>
<td>Overall class rating</td>
<td>7.8</td>
<td>0.21</td>
<td>7.84</td>
</tr>
</tbody>
</table>

It could be readily seen that there was no significant difference between the results of the surveys administered in the 5th lesson and the 10th lesson. For the survey conducted in the 5th lesson, the mean rating for group interaction and overall...
class rating were 7.55 and 7.69 respectively. While in the survey conducted in the 10th lesson, the mean rating for group interaction and overall class rating were 7.58 and 7.64 respectively. These results showed that the group interaction and the overall class rating were highly rated by the students and they were well maintained throughout the course.

In the interview conducted with student groups, emphasis was placed on the opinions about pre-lesson discussion and the classroom interaction. Below were some typical responses.

1. About pre-lesson discussion
   
   Student A: It’s good to support our group through analysing with us the presentation topic.
   
   Student B: In preparing for the presentation, we learn more and we engage in self-learning.
   
   Student C: We have a better and deeper understanding of the topic through pre-lesson discussion.
   
   Student D: Different activities and strategies are designed to help us understand the difficult concepts.

2. About classroom interaction
   
   Student E: Presentations can supplement the theme of the lesson.
   
   Student F: The presentation is not graded. It is a good practice because the absence of pressure enables better performance.
   
   Student G: The activities are motivating and promote effective learning.
   
   Student H: The presentations are meaningful and help us to understand the topic.

The interviews with student groups showed that the pre-lesson discussion played an important part in students’ learning both in grasping the content and generating ideas for designing the interactive activities for the presentation. This in turn helped maintain the interaction in the classroom.

Discussion

Through the AT initiative, students were provided with valuable experiences of learning actively. The presentation served as a substantiated learning outcome that students put efforts to prepare for. It was through teaching that students learnt and learnt better. The interaction was rich in the sense that students were interacting within groups and inter-groups in addition to the interaction in and outside classroom. Putting the learners at the centre of the design was a kind of constructivist approach. This redefinition of the relationship between teaching and learning helped to liberate the enthusiasm of learning. (Larochelle, Bednarz & Garrison, 1998)

Classroom interaction and participation served as a presentation benchmark for the AT groups. The flow was therefore well considered together with a preparation of teaching materials needed. Different approaches were used, giving another
form of practical training in an authentic classroom which is valuable for pre-service teachers. Assuming that teaching skills are transferable, the AT initiative actually provided sensible and meaningful opportunities for pre-service teachers.

Some students insisted that presentation without grading was more enjoyable. That was true in implementing the AT initiative. Nevertheless, the performance of the students group should be recognised. This could be conducted in the after-lesson group debriefing based on the feedback forms from the instructor and the participating groups. In addition, instructor may also design the assignment in relation to the presentation. Therefore, the learning is completed with consolidation on one hand, and the students' workload may be relieved when comparing with doing some other assignments on the other. The mini-lesson may then be good preparatory work for the assignment.

**Enhancement on Teaching and Learning**

The benefit of implementing AT in the courses for Post-graduate Diploma of Education was two-fold. First, through the mini-lesson presentation and pre-lesson discussion, students' interests and motivation were enhanced. This was shown from the previous findings. Students had a better understanding of the abstract ideas about education through carefully designed activities. This is especially important to those pre-service teachers who were completely new to the teaching career. The pre-lesson discussion actually served as an important scaffolding instructional design to students' group learning.

The presentations were implemented in a well-managed and thoughtful manner. In other words, the instructor and AT groups worked together for a quality lesson design. This apprenticeship of cooperative lesson design with an experienced instructor helped the pre-service teachers to get through the process of implementing effective lessons. The second benefit of adopting the AT initiative in teachers' training courses was that while students of the Post-graduate Diploma of Education Programme prepare themselves for the role as a teacher, students of the AT groups had already taken up part of the teaching role.

**Limitations/Difficulties**

Providing scaffolding supports to student groups was vital to the successful implementation of AT. (Vygotsky, 1978) Apart from ordinary lesson planning, the instructor had to make extra efforts in conducting the pre-lesson discussion. Each AT group was unique and the presentation groups might have their very individual problems in understanding the content to be presented in the mini-lesson and also the adoption of different strategies to enhance the participation of the whole class. The instructor, acting as a consultant mentor for the student group, had to take up this burden. This implied a definite workload.
As the instructor was too experienced and the students were too inexperienced, the views of the instructor might dominate in the pre-lesson discussion, suppressing the students’ ideas. This was a subtle balance. The instructor had to be very sensitive in determining the guidance for the presentation group. It was suggested that the instructor might take a more active role in dealing with the content of presentation, leaving more flexibility to the form of presentation of the group. Collaboration was important to the implementation. The instructor had to be experienced in making arrangements to ensure a smooth lesson and incorporate the mini-lesson by student groups. This further required the instructor to be flexible and creative.

**Conclusion**

Active learning will not come easily without paying the cost on the part of the instructor and the students. The AT initiative actually requires more effort from the instructor. It is a partnership between the instructor and the presentation groups. Therefore, it engenders ownership by the students of the lesson design. This participatory approach has been tested with promising results in terms of classroom interaction, learning atmosphere and learning effectiveness. The give-and-take emphasis in the implementation of mini-lesson helped build a collaborative culture.

Under the framework of AT, students are required to make their contribution to the learning experiences. They are responsible for their learning and also for the learning of other students through careful design of presentation with interaction. This goal is practically achievable. It is thus motivating to them with this responsibility in creating the learning culture.

Students are empowered with a significant role of instructor guiding them in the academic journey. Such an empowerment comes from the sense of ownership on the part of the students. (Senge, 1990) This is what makes the AT so powerful as a means to promote active learning.

**Reference**


Chow Bik Chu, David K C Mak, Chung Siu Yin, Lobo H T Louie
Department of Physical Education, Faculty of Social Sciences

Preamble
The evidence from research on teachers and students in physical education showed that student teachers can improve their teaching skills if they get adequate practice and supervision. Furthermore, student-teachers in physical education can learn to provide specific skill feedback which has been shown to be important in sports skill teaching and learning. In pedagogical research in the mid and late 1990s, we came across the use of Transmitter Assisted Learning (TAL) in teacher training. TAL is a system using small FM transmitters and receivers to link lecturing staff, supervisors or coaches to their students. We believed this technique can be useful in helping student-teachers to enhance their instructional skills such as the delivery of feedback by enabling a supervisor or a fellow peer to discreetly communicate with a student-teacher. From our experience in teacher education training and supervision, we saw potential of this technique for situated learning of both classroom management and instructional techniques.

Abstract
TAL is a system using small FM transmitters and receivers to link novices (student-teachers) and experts in authentic learning contexts. This technique has been found to be useful in supervising student-teachers on practicum (Giebelhaus, 1994), teaching school counselors in interview situations (Gordon, Lane & Hall, 1998) and early childhood teachers in mock employment interviews (White & Gordon, 2000). In the sports education context, Kahan (2002) used this device, which is termed as bug-in-the-ear device, for communication between a student-teacher and the cooperating teacher during physical education classes. He concluded that the device was a valuable tool for use in supervision. However, apart from his work, there is little evidence that such wireless communication has been applied in the physical education and sports skill pedagogy area. From our experience in teacher education training and supervision, we saw the
potential of this technique for situated learning of both classroom management and instructional techniques in pre-service teacher training programmes. Specifically, the enhancement of teaching or coaching for student-teachers can be achieved through micro-teaching and authentic teaching practice in schools. The teacher educator or sports skill instructor can directly communicate with the student-teacher through a linkage by transmitter and receiver while the student-teacher can simultaneously teach and receive help. The teacher educator or sports skill instructor can help the student-teacher to deliver quality teaching by providing immediate and focused feedback about their teaching classroom management skills and sports skill.

Keywords
Transmitter Assisted Learning, teaching practice, Physical Education student-teachers

Introduction
TAL is a system using small FM transmitters and receivers to link lecturing staff, supervisors or coaches to their students. This technique has been found to be useful in the student teaching supervision (Giebelhaus, 1994), teaching of school counselors (Gordon, Lane & Hall, 1998) and early childhood teachers in interview skills (White & Gordon, 2000). However, there is little evidence that it has been applied in the physical education pedagogy area in pre-service teacher training classes. From our experience in teacher education training and supervision, we saw potential of this technique for situated learning of both classroom management and instructional techniques. Specifically, enhancement of teaching or coaching for performance among student-teachers can be achieved during on-campus micro-teaching situations as well as authentic teaching practice in schools. The university supervisor can directly communicate with the student-teacher through a linkage by transmitter and receiver. At the same time, the student can receive help from the supervisor whilst engaged in the process of managing classes or teaching. Alternately, the communication could be between peers; for example, one student-teacher could be observing or giving feedback to another in small-group teaching situations. The supervisor or fellow classmate can help the student-teacher to deliver quality teaching by providing immediate specific feedback during the lesson or coaching situations about sports skill learning and classroom management skills. Thus, the feedback is more meaningful to the student-teacher. Another possible advantage for this technique is that a safe sports skill teaching environment can be ensured. If the supervising lecturer or observing peer realises a possible hazardous situation, this message can be discreetly communicated to the student-teacher to take immediate action.
Aims and Objectives
The project was to:
1. explore a new approach in teaching, coaching and learning by using the TAL for teaching sports skill; and
2. apply the technique as a form of action learning project so that reflections and feedback about the technique could be gathered for adjustment in the second phase of application.

Long-term significance of the study is:
1. if found to be effective in enhancing teaching and learning, to promote TAL for physical education and sports pedagogy area; and
2. to apply this technique in other areas for learning such as preparing students in interview skills for employment in teaching, fitness or recreational settings.

Methodology

Technological Device
We bought six sets of FM transmitters and receivers of Yaesu Portable Radio Model (VX-400V) and applied for a mobile radio system license (Note: at the time of doing this project, The Telecommunications Authority of the Hong Kong Government required all licensing for walkie-talkie devices).

Courses and Classes
Four practical sports skill classes for the Physical Education and Recreation Management Programme were involved. These sports skill classes included two sessions of Gymnastics I and two sessions of Basketball. As sports skill classes contain coaching elements, instructors had the opportunity to adopt this technique during micro-teaching situations when the students took turns to act as student-teacher for practice teaching of that particular sports skill.

Apart for practical sports skill classes, this technique was also applied in two cohorts in the Teaching Physical Education in Schools course. Help was directed from an instructor or a fellow classmate to the student-teacher. Most sports skill situations involved complex interactions and as such were not fully predictable and do not always follow to plan. Therefore, this technique has the advantage of creating situated learning for student-teacher as they are faced with decision-making in the live context. The supervising lecturer or peer can give direct support to the student-teacher in teaching classes. Another possible advantage for this technique is that a safe sports skill teaching environment can be ensured.

Familiarisation Training
Prior to the use of equipment, instructors and student-teachers had a familiarisation briefing with the system in the use of the earphone, microphone, transmitter and receiver. Procedures from the instructional training video Transmitter Assisted Learning: Supported Practice in Authentic Settings developed by Gordon, Lane and Hall (1998)
were followed. Instructors and student-teachers were told to speak softly, positively when giving prompts for encouragement, reinforcing feedback or corrective feedback so that a supportive tone was delivered. The observers learned to adjust their voice quality, timing and language.

TAL technique was first applied involving one-way communication from the instructor to the student-teacher. Then, a new format was derived involving students’ triad during micro-teaching situations: one receiver, one talker and one observer. The receiver was the student-teacher. The talker gave verbal feedback to the receiver. The observer sat next to the talker and wrote comments about the quality of feedback given by the talker. In the next cycle, a rotation of roles was done. The observer became the talker and the receiver became the observer while the talker took on the receiver role. In the following cycles, the same pattern of rotation of roles was repeated. Throughout the whole process, the one-way communication mode was kept.

**Evaluation**

Evaluation of applying TAL in micro-teaching sports skill was conducted in the form of survey and interview. In the survey, the observer of the students’ triad recorded the information about time line, task descriptions and teaching cues given by the talker during micro-teaching situation. At the end of a class session involving micro-teaching, each student-teacher was interviewed about the usefulness of the technique, satisfaction rating and skills developed by the technique. Discussion sessions among student-teachers and sports skill instructor were held.

**Results/Findings**

Twelve student-teachers of the *Teaching Physical Education in Schools* course were interviewed and they all commented that the technique was helpful in micro-teaching situations. TAL technique was particularly useful in enhancing teaching effectiveness when the talker was more experienced than the receiver in sports skill. In this case, the talker could often give specific feedback to the peer. On the other hand, student-teachers realised the timing of feedback delivery was crucial. If a talker gave feedback at a wrong time, the feedback itself might have become a hindrance to teaching. Another technical problem was that switching on the microphone for communication made a disturbing sound that was heard by the receiver. Furthermore, the quality of feedback depended on how experienced the talker was in the specific sports skill that the student-teacher was conducting. The more experienced the talker was in the skill, the more confident and specific the talker was in giving feedback. However, early in the project, student-teachers reported that they were distracted by the talker. Therefore, they were advised not to have abrupt stop in action when they heard the talker’s voice. Also, some students were reluctant to give feedback which might have perceived by them as criticising the fellow classmate. After further practice
in micro-teaching situations, student-teachers seemed to be more willing to try the TAL technology. Furthermore, in the earlier phase of applying TAL, student-teachers felt more comfortable if the sports skill instructor gave feedback instead of their peers. In the later phase of using TAL, student-teachers felt comfortable in having peers giving feedback. They further commented that the formation of the students’ triad could have affected the group harmony because the three student-teachers had to be comfortable in working together.

Discussion
The TAL technique was perceived to be useful in sports skill micro-teaching situations. In particular, a student-teacher could be discreetly advised or alerted about potential danger in the teaching environment so that he/she could rectify the problem immediately. For example, in a gymnastics class, the student-teacher could respond if necessary and could rectify an unsafe situation.

The implications for future pedagogic practice are:
1. to incorporate the technique into coaching situations;
2. to use in supervision of actual teaching practice in schools; and
3. to apply it in an action learning project aiming at assessing the effectiveness of skill learning of students.

Enhancement on Teaching and Learning
Students understood how to be more effective in teaching sports skill and were able to put this technique into action through
1. getting external help in the form of feedback on skill techniques and skill correction; and
2. managing the learning environment, particularly a greater awareness of unsafe situations and advice about how to react.

Limitations/Difficulties
Students or instructors had to be familiar with the techniques of being a talker (when to talk, how much to talk, how soft or how often to talk). If the talker gave feedback at the wrong timing (at the time the receiver was addressing the class), the receiver might be interrupted and focus on message relayed in his/her ear. At an inappropriate time, he/she might interrupt the thought of the tester or divert his/her attention.

Conclusion
In the implementation of the equipment during micro-teaching situations of sports skill, this project confirmed the usefulness of transmitter assisted learning technique to be applied in sports skill learning and teaching.
References


An Alternative Approach to ENG 1110 Introduction to the Study of Literature

Clayton G MacKenzie
Department of English Language and Literature, Faculty of Arts

Preamble
Students entering the English Major are required to take an introductory course on the study of literature. Many of them have never studied literature before and lack the basic tools needed for literary analysis. Teaching these simple skills is a relatively easy matter but inculcating an enthusiasm for and an appreciation of great works in English is a more difficult task. Grasping the imagination of students on introductory literary courses – in whatever educational context – is no mean feat. The course ENG 1110 Introduction to the Study of Literature has been taught for many years in the English Department. Like most survey courses, it tries to balance the teaching of analytical skills with the need for students to step back and acquire an almost intuitive understanding of what constitutes great literature. As teachers, we are constantly swapping our pedagogical hats – at one moment we are technicians, at another literary evangelists. In my own case, sometimes these demands have been managed successfully and at other times less so. A question then arose: would an alternative approach to ENG 1110 offer a stronger and more consistent promise of pedagogical effectiveness? The project in question sought to explore a new way of approaching old content matter.

Abstract
The project sought to implement a different approach to the teaching of ENG 1110 Introduction to the Study of Literature (a required English Major course in Semester 1). Customary approaches to the course have employed period studies, concentrating on texts of a particular period. Instead of focusing on period, the alternative approach focused on literary type (i.e. genre or topic). In drawing on this alternative approach, I hoped to provide a more useful framework for the study of literature at the beginning of the 21st century, taking into greater account, for example, the influence of electronic and non-print forms of literature.
Keywords
Literature, survey, English, themes, Internet, multimedia

Introduction
The course ENG 1110 Introduction to the Study of Literature has been taught by me along traditional lines associated with a survey-type course. The progress of the course has typically involved a period-based text approach, in which texts are examined chronologically. This approach has been widely used in English departments and is effective. The present project took the form of an inquiry into other possible approaches, in particular, sought to make use of Internet resources to a far greater extent than has been the case hitherto in my teaching of ENG 1110. My revised approach, it must be stressed, remained within the parameters of the current approved course description. However, it distanced itself from the usual methods I had employed in teaching the course and sought to meet the course objectives through alternative pedagogical strategies and methodologies – involving extensive use of genre and topic (sometimes called “thematic” study) approaches.

Aims and Objectives
The project sought to achieve the following:
1. a practical and well-documented exploration and evaluation of alternative teaching methods for the course ENG 1110 Introduction to the Study of Literature;
2. the compilation of a repository of teaching materials relevant to ENG 1110; and
3. the production of an extensive resource booklet, detailing the teaching and other materials for ENG 1110.

Methodology
The project lasted for 15 months.
A course outline was presented to students at the outset and was open to some negotiation during the semester. The initial outline, and the subsequent adjustments to it, met the requirements of the relevant course document. It embraced a stronger genre and topic-oriented approach to literature, taking account of the diversity of literary form. A record was kept of the effectiveness or otherwise of teaching materials and approaches. Students were given opportunities to use the Internet to develop group and individual presentations on particular authors or modes of publication. Students were questioned (written and oral responses) near the outset, in the sixth week and at the end of the semester. The preliminary questioning was aimed at determining expectations of and attitudes towards the course. The mid-semester investigation sought to diagnose possible adjustments to be implemented during the second half of the course. The final questioning session sought to assess students’ attitudes towards the learning
process and subject matter. A selection of students was interviewed at the end of the semester and questioned on their impressions of the content, structure and pedagogical implementation of the course. The progress of students was monitored through assessment procedures, including:

1. anonymous surveys to establish some indication of knowledge and conceptual proficiencies at various points in the course;

2. short answer and presentation assignments (to test knowledge and conceptual acquisition);

3. a term paper (to evaluate argumentative capabilities and conceptual grasp within a specific learning domain); and

4. a two-hour written examination (to assess students’ abilities to detect thematic innuendo and referential significance in relation to unseen textual extracts).

Results/Findings

Instead of examining texts chronologically, the alternative approach focused on issues of theme and genre. It allowed the flexibility to range far and wide through the corridors of literature, garnering works that are related by the commonality of their form and by their content preoccupations rather than simply by their relative places on a time continuum. In addition, a much stronger emphasis was placed on visual and non-print media. With the assistance of a Project Assistant, an Internet site was constructed and students were encouraged to interact with this site. In regular feedback sessions (conducted in both written responses and one-to-one oral interviews), students indicated that they valued this site highly and it had proved useful to their ongoing studies in ENG 1110. However, the site was not operational until fairly late in the first semester when the project started. So, for a time, there was a “credibility gap” – the promise of a site to come, but the absence of that site for a good deal of the semester.

Selection of students’ comments (early in the course process and before the website was up and running):

- You need to be slower. You are going too fast.

- We don’t have time to look at the Internet. We can use it but we need to see your website, when can it be finished?

- I hope you can tell us more about the Western traditions and history.

- Further instructions are needed on “stress” patterns.

- Could you provide some notes before the lecture starts?

- Since I haven’t studied English Literature before, I am still puzzled and confused by this course and don’t know how to study it well.
I don’t think the website will be good. It is better to give us notes.

We are not familiar with this course so we need to have detailed explanations and notes.

Will we have some notes explaining the sonnet as we miss some points sometimes? Or where can we find these explanations?

Perhaps by providing more pictures or stories, you can make this lesson more interesting.

I think we can find some useful poems on themes on the Internet by using the search engine. But how do we know if a poem is suitable or not?

Selection of students’ comments (during the course process but after the website was up and running):

You have improved a lot! You provide sufficient explanation (i.e. because of the website) and speak slower in class now.

Good way of presenting poems and novels but can you show us some diagrams…so that we can have a clearer picture in our mind?

I think you are perfect already!

It’s good for you to prepare some notes for us. They are very helpful. Thank you.

I enjoy studying this class very much. It is not necessary to speak slower. I can hear you clearly. Try to meet the class schedule next time.

The website should have come sooner. It would be better to have it from the beginning but it is fine now that we can access it easily. It is all in one place.

I think you’ve been doing very well to help us. I have learnt something, from none to something. And you arouse my interest in English Literature.

The Internet webpage is useful. The website design is user-friendly and attractive.

Selection of students’ comments (during the final stage of the course):

This course really arouse my interest in studying English Literature and the website is quite good to include some useful notes.

I don’t have any background in studying English Literature before. However, when I study this course, I don’t even find it hard and stressful. In fact, it’s quite interesting.

I was given the opportunity to think freely. Interesting lectures and tutorials.

It has been successful to introduce the knowledge of English Literature to me and I know more about the cultural values and arts of Britain.
Notes are well organised and assignment instructions are clear so that students can follow the instructions and do the assignments correctly.

The stuff on the website is interesting.

This course does give me stimulation and inspiration and I like the website.

Somehow the course is a bit abstract that I am not able to handle it well and I don't know what to do for my revision since I didn't learn English Literature in secondary school. Those classmates who have learnt English Literature before may find the course much easier to follow and they have no problems in doing the assignments. But we all have to do the same assignments and are assessed in the same way. This may be unfair to those who had no idea of what English Literature is before. However, the lecturer has been fair in marking the papers overall.

It was worth emphasising that I was not claiming that my pedagogical methodologies were new but, instead, they constituted a departure from my own normative approaches to the teaching of the course. Over the last nine years, I had taught ENG 1110 Introduction to the Study of Literature on many occasions. I would like to offer a comparison of Teaching Evaluation scores (averages) over the last three occasions that I taught the course. The first example preceded the commencement of the TDG project. The second example was taught early in the project, before the full dimensions of the website and non-print resources were in place. The third example was my most recent teaching of ENG 1110, implemented with the full array of resources enabled by the TDG available to it.

<table>
<thead>
<tr>
<th>Average score for Part I: Teaching Effectiveness</th>
<th>Average score for Part II: Course Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(pre-TDG)</td>
<td>7.1</td>
</tr>
<tr>
<td>(early-TDG)</td>
<td>6.91</td>
</tr>
<tr>
<td>(late-TDG)</td>
<td>7.51</td>
</tr>
</tbody>
</table>

Though all of these scores were high, I would suggest that the initial hesitancy associated with the outset of any revised pedagogical strategy might have resulted in a slight fall in student satisfaction in the early phases of the TDG project. But once all resources (e.g. the website) were in place, student satisfaction came back strongly in the late-TDG and exceeded the high scores of the pre-TDG teaching of the course. Overall, on the basis of official evaluations and my own regular evaluations of project/students’ progress, I believe it was fair to say that the course and students had benefited from the project.

A wide range of materials is now available for the teaching of ENG 1110. Purchased materials have been housed in the English Department’s Multi-Function Room OEM1008. These include videos and textual resources. There is also an extensive resource booklet, detailing teaching and other materials for ENG 1110.
I have attached copies of some of the resources I prepared for the alternative teaching approach to ENG 1110. In practice, the website provided a central repository of many other resources and I have therefore attached copies of the home page and other sub-section header pages of the site.

**Discussion**

Any new approach to a course is naturally stimulating for the tutor implementing the project and, vicariously, for the students following the course (who are often aware that something different is happening). The great strength of the period approach is that it provides an historical and cultural background that usefully informs a range of literary materials that belong to that period. In largely submerging this approach and opting for a topic-based or genre approach, the teacher is losing this advantage to some degree. Studying, say, the sonnet (a topic or genre approach) across the centuries means that while there is a unifying force (the idea of the sonnet), the examples from different periods each requires a degree of background input to make it understandable and accessible to the students. In a sense, therefore, there is no escape from some forms of “period approach”, albeit its presence is in a muted and less obvious form. Nonetheless, as university English departments worldwide generally move away from author and period studies and into what many regard as the more interesting domain of topic and/or genre studies, this project I believe was both timely and important. It certainly convinced me that period approaches to survey courses on English and other literatures are not a sine qua non. My natural inclination is towards this kind of approach, since I am interested in the social and historical background of literature and in how pieces from the same period knit into socio-literary tapestries of the time. Nonetheless, by undertaking the project, I forced myself to consider other ways of approaching texts, and found much to like and learn through this process.

**Enhancement on Teaching and Learning**

Any course we teach, we monitor closely. That is an important part of what is often called “reflective teaching” – teaching and reflecting upon the learning processes and outcomes of what has been taught. However, in an experimental course – and this was, for me, an experimental course – one is apt to study teaching and learning processes and their results with even greater circumspection and interest. I noticed clear development in what students were learning and in how effectively they were able to transfer their skills to different contexts. So, for example, genre-based approach to poetry allows me to focus on particular skills involved in poetic analysis. And I use the word “focus” deliberately. In period studies, there is a tendency to dilute poetic analysis (for example) over the wide range of the course. So, in the Renaissance period, we may look at Shakespearean poems; in the Romantic period, we may look at Keats’ poems; in the Modern period, we may look at Auden’s poetry; and
so forth. But if we focus on the poem as a genre, then in a single and concentrated span of teaching time, it becomes possible to achieve greater depths of study with regard to what a poem is and what its dimensions and techniques may be. Curiously, I found this process quite useful, as well, to period understandings since each poem brings with it its baggage of social and historical dispositions and it was of interest to compare, with some immediacy, the role of women (for example) in the poetry and times of Shakespeare with the role of women in the poetry and times of the twentieth century. The Internet and the resources I made available to students through the website were proved useful to this process.

I have no doubt that students were benefited from the enthusiasm and commitment with which I approached the topic and they certainly reciprocated. I was able to measure the quality of their skills and learning through the various assessment mechanisms I identified earlier in this report. I have already used the example of poetry, so perhaps I may take that example to push my point further. Normally, in a survey literature course, I would not be able to develop any great details in relation to the technical issue of “poetic metre”. In the alternative approach, this became possible through the focused study of poetry. By the end of the course, students’ technical knowledge of metre exceeded that of students in any previous years I have taught this course. This advance was verified through the final written examination in which students were required to analyse an unseen poem and metre played a significant part in the effectiveness of the poem. Now, of course, something has to give. One cannot expect depth to be achieved in everything studied. I felt that my teaching of the short story was rushed. And generally, the students consistently felt that my pace during the course was too fast. Genre and/or topic approaches somehow lend themselves to greater depth but also lure the teacher into the trap of moving too quickly in order to traverse all that he or she feels needs to be traversed. In future offerings of the course, I opt to preserve the depth of study but to cover fewer topics. This may seem to constitute a narrowing of sorts but, on a survey course such as this, optimal depth of study and ideal width of study are surely not achievable in a single semester offering.

Limitations/Difficulties

I have mentioned the key difficulties already, but perhaps I could summarise them briefly below.

1. By focusing on in-depth study of genres and topics, there seemed to be less time available to roam across the full range of literatures. My attempt to do so resulted in a pace of teaching that the students often regarded as a little too fast for them.

2. The project began a month prior to the beginning of the semester. This meant that the development of a website, with the help of my Project
Assistant, could not be brought to fruition until mid-way through the semester. Students, who knew that the website was coming, felt a sense of frustration that it took so long to arrive.

3. The genre/topic approach still required “period” input (i.e. socio-literary and cultural studies) and my initial attempts to avoid this proved unsound and unfounded. In fact, genre/topic approach now seems to me a glean considerable benefit from some parallel comparative period discussion and study.

**Conclusion**

I am very much committed to the provision of a stronger technological basis for the teaching of ENG 1110. The study of literature in the 21st century must take greater account of the influence of electronic and non-print forms of literature and, equally, must make the presentation of literature more appealing and stimulating to young people in a highly computer-literate environment, such as Hong Kong. I have enjoyed the flexibility to range through the garden of literature, gathering works that are related by (for example) the commonality of their form or by their mutual interface with new computer-based technologies or by their content preoccupations – rather than simply by their relative places on a time continuum (i.e. the traditional period approach).

In moving away from the traditional period approach to literature, I have also learned much about the new forms of organisation and pedagogical presentation that have proved necessary to execute the alternative method to the course. This said, I remain convinced that the use of technology in the teaching of ENG 1110 is not an end in itself. Non-print sources, such as the Internet, provide valuable resource pools for students but they can never supplant the teacher nor can they make amends for poor pedagogical strategies. Good teaching, it seems to me, must increasingly take account of, but not be subjugated by, the technological environment in which it exists. Technology is valuable as a tool to be used in an overall teaching approach to given subject matter but it cannot be allowed to dictate pedagogical processes.
Using Films in Teaching

Amy W S Lee
Department of English Language and Literature, Faculty of Arts

Preamble

I am a core member of the Humanities Programme and I teach interdisciplinary, cross-cultural and bilingual courses. Humanities courses frequently deal with discussions of human nature, values and meanings in life and developments of humanity in various historical and political situations. Thus narrative texts from different cultures and historical periods have a substantial presence in the materials used by humanities teachers. One challenge for humanities teachers in Hong Kong, if using predominantly texts in English (or English translation), is to carry out meaningful discussions with students who may have to struggle to finish reading some of these lengthy texts. Another challenge for us is to enliven the learning experience of students even when dealing with theory-based knowledge transfer. On the other hand, we realise that the new generation of young people are exposed to a much more visual-dominant world than previous generations, and so this project aimed to explore the potential of film as a useful medium to reach our students and to facilitate teaching and learning in the humanities classroom.

Abstract

Petrarch, a 14th century pioneer of humanistic education, promoted the idea that to study humanities is to study the principles which make us human, and a humanistic education is the education for a moral self. As a humanities teacher, my teaching aims not only at transferring to students the knowledge of the major great works in literary, philosophical, and artistic fields, but more at inspiring students’ reflective and critical consciousness towards these great works. In the attempt to find ways of engaging the students in class, I proposed to use films to facilitate the teaching of literary masterpieces and possibly for further use in different humanities courses. After the acquisition of relevant film adaptations of literary masterpieces and the design of new in-class and take-home teaching and learning activities, I discovered that film is not only an effective tool to enliven teaching and learning of literary masterpieces, but also excellent teaching materials for a multitude of Humanities courses such as Gender Studies, Language and Humanities, and special topics in humanities. A collection of useful films for various purposes was built from the funds of this project and several very successful credit-bearing courses were commissioned by the Education Bureau and the Hong Kong Academy of Gifted Education.
Keywords
Adaptation of masterpieces, interactive class activities, film masterpieces, creative writing, values and meanings in life, moral decisions, humanities

Introduction
Since joining the Humanities Programme of HKBU, I have been assigned to teach interdisciplinary, cross-cultural, and sometimes bilingual courses such as the following: HUM 1110 Introduction to the Humanities, HUM 1150 Humanism and the Individual, HUM 1140 Human Self Discovery, HUM 2170 Research Methods in the Humanities, HUM 2160 Gender Studies, HUM 2180 Great Works in the Humanities, and ENG 3770 Literature and Film. A common feature among these courses is a strong reference to the traditions of humanistic texts across different cultures and times. That means course materials used frequently include a substantial amount of lengthy narrative texts, as well as philosophical essays and theoretical discussion papers in both English and Chinese. This is usually not a major problem for highly motivated students, but with a relatively large class (ranging from 40-80 students) and also mixed student background (most Humanities courses are open to students from all other disciplines), a more interactive and feasible way communicating these lengthy narrative and theoretical texts is needed.

In the spirit of a 14th century pioneering humanistic scholar, Petrarch, to study humanities is to study the principles which make us human, and a humanistic education is the education for a moral self. The courses offered by the Humanities Programme aim not only at transferring the knowledge of traditional and contemporary humanities masterpieces, but also inculcating in our students an ability to make moral decisions. In this light, it is of utmost importance that teaching and learning should engage students’ intellectual, emotional and spiritual abilities. In an attempt to achieve an active communication with the students, I proposed to explore the film medium both as a tool and a context to maximize the teaching and learning experience. An initial choice of films to be used included film adaptations of major literary works as they might attract students to approach the written originals of the masterpieces. As the project went on, different types of narrative films were found to be useful, and also other ways of using these narrative films had been discovered.

The application for this grant therefore aimed at a more systematic and thorough exploration of the visual medium of films in order to identify suitable items for teaching various courses in the classroom. It was hoped that at the end of the project, a set of films would be identified for classroom use, and relevant teaching materials would be developed in relation to various courses within the humanities.
Aims and Objectives
The project sought funding for the following intentions:

1. the acquisition of suitable resources, especially films, for various courses that I am teaching for the Humanities Programme;

2. development of course materials based on the acquired films for the various courses I am teaching; and

3. exploration of new ways of using films in the Humanities classroom, including possible design of new courses.

Methodology
The first stage of the project was the acquisition of films to serve as additional materials for in-class interaction and discussion when teaching narrative texts of different historical periods. Criteria for selection depended on the actual course materials chosen, the availability of film adaptations of the chosen texts, language of the films, quality and focus of these film adaptations, as well as their potential to enhance relevant teaching and learning experience.

After the initial acquisition of films, the next stage was devising course materials using these films to enhance the particular learning outcomes at course, lesson and individual student group levels. At this early stage, as the film choices were mainly adaptations of masterpieces, a lot of attention had been put on comparing and contrasting the narratives in the films and the original written pieces. This comparative approach could draw students' attention to the overall plot development as well as the specific details in various texts. Selected scenes from these films were chosen for illustration in class to highlight the similarities and/or differences from the original for in-class activities including discussion, short writing tasks, debates and role-playing.

The attempt to use mainly film adaptations of literary masterpieces for illustration purpose and focusing on major theme, characterisation, narrative approach, critical interpretation was a success as it added value to the teaching and learning experience in terms of increasing students' participation and interest in the process. Showing scenes from films successfully engaged students' attention and increased their desire to approach the original texts in order to have a better understanding of the materials and specific points of discussion. Films such as The Crucible (1996), Kiss of the Spider Woman (1984), The Color Purple (1984), Orlando (1992), and the Sherlock Holmes series were useful adaptations to assist in enlisting student discussions concerning various issues of the literary texts. This was particularly obvious when dealing with more traditional narrative texts such as those featuring in HUM 2180 Great Works in the Humanities and HUM 1150 Humanism and the Individual.

With an experience of using film adaptations of literary masterpieces, the
project moved on to another stage, which involved choosing more contemporary narrative texts not necessarily related to any traditional literary masterpieces. In this second stage of the project, a variety of films of different narrative types were chosen not to illustrate written pieces, but to be used as teaching materials. Films such as Some Like It Hot (1961), Tootsie (1982), Sunset Boulevard (1950), Citizen Kane (1941), The Alien series, and The Terminator series, to name but a few, were very interesting narrative texts and could be used for illustrations of multiple areas of interest. Criteria for choice included discussion of important values and meanings in life, human nature, culture and differences, gender, language and communication, the human body and our mind, and other issues relevant to what Humanities as a programme is teaching.

This stage was an exciting experience because of the active student participation in class. Students were receptive to seeing these film narratives as talking about issues of their lives, how human beings are relating to their changing world in changing ways, and also how these films, though being part of the popular culture, can be interpreted as texts seriously discussing phenomena in our world. Again, short sections of these films were screened in class to be followed by individual and small group in-class activities such as role-playing, presentations, games, debates and short writing tasks.

A project assistant had been hired for a few months to assist in the acquisitions of films and books. The assistant also helped to do some online research of certain films and their production background, and was responsible for word processing of some of the teaching materials I designed.

**Results/Finding**

The project has produced results in different aspects:

1. A collection of different film types which are useful for the teaching of various Humanities courses and which can also be used as a foundation for future new course designs. (The collection includes film adaptations of literary masterpieces as well as great films discussing important and relevant issues taught under different courses in the Humanities programme.)

2. Teaching materials based on these films, which had been used in the teaching of HUM 1110 Humanities Study and Research Methods, HUM 2160 Gender Studies, HUM 2180 Great Works in the Humanities, and HUM 2150 Language and the Humanities.

3. A newly designed course, HUM 3130 Special Topic in the Humanities: Human Beings and the Monsters they Create, was constructed using many films purchased with the funds of this grant.

4. Some of the films purchased inspired new teaching designs which were the basis of course projects sent to the Education Bureau (EDB) and
subsequently Hong Kong Academy of Gifted Education (HKAGE). As a result, I designed, coordinated and taught several EDB-commissioned courses for gifted students in Hong Kong. These courses included Film Art and Culture, Mentorship Scheme: Drama as Human Experience, Credit-Bearing Course for Exceptionally Gifted Students: English Creative Writing, Mentorship Scheme in English Creative Writing and Drama, and Credit-Bearing Course in English Creative Writing: Frankenstein’s Monster.

5. I wrote Film English and it was later published by a local publisher Sing Tao. This book is a discussion of eight masterpieces in films in the last 80 years for teachers and students who are interested in reading films not only as stories, but also as carriers of interesting information and sites of meaningful intellectual discussions.

6. Trained as a literary comparatist, I am now much more familiar with using films alongside written texts, as well as handling films as a specific kind of text. Now I can respond to films with ease in turning them into useful teaching and learning materials.

Although the grant was not requested to improve the teaching quality of a particular course, in the teaching evaluation done at the end of the semester, students often referred to the excellent choice of texts in the various courses I taught, and they were particularly impressed by the very interesting audio-visual materials included in the otherwise reading-oriented courses. Many students of HUM 2180 remarked on the interactive and interesting in-class activities I designed in relation to the film texts. I believe this showed that the students enjoyed the teaching and learning experience resulted from a successful incorporation of these films.

Discussion

Stam stated in his book Literature through Film that the study of film adaptations of masterpieces is “beyond fidelity”. Films can be studied for the “multicultural nature of artistic intertextuality, the problematic nature of illusionism, the wealth of ‘magical’ and reflexive alternatives to conventional realism, and the crucial importance both of medium specificity – film as film – and of the migratory, crossover elements shared between film and other media” (Stam, 2005, P.3). In the course of the project, I had plenty of experience to feel the truth of what Stam wrote about film adaptations and also that the film medium indeed is a very good teaching material. Human beings are naturally attracted to narratives, and narratives in images become important carriers of messages, reflections of our world, and means of fulfilling human imaginations and desires. It has therefore a rich potential to be used in the classroom in many different ways. In this project, I started with adaptations of great literary works and extended to films of other genres and types, using them as objects of study and stepping stones for other cultural and historical issues within the study of the
Humanities. I hope in the future to engage in other research projects using films for more specific purposes, such as designing a new course to teach creativity using films as the main means of support.

**Enhancement on Teaching and Learning**

Responses from students during in-class learning activities, as well as their performance in tutorial discussions involving films showed that this is a medium that speaks to them. Films also frequently featured in students’ presentations. I believe therefore that the project has been very much relevant to the needs of the Humanities programme and any teaching aiming at creating a reflective human being.

In HUM 2180 *Great Works in the Humanities*, film adaptations served the purpose of guiding students in their reading of the original written texts, and helped to focus the teaching and learning on specific issues and contexts more easily as scenes were chosen to be screened in class. Compare and contrast between the written and the film texts often became good starting points of discussions about the major issues and themes in the texts.

In HUM 3130 *Special Topics in the Humanities (Human Beings and the Monsters they Create)*, a film-based course discussing humanity and its fears and dreams, many students came to audit the course because the texts chosen and the issues for discussion were felt to be relevant to their very existence. Seeing the power of the visual image and the narrative mode, I have confidence in adopting more filmic materials for future classroom teaching to create an interactive and engaging teaching and learning experience.

The use of films also has an additional dimension – while the students respond to the films as students studying assigned texts, at the same time they are also individual human beings responding to films which may or may not be in line with their values and beliefs. Very often after the class, students approached me to talk about parts and aspects of the films which they liked or disliked, not necessarily related to the lecture. I think this is a very good proof that the films have become a good site for a genuine exchange of ideas and feelings among human beings, and this is also one of the ultimate goals of a humanistic education.

**Limitations/Difficulties**

Films, like other texts we deal with in the Humanities, have their own contexts and histories. In using a film for teaching purpose, the instructor has to judge how much of the contexts and histories should be introduced into the classroom discussion. To the humanities students (or students of any discipline apart from those of Media Studies) who are not equipped with the knowledge of film language, sometimes it can be difficult preparing them for discussions which may involve many technical aspects of the film medium.
When using a film for illustration of certain cultural phenomena, very often the discussion would be taken over by the actual plot development of the film, and the many interesting artistic manifestations of the form. When designing the teaching materials, time was often spent on taking just the relevant bits and pieces from the film for the specific purposes of the lessons. Films dealing with historical and cultural background which students were not familiar with also needed extra guidance (which might mean sometimes shifting the focus of a lesson to something else). Older films (even in the case of masterpieces of cinematic production) which show different ideologies, ways of behaviour, even ways of acting might also alienate students.

**Conclusion**

The project enabled me to purchase some films in DVD form to be used for various courses that I have taught and I am still teaching for the Humanities programme. It also enabled me to extend the use of films from being a parallel example for illustrating certain literary masterpieces to substantial teaching materials which contain relevant cultural, historical and philosophical issues discussed in various courses (*HUM 2160 Gender Studies, HUM 2150 Language and the Humanities, HUM 3130 Special Topic in the Humanities: Human Beings and the Monsters they Create*) within the Humanities programme. On top of this, the experience of using these films enabled me to apply films in teaching in other contexts to provide multi-disciplinary learning experience for students other than the university undergraduates. These experiences of using films for different age groups and student backgrounds give me confidence in exploring further use of films in more systematic ways in the Humanities classroom – I will be exploring how to use films to teach creativity/creative writing in the near future.

**References**

Development of Multi-media Teaching and Learning Materials for Psychology and Sociology of Music

Ho Wai Chung
Department of Music, Faculty of Arts

Preamble
New developments in e-learning and increasingly sophisticated learning technologies have brought a major impact on Hong Kong universities, which welcomed the implementation of Information Communication Technology (ICT) as being core to their educational missions, and to this end encouraged all graduates to be computer or ICT literate. Academics are increasingly concerned with the processes of curriculum change with respect to ICT in higher education, as well as with their delivery of multimedia lectures.

This project supported the new MA course entitled Psychology and Sociology of Music (MUS 4290). It intended to acquaint participants with the main areas of contemporary research in music psychology and sociology. It aimed to help participants to explore theoretical concepts and evidence from those disciplines of psychology, philosophy and sociology that are applicable to a variety of areas of music.

Whilst psychology has provided insights into the individual creation, performance, perception and understanding of music, sociology has examined the contexts in which people engage in these activities. These theoretical concepts include musical cognition and memory, musical development, emotional responses to music, music and gender, musical values and social meanings, and the commercial uses of music. The course also aimed to make students aware of the social organisation of musical production and reception, and the social functions and effects of music education. There was an emphasis on the tools and products of research in the fields of psychology and sociology of music.
Abstract

This multimedia project was intended to give participants a thorough grounding in the theories and principles of both the psychology and sociology of music in a wide range of practical settings. It utilized ubiquitous computing technology to establish a learning community in which participants used appropriate technology and acquired skills to access multimedia information in the educational setting of the university classroom. The project attempted to integrate a large range of communications elements - texts, sounds, pictures, photographs, animations and moving videos - to facilitate teaching and learning.

Keywords

Multimedia teaching and learning, music psychology and sociology

Introduction

Taking a learner-centered approach, this project aimed to use multimedia presentations and explanations to help students to learn and to work easily with verbal and non-verbal representations of complex musical understandings and/or educational issues. With the combination of multimedia technology and educational content materials, interactive contents can be delivered to students in new ways through teacher-centered, student-centered and mixed modes of teaching and learning (e.g., Busen-Smith, 1999; Cain, 2004; Ho, 2004; Lahav, Boulanger, Schlang & Saltzman, 2005; Neo & Neo, 2004). For instance, writing music using sequencing software packages assists student in composition (Airy & Parr, 2001; Nilsson & Folkestad, 2005). Music lessons designed to develop auditory, visual and motor skills have benefited reading skills (Douglas & Willatts, 1994). The Internet is used to explore new methods of music making, composition and performance, along with the analysis and discussion of compositional and cultural matters related to digital music and culture (Duckworth, 2003; Hugill, 2005; Thompson, 1999). Other studies also maintained that global communication technology has offered a major contribution to music education by developing knowledge of music, and encouraging creative thinking within and beyond performance-based education (Angelides & Tong, 1995; Bauer, Reese & McAllister, 2003; Mansfield, 2005; McCarthy, Bligh, Jennings & Tangney, 2005; Webster, 2000).

The following were addressed by this project in order to provide the optimum means for students to gain access to media-assisted learning in different disciplines:

1. research would determine the optimum procedures for accessing and using wide area networking facilities to help participants access materials taught in the class, and to obtain sources of relevant references via the Internet;
2. this professional development would help the instructor to design and implement student-centered, technology-supported and project-based learning using multimedia;

3. it would support the teaching of how best to find and use engaging online learning resources as an integral part of any university education; and

4. electronic communication links would be established to facilitate communications between the instructor and participants.

Multimedia projects can help participants develop a wide variety of higher order thinking skills, group and interpersonal skills and intellectual skills in a given discipline. Participants will then present their final projects to the class at a multimedia fair.

This project aimed to produce a music programme combining innovative and classical teaching methods with leading-edge research. In order to maximise participants’ learning, the instructor took advantage of multimedia classroom facilities together with the latest teaching techniques. Multimedia lectures were not only convenient but also significantly expanded the way in which course materials were presented.

**Aims and Objectives**

The following were addressed by this project in order to provide the optimum means for students to gain access to media-assisted learning to explore theoretical concepts and evidence from those disciplines of psychology, philosophy and sociology that are applicable to a variety of musical areas:

1. to help participants access materials taught in the class and to obtain sources of relevant references via the Internet;

2. to help the instructor to design and implement student-centered, technology-supported and project-based learning using multimedia;

3. to support the teaching of how best to find and use engaging online learning resources as an integral part of any university education; and

4. to facilitate communications between the instructor and participants with the aid of an electronic communication link.

**Methodology**

The project comprised four major phases using different methods of data collection with different purposes.

**Phase 1: Literature review (books, journals, newspapers, etc.)**

The literature focused on the key theoretical issues and empirical methodologies employed by contemporary researchers in music psychology and sociology. The literature review included the following topics to facilitate the instructor’s teaching preparation:

- theoretical approaches to developmental psychology and the developmental psychology of music
Phase 2: Presentational Level
This level incorporated simple presentation software that provided one-way communication from the instructor to the participants. Electronic handouts were prepared to guide the instructor, while providing a visual stimulation for students. The presentation also contained audio or video displays to better illustrate musical concepts and/or concrete examples of complex subject matter. Video images could be helpful in facilitating participants’ music learning. For example, in the discussion of the components of an expert performance, a few video tapes were edited and shown in class. Participants were required to hold group discussions about the questions raised in the edited music videos regarding an expert performance. Powerpoint slide shows were available to students outside the classroom.

Phase 3: Interactive Level
This level also incorporated interactive devices, such as email, into the coursework. Simple email interaction allowed students free discussion of pertinent issues outside classroom hours. This interaction would allow the instructor to encourage more future interaction while giving a clear view of the course’s objectives, as well as enabling participants to increase their understanding of the subject matter. Nearly all of them had their own computer, and their use of audio-visual media/technology and email communications with their instructor could also help their assignments and presentations.

Phase 4: Evaluation
At the end of the course, participants were asked to fill out a questionnaire concerning their reactions to the use of multimedia tools both inside and outside the classroom. Those questions concerned overall impression, effectiveness of use, whether the multimedia tools enhanced learning, how the technology affected class participation, and whether the technology contributed to learning the particular subject matter of the course.

Results/Findings
Overall Observation
The instructor made extensive use of information technology in class, which enabled simultaneous multimedia presentation of lecture contents. Most of the students were attentive in class and took notes. They learnt from the
Powerpoint presentation and through consulting the lecture notes (which could be downloaded beforehand from the Web). The multimedia materials were helpful in drawing students’ attention, and provided an excellent source of discussion. For example, during week 12 of the topic on Gender and Music Education, the lecture ran a little later than usual as there were more video excerpts than usual, but students were patient and enjoyed the presentation very much: the videos promoted excitement, empathy and some laughter. Most importantly, the excerpts provided students with ideas in heated discussions on related issues during class.

Quantitative Feedback from Questionnaire Surveys Designed by the Instructor

Simple questionnaires were adopted at the beginning of a course to collect information about the students, e.g., prior coursework or experience with the course, preferred modes of teaching and learning, opinions about the use of multimedia materials and their respective effectiveness (refer to Appendix One). Most of the students said they felt more motivated in, and more attentive to, class when technology or music technology was used. Most of them also thought there should be more use of technology/music technology in the lectures. They found the multimedia materials helpful in understanding issues in class through video presentations, as well as through both the listening examples and Powerpoint presentation. Most of the class, however, believed that the video shots might interrupt their learning.

The end of term questionnaire was a follow-up to another questionnaire which collected students’ opinions about the use of such materials at the beginning of the term. The students were asked about their interest in music psychology and the sociology of music after taking the course, their opinions about the effectiveness of the multimedia teaching materials used in class, as well as their overall ability in using multimedia resources for presentations and other assignments (refer to Appendix Two). Below is a brief description of the questionnaire results.

There were altogether 18 questions. Seventeen year-one and year-three students together with two MA students completed the questionnaire. Twelve students majored in music education; two in conducting; three in other areas: one in information technology in music, and two in music culture in Hong Kong. Most students were generally confident in learning the psychology and sociology of music. All students said that they had either some confidence or a little confidence. More of them said that they had some confidence with the psychology of music (10 students) than the sociology of music (nine students). More students answered that they had little confidence in learning the sociology of music (eight students) than the psychology of music (seven students). Apart from one student who did not answer, most students believed that technology made them more creative, and that it made them more motivated. All students looked at the library’s database. Most thought their
skills in using web browsers and online library materials were good. One evaluated himself/herself as having advanced skills with web browsers and two said the same about online library materials. Fourteen students used the CD drive in the computer for their presentation; five used the scanner; four used VCR; and two used a digital camera. Only one student used audio equipment, and two did not answer this question.

As the data showed, most students believed that technology made them more creative, and almost all of them thought technology made them more motivated. Almost all students thought the listening, video and Powerpoint presentations used in class were helpful in understanding issues. Most of the class agreed that more technology should be used in the future. The addition of high quality graphics, audio and video to teaching content, along with more editing and authoring software, could provide a major enhancement of computer-based learning. One student had another opinion. He/She believed that the equipment of the university needed upgrading and should be more user-friendly. All the positive feedback showed that the project’s use of multimedia materials was very helpful in encouraging students to learn, and to do so efficiently.

**Discussion**

Although there was room for improvement, the instructor ranked her overall performance in teaching and course design as good. The instructor prepared lecture notes carefully, along with parallel multimedia presentations. Every lecture was also conducted well in terms of the organisation of learning activities for the development of multimedia teaching and learning materials. Most students found their knowledge and ability to think and discuss much improved after the course, as was reflected in the instructor’s survey results. Once the learning moves beyond the recall of principles, facts or data, and into the area of creativity, problem-solving, analysis and discussion, learners need to have interpersonal communication and the opportunity to question, challenge and evaluate. All the presentation skills, classroom activities and teacher-student interaction and communication have to be considered, and carefully examined as a whole. At the heart of these ideas is the shift away from thinking about education as being solely in the mind of the instructor and more as a partnership between teacher and student with the teacher as the major architect of learning. Multimedia teaching and learning is celebrated as a way of helping students to solve problems creatively.

**Enhancement on Teaching and Learning**

This project recognised that the achievement of excellent teaching and learning depends on not only the ability and commitment of the instructor and students, but also the choice of appropriate teaching contents, resources and evaluation processes to ensure these standards are met, and that mechanisms are
developed to monitor the achievement of standards and the enhancement of quality. The following were some questions that were taken into consideration by teaching practice to monitor the enhancement on teaching and learning:

1. **Course design**: How does the instructor define the objectives for the course and then apply the objectives to each class session?

2. **Technology**: What technologies can the instructor select, develop, and/or use to enhance her teaching?

3. **Lecturing**: How can the preparation and delivery of the lectures attract participants to the psychology and sociology of music, draw and maintain their attention, and, through pacing and variety, enable students to be not only attendees but also intellectual participants with the aid of the multimedia project?

4. **Knowing the participants**: For teaching to be most effective, it is critical that the instructor should understand how her teaching relates to the learning experiences, learning approaches and learning styles of her participants. Informal conversations related to the course improvement and teaching effectiveness were conducted outside the classroom between the instructor and the participants.

5. **Discussion**: How will the participants’ thoughtful conversations enhance their understanding, and help the instructor to monitor the progress of their learning?

6. **Feedback and evaluation**: How can the instructor monitor the effectiveness of her teaching early and frequently enough in the semester so as to introduce changes that might benefit the students? As mentioned earlier, two actual questionnaires were designed to collect participants’ feedback on the course, which the instructor could use to improve her future delivery of lectures.

Powerpoint software, graphic animation and audio-visual resources rendered abstract ideas and concepts more intelligible, thereby enhancing student learning. While MA students might have problems with concentrating because of fatigue from work, they were generally observed to be interested in the teaching materials, especially the visual ones, such as DVDs, film excerpts and MTV excerpts.

**Limitations/Difficulties**

This project described the Music Department’s efforts to increase MA students’ access to and mastery of music technology skills. The limitations we faced in relation to budget, equipment and time spent with students were held in common with many other educational institutions. Although students answered that they had at least the basic skills of using web browsers and online library resources for the course, the instructor received complaints from some students that they...
found it difficult to find materials on the Internet. Some admitted that they had no training at all with the use of technology or the Internet. A few even had problems in downloading the lecturer’s teaching materials. While this specific curriculum was designed to fit our institutional context, the instructor hopes that it could provide a philosophical approach to technology skills training that could be adapted and implemented in a variety of situations. Some students also complained that they could not borrow video resources from the university library for their presentation. These were some of the most pressing problems and limitations in the use of information technology in class. If we are able to respond to these limitations, we can build systems that support both formal and informal learning.

The video tape review was regarded as one of the current fashions in evaluating the teaching ability of teachers and the learning effectiveness of students. Videos for lessons were originally required for teaching and learning evaluation for this course. Nonetheless, as shown in the survey conducted in the first week of the course, most of the students were hesitant about video-taping some of the lectures. As a result, the instructor gave up her video-tape evaluation.

**Conclusion**

To sum up, the instructor characterised her experiences with multimedia resources in the classroom as successful and rewarding for both her students and herself. The instructor particularly emphasised creating content and motivating students to take advantage of the strengths and dynamism of multimedia resources as part of the course development and delivery. It was recognised that the achievement of excellent teaching and learning depends on not only the ability and commitment of the instructor and students, but also the setting of appropriate teaching contents, resources and evaluation processes to ensure that these standards are met, and that mechanisms are developed to monitor the achievement of standards and the enhancement of quality.

The revolution of multimedia technology and music technology in education is actually less about machines than it is about students. Used wisely, it can promote creativity, initiative and communication. On the basis of the evidence of changing classroom practices, one may doubt that more changes in philosophies have occurred than stated (Jorgensen, 2005; Robinson & Latchem, 2003; Walls, 2008). On the basis of the TDG’s project, the instructor applied for Faculty Research Grants to address the gap in the literature by examining one music faculty’s strategic responses to the challenge of e-learning and multimedia technologies. The overall analysis intended to examine the relations between university culture, teaching practices, student learning and multimedia technology. The findings of this project were reported in international refereed publications (Ho, 2007 & 2009).
References


Ho, W. C. (2007). Music students’ perception of the use of multi-media technology at the graduate level on Hong Kong higher education. Asia Pacific Education Review, 8(1), 12-26.


**Acknowledgements**

I would like to thank my project assistant Miss Linda Ma and all the participants who made this project possible.

---

**Appendix One**

*Questionnaire on Students’ Opinion on the Use of Multimedia Materials in the Taught Postgraduate Programme, Psychology and Sociology of Music*

The Department of Music is committed to the development of high quality research and study at postgraduate level. In addition to the teaching materials, we have adopted the use of multimedia in classes to enhance students' learning experience.

The following asks for your opinion about the use of such multimedia materials and their respective effectiveness in assisting your studies at Hong Kong Baptist University. Your contributions and opinions are highly appreciated, and will help us improve the course to make your studies here even more efficient and enjoyable.

Unless stated otherwise, please use a tick “√” to indicate your choice in the boxes provided.

1. You are currently in:
   - [ ] MA1
   - [ ] MA2

2. Field of your major at the MA level:
   - [ ] Choral Conducting
   - [ ] Music Education
   - Others, please specify: ___________________

3. Have you had any teaching experience? If yes, for how many years?
   - [ ] No
   - [ ] Yes, please specify: ________________

4. Prior to this course, have you had any training in psychology?
   - [ ] Undergraduate level
   - HKAL/HKCEE
   - Others, please specify: ________________
   - [ ] None

5. Prior to this course, have you had any training in sociology?
   - [ ] Undergraduate level
   - HKAL/HKCEE
   - Others, please specify: ________________
   - [ ] None
6. Do you feel more motivated about learning music and music education when technology or music technology is used in your lessons?

- Yes, very much
- Some
- A little
- Not at all

7. Do you think technology/music technology can make you more attentive to your lectures?

- Yes, a lot
- Some
- A little
- Not at all

8. Do you think there should be more use of technology/music technology in your lectures?

- Yes, definitely
- Some
- A little
- Not at all

9. Will you welcome the department to video-tape a few of the lectures to evaluate the effectiveness of the course and your level of participation?

- Yes, definitely
- Some
- A little
- Not at all

10. Do you think the video shot will interrupt your learning or the delivery of the lecture?

- Yes, definitely
- Some
- A little
- Not at all

11. Do you find the video presentations helpful in understanding issues?

- Yes, very much
- Some
- A little
- Not at all

12. Do you find the listening examples helpful in understanding issues?

- Yes, very much
- Some
- A little
- Not at all

13. Do you find the Powerpoint presentations helpful in understanding issues?

- Yes, very much
- Some
- A little
- Not at all

14. Other opinions:

- 
- 
- 
- 

**Appendix Two**

*End-of-term Questionnaire on Students’ Opinion of the Use of Multimedia Materials in the Psychology and Sociology of Music*

The following asks for your opinion about the use of such multimedia materials and their respective effectiveness in assisting your studies at Hong Kong Baptist University. Your contributions and opinions are highly appreciated, and will help us improve the course to make your studies here even more efficient and enjoyable.

Unless stated otherwise, please use a tick “√” to indicate your choice in the boxes provided.

1. You are currently in:

- [ ] MA1
- [ ] MA2

2. Field of your major at the MA level:

- [ ] Choral Conducting
- [ ] Music Education
- Others, please specify: _______________________

3. Have you had any teaching experience in school? If yes, for how many years?

- [ ] No
- [ ] Yes, please specify: _______________________

4. Did you find psychology interesting prior to this course?

- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

5. Did you find sociology interesting prior to this course?

- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

6. Do you feel more motivated about learning music when music technology is used in your lessons?

- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

7. Do you think music technology can make you more creative?

- [ ] Yes, a lot more
- [ ] Some
- [ ] A little
- [ ] Not at all
8. Do you find the video presentations helpful in understanding issues? If yes, to what extent?
- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

9. Do you find the listening examples helpful in understanding issues? If yes, to what extent?
- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

10. Do you find the Powerpoint presentations helpful in understanding issues? If yes, to what extent?
- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

11. How do you rate your skills using a web browser e.g. Netscape to access your learning materials for this course?
- [ ] None
- [ ] Basic
- [ ] Good
- [ ] Advanced

12. How do you rate your skills using online library resources for this course?
- [ ] None
- [ ] Basic
- [ ] Good
- [ ] Advanced

13. Are you going to use the following equipment for your oral presentation? Tick all that apply:
- [ ] Scanner
- [ ] Digital camera
- [ ] CD drive in a computer
- [ ] Others (please specify): ___________________

14. How would you rate your general confidence in learning Psychology of Music?
- [ ] Much confidence
- [ ] Some confidence
- [ ] Little confidence
- [ ] No confidence

15. How would you rate your general confidence in learning sociology of music?
- [ ] Much confidence
- [ ] Some confidence
- [ ] Little confidence
- [ ] No confidence

16. On the whole, do you feel technology/music technology has helped you and motivated your learning (including your oral presentation) for this course?
- [ ] Yes, very much
- [ ] Some
- [ ] A little
- [ ] Not at all

17. Do you think there should be more use of music technology for this course?
- [ ] Yes, definitely
- [ ] Now it’s enough
- [ ] Could reduce the present use

18. Will you be happy to spare about 20 minutes for an individual interview to articulate your views on technology/music technology for this course? Dr Ho’s Project Assistant will arrange your most convenient time and place for an interview after the term break in May/June. Your help is deeply appreciated. Please write down your contact number.
- [ ] I will be available. Please contact me at: ___________________
- [ ] I will not be available. ___________________
Virtual Field Visits to the Pearl River Delta

Wong Ming Hung, Doris W S Ng, Angela W M Wong
Institute for Natural Resources and Environmental Management*, Department of Biology, Faculty of Science

* (Currently renamed Croucher Institute for Environmental Sciences)

Preamble

One of the aims of the Institute for Natural Resources and Environmental Management (INREM) is to promote education in environmental management. Henceforth, the purpose of this report is to describe a new teaching strategy using multimedia which will enhance teaching and learning in the field of environmental studies. A field visit is a valuable way for students to gain first-hand experience and knowledge of a site, however, it may sometimes be difficult for teachers to arrange such field visits for students due to time constraints and cost requirements. For example, the recent rapid deteriorating environmental quality of the Pearl River Delta (PRD) provides a perfect opportunity for students to learn about environmental management. However, a field visit to the PRD may not be possible due to limitations in organising study tours. Alternatively, a virtual field trip via multimedia can allow individual students to gain a better understanding of the current environmental problems in the PRD without an actual visit to the field. The virtual field trip will enhance classroom teaching and promote high quality teaching. This report describes the development of a web-based “Virtual Field Visits to the Pearl River Delta”.

Abstract

The PRD has been undergoing an economic take-off, however, at the same time, its environmental quality has been rapidly deteriorating. Field visits to the PRD would be ideal for students to explore different environmental problems. Unfortunately, organising field visits would involve lots of manpower and resources. As such, this project developed a web-based “Virtual Field Visits to the Pearl River Delta” in order to allow students to visit different field sites via the web. This teaching aid enabled students to understand the landscape, population, industries and current environmental problems of the major cities of the PRD simply by browsing through the website.
Keywords
Virtual experience, field trip, Pearl River Delta, environmental problem, waste treatment

Introduction
Since the implementation of the Economic Reform and Open Door Policy in 1978, rapid economic growth has been observed in China, especially in the PRD (Chan & Kwok, 1990). Because of the encouragement of various developments, environmental concerns are not always adequately considered (Liu, 1992). Development in the region has also given rise to increasingly serious pollution problems (CEN, 1997c; Ma & Qiang, 1988). Hong Kong relies on China for supplying more than two-thirds of its drinking water (CEN, 1997b). Deteriorated water quality may damage our health. Moreover, poor water quality also increases the occurrence of red tides leading to enormous economic loss and health hazards.

The adverse air quality of Hong Kong has also drawn a lot of public attention recently. It has already reached a level adverse enough to damage human health (Chung, 1998). Pollutants can be transported from one area to another by means of wind or water current. Serious air pollution in Hong Kong may be partially due to trans-boundary pollution from industrial areas of the PRD (CEN, 1997a; Hills et al., 1998; Shen, 1983; Wei, 1997). Pollution respects no boundaries so environmental problems should be addressed in a wider or regional perspective. In order to protect the environment and maintain its sustainability, environmental education encompassing a regional perspective is the ultimate solution. It should be worthwhile to educate students in the environmental issues of the PRD region.

Aims and Objectives
INREM aimed to develop a web-based “Virtual Field Visits to the Pearl River Delta” in order to enhance teaching and learning quality of environmental related courses. It would allow students to have a better understanding of the current environmental problems of the PRD even though they have not actually visited the field.

Methodology
1. Background Research
Relevant information about the environment of the PRD was collected from different sources such as books, periodicals, maps, aerial photos, video, etc.

Some of the major topics of information collected are listed as follows:
• Sustainable Development
• Environmental Impact Assessment
• Biodiversity and Conservation
• Waste Management
• Waste Treatment, Disposal and Recycle
• Ecological Park

2. Site Visits and Recording
Three site visits were conducted to the
major cities of the PRD, including Shenzhen, Guangzhou, Shunde, Heshan and Xiaoliang. Relevant and interesting information was collected and recorded using a digital camera (e.g., photographs, videos).

3. Information Compilation  
After collecting the required information, the information was edited for the development of the website “Virtual Field Visit to the Pearl River Delta”.

4. Website Design and Construction  
The production of the website was carried out with the help of seven students of the Department of Computer Science, HKBU.

5. Monitoring and Maintenance of the Website  
The website is being maintained by INREM. We are grateful to Dr. Wai Wong for providing technical advice on the maintenance of the website.

Results/Findings  
The PRD is broadly triangular in shape, extending down both sides of the Pearl River estuary with the provincial capital of Guangzhou at its northern apex, the Special Economic Zone (SEZ) of Shenzhen at its southeast corner, the Zhuhai SEZ at its southwest corner. The area of the PRD is about 461,000 km² with a population of 21.4 million (1995) (Jiang, 1996; Ma & Lin, 1993). The climate of the PRD is humid mesothermal, and is affected by the monsoonal circulation. It is characterised by an annual mean temperature at Shunde of 22°C, and an annual average range of 15°C, with mean temperatures in the warmest months of 27.7°C (July) and 28.4°C (August), and in the coldest months of 13.0°C (January) and 14.7°C (February).

The PRD is the economic leader of Guangdong. The tremendous and perhaps miraculous economic and industrial advancement enjoyed by society in the past few decades has also brought about many environmental tradeoffs (CEN, 1997c). The rapidly developing PRD has generated lots of revenue and employment opportunities. But at the same time, these economic achievements have also produced enormous environmental and health problems. Some of the major environmental problems of the PRD such as water pollution (United Nations, 1998; CEN, 1997b; Ruddle, 1988), air pollution (CEN, 1997a) and biodiversity reduction (Silver, 1996; United Nations, 1997; Xie, 1994; Xu, 2000) and their remedial strategies have been discussed in the website (Xu, 1999).

In the website, some good examples of sustainable environmental management in the PRD are illustrated. They are Guangming Overseas Chinese Livestock Farm (Integrated Farming Systems), Dinhushan Biosphere Reserve (Conservation of Biodiversity), Shunde Ecological Park (Eco-tourism), Xiaoliang Tropical Artificial Forest Ecosystem Station (Restoration of Derelict Land) and Heshan Hilly Land Comprehensive Experimental Station (Restoration of Derelict Land).
Guangming Overseas Chinese Livestock Farm is an intensive enterprise group with animal industry, beverage, western style meat products, biological products, fodder and fruits. The net capital of the farm is over RMB 173 million. The farm owns 40 joint companies and more than 40 semi-product processing factories. The farm also emphasises the importance of environmental protection and conservation, and its products are regarded as “Environmental Pollution Free Products”.

Dinghushan Biosphere Reserve is one of the foremost national reserves in China. There are different types of forests exhibiting very high biodiversity. Dinghushan Biosphere Reserve is an excellent place for studying forest development, wild animals and plants, geography and other environment related subjects.

Shunde Ecological Park is one of the most beautiful artificial parks in Guangdong Province. As well as enjoying the beautiful and comfortable scenery of the environment, visitors can learn the importance of conserving natural resources and sustainable development in the park. The park is divided into five zones: Ecological Conservation Zone, Ecological Education Zone, Ecological Recreation Zone, Ecological Appreciation Zone, and Ecological Agricultural Zone. Different educational and/or recreational activities are available in different zones.

Xiaoliang Tropical Artificial Forest Ecosystem Station is a rural station managed by the South China Institute of Botany, Chinese Academy of Sciences. Due to the heavy pressure of human activities in the area, the original forest has been seriously damaged. Soil erosion has been occurring over a period of hundred years and resulted in degraded environmental quality, delayed production and poor living standard. In 1959, the Chinese Academy of Sciences selected Xiaoliang as a testing site for investigating effective methods in rehabilitating degraded tropical ecosystems.

Heshan Hilly Land Comprehensive Experimental Station is another rural station for studying artificial rehabilitation and reconstruction of degraded lands. It aims to develop an integrated development demonstration station which is ecologically and economically sustainable and compatible on the degraded subtropical abandoned land. There are eight artificial forest ecosystems available for studying the structure, function and mobility of different eco-agricultural systems.

Questionnaires were distributed to year-one students of the Hong Kong Baptist University in the course You and Your Environment to collect their comments on this website. Of the returned questionnaires, all students indicated “strongly agree” or “agree” to the statement “The website can help me to understand the environmental issues of the Pearl River Delta”. Moreover, 92% of the students “strongly agreed” or “agreed” that the information provided by the website was interesting or useful. Over
60% of the students “strongly agreed” or “agreed” that the website could raise their interest in learning about the environment of the PRD.

Discussion
This informative and well illustrated website was able to arouse the learning interest of students. Although the students were not actually visiting the fields, they could obtain environmental related information of the PRD, such as the landscape, population, industries, environmental problems and some good examples of sustainable development, through this website.

The PRD is a typical example of a rapidly developing economic zone. Lessons learnt from the occurrence and subsequent management of environmental problems of the PRD can serve as a model for other similar developing economic zones. This easy accessible electronic environmental information of the PRD is very useful for studying the environmental problems of other actively developing cities.

Enhancement on Teaching and Learning
Field visits are essential to provide students with direct contact with the environment, and to stimulate their interest in acquiring knowledge and developing skills. Organising field visits to areas of the PRD undoubtedly increase the learning quality of students in studying environmental issues, however, it will involve a lot of manpower and preparation.

This web-based “Virtual Field Visits to the Pearl River Delta” reduced the workload of teachers in arranging field visits without sacrificing the learning quality of students. It allowed students to have a better understanding of the current environmental issues of the PRD even though they had not actually visited the field. The information related to the environmental issues of the PRD was well presented in the website.

With the aid of the “Virtual Field Visits to the Pearl River Delta”, teachers acquired techniques to organise innovative activities associated with the Internet, and students actively participated in the course to enrich their environmental knowledge. At the same time, they adapted to self-education mode and familiarised themselves with the World Wide Web interface in searching information. It was a valuable practice to prepare themselves for future studies.

Questionnaires were distributed to year-one students of the Hong Kong Baptist University in the course You and Your Environment to collect their comments on this website. The summary of the results of the survey can be found in Appendix 1. Encouraging responses were received such as 61.5% students agreed that the website could raise their interest in learning, 38.5% strongly agreed and 61.5% agreed that the website could help them to understand the environmental issues of the PRD. Thus, the project could really enhance teaching and learning quality.
Limitations/Difficulties
Not much of the information related to the environment of the PRD was accessible through Internet. Most of the information of the literature was not up-to-date so it was difficult to find the up-to-date information of the environmental issues of the PRD. Moreover, due to logistical and administrative procedures, it also took quite a long time to arrange field visits to some of the important sites. Field visits and video shooting were time-consuming as video footage had to be carefully edited.

Conclusion
This web-based “Virtual Field Visits to the Pearl River Delta” was the first information providing website made by INREM. Students can easily obtain information related to the PRD through this website. In order to improve the quality and user-friendliness of the website, we are planning to enrich the website with more information related to natural resources and environmental management such as the conservation of endangered animals and plants in China and the conflicts between development and conservation in China.

References


**Acknowledgements**

We would like to thank Dr Wai Wong of the Department of Computer Science of the Hong Kong Baptist University for his valuable advice on the development of the website. We also thank the following students (under his supervision) from the Department of Computer Science for the production of the website: Miss Wing Sze Leung, Mr Chung Keung Wong, Mr Ka Ki Wong, Miss Yee Man Wong, Miss Wan Yee Chak, Miss Wai Lin Lok and Miss Hoi Man Lee.
# Appendix 1

Summary of the Results of the Questionnaire Survey to Students

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Does not apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>The information provided by the website is interesting or useful</td>
<td>23.1%</td>
<td>69.2%</td>
<td>7.7%</td>
<td>0%</td>
</tr>
<tr>
<td>The website can raise my interest in learning</td>
<td>0%</td>
<td>61.5%</td>
<td>30.8%</td>
<td>0%</td>
</tr>
<tr>
<td>The website help me to understand the environmental issues of the Pearl River Delta</td>
<td>38.5%</td>
<td>61.5%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Other comments given by students:

1. The website is well organised and easy to read and understand.
2. The website is user-friendly.
3. The website is very useful for students to understand the Pearl River Delta environment.
4. The information is detailed, and the photos and tables can raise our interest and help us to know more about the Pearl River Delta.
5. The website has a complete structure, useful information and interesting pictures.
The Integration of Chinese Cultural Studies with Different Courses: Development of Teaching Pedagogy Utilising a Web-based Package

Leung Yin Bing, Cheung Wai Chun, Sandy S C Li
Department of Education Studies, Faculty of Social Sciences

Preamble
The learning of Chinese culture is always realised through Chinese language study. However, with the new curriculum reform in the new millennium, cross-discipline study is encouraged (Curriculum Development Council, 2001) because too much emphasis was placed on individual course learning, which did not help students to stitch patches of knowledge into a full picture. The project team decided to draw on information of four courses, namely: Chinese Language, Chinese Literature, Chinese History and Liberal Studies into one web-based package. The design of learning support system helped students learn effectively in an autonomous context. The team members hoped to explore the learning of knowledge with the design of information and computer technology-based learning system to advance our teaching pedagogy in higher education. It is essential for faculty members to realise that “helping learners to develop their own power of metacognitive learning to learn knowledge and skills will be increasingly essential as we are faced with an increasing range of systems, tools, and facilities enabling us to access and confront ever vaster amounts of information.” (Ford, 2008: 327)

Abstract
The new curriculum developed by the Curriculum Development Council in 2001 suggested the integration of different Key Learning Areas into single learning units or into project learning (2001: 23). Interactive learning using information technology was also recommended. This project aimed to utilise the web to develop teaching pedagogy involving the integration of Chinese cultural studies with courses Chinese Language, Chinese Literature, Chinese History and Liberal Studies, and to enhance students’ interest in and autonomous study of Chinese culture through computer technology-based learning system. This project resulted in the development of a multimedia web-based package to assist students in different education courses, in particular.
those who have to carry out practicum in schools and who are keen on learning Chinese culture. It was also helpful to colleagues who lecture on cross-disciplinary topics.

**Keywords**

Chinese cultural studies, web-based package for teaching and learning, cross-discipline study

**Introduction**

Computer technology is employed in teaching courses such as Chinese Language and History, and especially in the area of Chinese cultural studies. However, in this latter area, few good websites have been developed in Hong Kong. This project aimed to produce a multimedia web-based learning package to facilitate the learning and teaching of an integrated study of Chinese culture with different courses. The Yangtze Delta Region (長江三角洲), with the city of Shanghai as the centre and radiating to the two neighbouring provinces of Jiangsu (江蘇) and Zhejiang (浙江), was chosen as the focus of this project because of the rich cultural heritage of the Yangtze Delta Region. The project team responded positively to the curriculum development of the Education Bureau (EDB) on the study of “river culture”. This would prepare our students better for their course teaching in schools.

This project provided a chance for different course teams in the Department to work together towards a meaningful goal.

**Aims and Objectives**

The aims of the project were to develop teaching pedagogy in web-based teaching, and to enhance students’ interest and self-learning skills in the study of Chinese culture. The package could be used by instructors during class teaching of specialised courses, such as Chinese, Chinese History, Liberal Studies (LS) and even Information Technology (IT).

Other educational objectives were:

1. To provide students with a comprehensive view of the development of Chinese culture in the Yangtze Delta Region;
2. To cultivate in our students an appreciation and understanding of the uniqueness of Chinese culture;
3. To cultivate in our students an identification with Chinese culture;
4. To develop a multimedia web-based package that would stimulate students’ interest in and thought about the course of Chinese culture;
5. To promote the use of information technology in education; and
6. To encourage the cross-disciplinary collaboration of different course areas among staff members and students in the Department of Education Studies.
Methodology

The methodology of the project included the following components:

1. **Categorisation of major fields of cultural study and studying of the curriculum objectives:**

   The package targeted university students in both classroom and self-learning environments. The learning units were developed according to four categories of study. The content of these categories are included in the curriculum of the Chinese Language and Literature, Chinese History and Liberal Studies Key Learning Areas (KLAs) (Curriculum Development Council, 2002; Curriculum Development Council & Hong Kong Examinations & Assessment Authority, 2007a, 2007b, & 2007c).
   - Major historical events - From modern to contemporary China (1842 to present);
   - Literature development - Many modern writers were born in the Yangtze Delta Region, or else studied or spent a significant period of time in Shanghai or in the Yangtze Delta Region;
   - Modern educators who were born and brought up in this Region; and
   - Gardening and landscaping and the layout of some riverside towns are introduced to students to provide them with a glimpse into the life of Chinese in the past.

2. **Collection of data and relevant materials:**

   - all relevant materials (books, journals, newspapers, audio-visual materials, web-sites, etc.) related to the above four categories;
   - materials collected from collaborating departments and universities; and
   - Principal Investigator and Co-investigators conducted field trips to the Yangtze Delta Region. All photos and videos were taken by the Principal Investigator and Co-investigators to avoid copyright issues.

3. **Pedagogical design:**

   This web-based package does not provide information only. The categories chosen, and hence the materials collected, corresponded to the present curriculum in Chinese Language and Literature, Chinese History and Liberal Studies. Teaching strategies are suggested in these KLAs.

4. **Design and programming for web-based teaching and learning package:**

   The materials were installed and incorporated into the Internet server of the Department of Education Studies. The database, search engine and user interfaces were organised by a computer specialist. They fit into a website structure that was usable internally within the Department by instructors and students.
5. **Using the web-based package for teaching and learning:**

The website is accessible to staff and students of the Department for teaching and learning. Instructors could use it to demonstrate how IT would help in the process of teaching. Students could use it for class preparation and presentation.

**Results/Findings**

The Teaching Development Grants provided us with an opportunity to develop an online web-based cultural study package for the instructors and students of the Department of Education Studies. Before opening the website to students, the team invited two other colleagues of the Department, whose expertise is in the field of Liberal Studies Teaching, to try the website and give comments. Some feedback from our colleagues included:

- **Chinese Literature**
  - Helpful, informative, resourceful, organised and cater for the needs of the teachers;
  - Good teaching exemplars in the Literature session, but not in other sections.

- **Chinese History**
  - Again organised and informative. User friendly;
  - Is it possible to provide a key storyline to link all incidents described in each region?
  - It would be difficult to make sense of the incidents in isolation;
  - Some important historical events are missing;
  - Teaching exemplars should be provided in this section too.

- **Education**
  - Good choice of educators;
  - Educational philosophy of two important figures is too brief and abstract.

- **Others**
  - Captions or description of some photographs are not given or are not clearly written;
  - More photographs could be provided for illustration;
  - Linkages to other relevant websites are useful, but some of these links do not work;
  - The name of the website as appeared in the bar at the bottom of the screen is confusing.

With the comments from our colleagues, the team improved the websites. The different categories are interconnected through hyperlinks. On each page, other links are included to facilitate the viewers’ search for further information. The package is rich in materials with explanations, photos, videos and maps. Above all, teaching strategies are suggested to help viewers to use these materials.
Discussion

As the materials available for study of culture are voluminous, the project team decided to concentrate on just one region with four major categories. The content and pedagogical approaches of the four categories (the historical events, literary and famous figures, education development, and the art of gardening and layout of small towns) were discussed in the light of the curriculum goals and objectives of each KLA. Students could learn culture in a multi-dimensional way. For example, when the viewer wants to know about the war in Shanghai with Japan in 1940, he/she can also surf the literature category to check how it affected the writers at that time. While one reads the works of Lu Xun depicting the struggle of poor people under capitalism, he/she can check the historical events in China from 1911 onwards. When the student-teacher is checking the lesson plan on teaching a certain piece of work of Feng Zikai, he/she can also appreciate Feng’s engraving works showing the daily life of people. The viewer can surf all related categories within the site and also other web sites outside the Hong Kong Baptist University. This helps the viewer to further strengthen his or her knowledge and understanding of a particular topic. This package not only helped students to obtain data and information in a systematic way, but also assisted students to think independently and to develop autonomous learning.

The log-in was monitored by instructors to check that students were using the package for their study and teaching.

Enhancement on Teaching and Learning

Questionnaires were sent to Chinese and Liberal Studies major students in the Department of Education Studies by email to solicit their views on using the website. Questions included their comments on the structure and user-friendliness of the website. The amount of information, appropriateness, and relevancy of learning and teaching in each category were asked. Most of the feedback was positive. The students commented that this web-based package on Chinese culture was very focused on one region, with clearly defined categories to facilitate teaching and learning. Moreover, the different dimensions in Chinese culture were put onto one platform for a clear understanding of the development of Chinese culture. They also liked to surf the different sites linked to our project to further their knowledge in a particular area.

The contributions were two-fold:

The project widened the knowledge of the instructors on Chinese history, literature, Chinese gardening and layout of old towns. While collecting materials and undertaking field trips, the instructors were able to collect primary materials on-site and from archives. It also helped the instructors to realise the benefit of integrating the data and information of different courses into a platform that enabled students to learn the courses in a more holistic way.
The web-based package served as a facilitator for the learning of Chinese culture in a multi-dimensional way. While putting all the jigsaw pieces together, students could get a glimpse of the full picture of China. Moreover, the site would guide them to other sites to help them construct their own knowledge by autonomous learning. In addition, during practicum, the students could check the teaching strategies recommended and materials provided to facilitate their own teaching.

**Limitations/Difficulties**

As with other web-based materials, it was difficult to maintain and update materials. Often, after a few months, some links were broken. Moreover, other new sites on Chinese culture appeared and changed very quickly, so the team had to check the sites frequently during the process of developing this platform.

The Yangtze Delta Region is a vast area. With limited funding, we could only travel to Nanjing, Zhenjiang, Shanghai, Suzhou, Hangzhou and Shaoxing. However, with the two trips, we were able to take many photos and videos, and purchased some materials ourselves.

When we put forward the proposal for this project, we tried not to overlap with other websites on Chinese culture. We thus focused on the Yangtze Delta Region and added the pedagogical component into our package. However, we found last year that another website on Chinese culture had added the Yangtze component. When we conducted the pilot study, some colleagues and students commented that our site overlapped with this particular one. However, as we focused on the curriculum specification, this was still of great benefit to our instructors and students.

We could not develop a storyline for all the historical events around the Yangtze Delta region as suggested by our colleague, but some of the events were linked up if they were related to one another in terms of causal relationship or historical figures.

Objectives 2 and 3 (on appreciation and identification of Chinese culture) could not be easily achieved by just having the students surfing once or twice on the website. However, one student, in an interview, expressed his interest in reading the materials presented and in watching the photos and video uploaded onto the site. He said he did not know how to appreciate the gardens in China, but after going through the detailed introduction on the design of traditional Chinese gardens, he was able to develop certain ability in appreciation.

**Conclusion**

During the process of developing the website, the instructors were able to look deeper into different issues of Chinese culture. The design of the package seems technical, but it is actually very intellectually stimulating. This was a good learning experience for the instructors as well as the students.
As for the latter, the package helped them develop a holistic picture of Chinese culture in a more interactive way, thus making learning more interesting and self-structured.

References


Acknowledgements
We would like to thank everybody who had helped to make this project successful. First, we would like to thank Prof Chow Kai Wing and the colleagues of the History Department for their generous support, especially for the materials on education. We would also like to thank Prof Wang Yao for his advice on the literature development in China. A big thank is extended to Prof Wu Jixia for her help in arranging our visit and stay in Suzhou. Of course, we thank Prof Jin Xuezhi for his inspiring speech that helped us develop new perspectives on appreciating gardening and layout of towns in Suzhou. We are grateful to Prof Zheng Zhong of Nanjing Normal University for his help in arranging our visits to Nanjing and Zhenjiang. He had contributed to the photo-taking in most historical sites. Many of the photos in the package were taken under his supervision.

The team could not recruit a suitable project assistant. However, the Hong Kong Baptist University has the best pool of student helpers. We would like to thank the following graduates for helping the collection of data and drafting of materials. They are: Chu Ming Yee, Kwok Ho Cheong, Leung Hung, Leung Chung Yee, Ng Lai Fong, Shum Lok Yee, Tong Wai Leung, Tse Man Fai and Wong Chun Hin. Especially, we would like to thank Mr Wong Yuk Fung who worked hard to provide us with the computer and other technical supports.
Enhancing the Teaching of Web Based Journalism – Setting Up a Pioneering Online News Station

Huang Yu, Timothy F Hamlett, To Yiu Ming, Judith L Clarke
Department of Journalism, School of Communication

Preamble

In late 2001 the “dot-com” bubble burst and many web-based media outlets closed. Others severely curtailed their activities and reduced the number of their staff. The surviving Internet news outlets locally were generally offshoots of print publications like the South China Morning Post or Ming Pao – or were non-profit-making. There is also one web news operation run by the Hong Kong SAR Government.

The end of the bubble caused a widespread reassessment of the future role of the Internet in news distribution, and some of the more visionary predictions on this topic were discarded. It appeared that the most common arrangement would be for journalists to produce work which would be offered to the public simultaneously on a variety of platforms, including the Internet. This implied an important change in the implications of the Internet for journalism. Reporters would not develop a new style of reporting to fit the new medium. But editors would need to be able to put copy simultaneously on the page, on the web, and perhaps also on the television screen.

In light of these changes, the project team decided that it would no longer be appropriate to aim for a stand-alone Internet news station, as envisaged in our original proposal. Instead we would aim to broaden the scope of the existing student workshops so that all student works would be published on the net as well as in print. The team also believed that in the new realistic climate, the planned international workshop would not attract the number of participants required for it to fulfill its purpose. It was then decided to replace this with a joint workshop staged with the Department of Journalism and Communication, Nanjing University, one of the best online journalism teaching-learning units in the Mainland.
Abstract
This project aimed to enhance students' ability to deliver their online journalistic work by providing real hands-on experience of running a regular student-run news station with content delivered over the Internet. The project was divided into three stages. In the first stage, a series of web production and design workshops were conducted. There followed a series of lectures delivered by invited practitioners and experts in the field about the implications of IT developments and the future of online media. In the second stage, the existing student publications – The Young Reporter in English and the San Po Yan in Chinese – developed web-based counterparts regularly published on the Internet. The third stage involved collecting feedback and the dissemination of good practices. A workshop and a symposium on web-based teaching and learning were held with students and teachers from the Nanjing University. Through the training workshops and supportive activities, the project has achieved the purpose of equipping our students with cutting edge knowledge and practical skills.

Keywords
Internet journalism, online news station

Introduction
This project was initially a response to the profound changes in the journalism paradigm introduced by the Internet and other digital innovations during the late 1990s. The project team then believed that future journalists would need to be equipped to work on the web as well as in the more traditional media. Accordingly, the team proposed to run a series of workshops which would pave the way for a major expansion of web-based journalism as a part of the journalism training programme.

Aims and Objectives
The objective of the project was to set up a pioneering online news station addressing the emerging new media environment. The TDG would make it possible for students to produce regular news and other journalistic products on the Internet.

Our aim was to initiate teaching and learning of online journalism in the Reporting and Editing Laboratory (courses required for all year-two and year-three journalism major students).

Traditionally, the laboratory courses produce students' own newspapers (for Chinese and English concentrations). The Young Reporter and its sister Chinese publication San Po Yan have been successfully running two independent versions for 30 years. However, with the increasing popularity of the Internet as the venue for public information, a shift towards web-based mode of journalism laboratory is not only necessary, but also promising. The project thus attempted to achieve several goals:
1. To introduce the new forms of online journalism practice by establishing a student-run news station;

2. To explore alternative ways to further reform the current experimental courses, which are mainly designed for print media;

3. To upgrade the knowledge and skills that students will need for future online journalism by inviting relevant experts to give lectures and workshops; and

4. To provide a unique platform for dynamic interaction between industry professionals and journalism students.

**Methodology**

Project assistants were hired to help students:

1. Set up the framework of the station,

2. Direct the students’ news production on the web; and

3. Acquire online journalism skills and know-how techniques.

In the initial stage, they also performed certain editorial duties to exemplify online production practice. As for the advisors of the project, we provided all necessary supervision and assistance in designing the operational structure of the station, engaging in the major tasks of online operation. A number of guest lectures were organised to invite experts in the field to deliver up-to-date knowledge and skills to advance online journalism. The use of outside expertise enhanced the department’s links with the local industry and provided access to high-quality current advice on the skills needed.

**Results/Findings**

At the end of the project, we believe that the four stated objectives were achieved, though a deliberately modified form in the case of objective. It also appeared that the Department is in the forefront of teaching this kind of journalism in Hong Kong, though in the light of current thinking about the Internet it is no longer quite such a trendy forefront to be in. The project was divided into several stages:

In the first stage, specialists were invited to conduct a series of web production and design workshops, which equipped students with the necessary skills to carry out online publishing.

There followed a series of lectures delivered by invited practitioners and experts in the field about the implications of IT developments and the future of online media.

In the second stage, the existing student publications – *The Young Reporter* in English and the *San Po Yan* in Chinese – developed web-based counterparts regularly published on the Internet and received positive response from the community and the media industry.

The third stage involved collecting feedback and the dissemination of good practices. A workshop and a sharing session on web-
based teaching and learning were held with the students and teachers of Nanjing University. Also, the team held a Symposium, jointly planned with the Nanjing University, on “On-Line Media Development and Journalism Education”. The Symposium was very successful, attracting nearly 100 academics, professionals and students (many from other institutions).

**Discussion**

There are a number of excellent reasons to run this project. Through setting the online news station, students have learnt the necessary skills to undertake online publishing and gained the hands-on experience. Most of the current experimental courses are mainly designed for print media. The project helped to explore the possibilities of course reform and thus contributed to our future pedagogic practice. With the many challenges ahead in the journalism professions, we believe this pioneering project has helped to prepare our students for the ever-changing news media environment. The project has enriched and enhanced learning and teaching with real-life input. Students had the chance to integrate their theoretical knowledge with practical experiences and went through the entire reporting process, from news gathering to publishing/broadcasting on the web. By actively involving in this project, students not only mastered advanced knowledge and skills in web publishing, but also developed better understanding of the fast-paced technological changes. It is believed that this project has enhanced learning and teaching in the long run.

**Enhancement on Teaching and Learning**

The project provided students with the opportunity to increase their intercourse with and knowledge of an important new branch of the journalism industry through visits in both directions. It enabled students to expand their range of journalistic skills through hands-on experience and extensive practical demonstrations. It enabled us to add a new and permanent dimension to the existing print and broadcast workshops. Specifically, our students have gained several major benefits from this project:

1. In the early stage of online media operation when the practical knowledge was difficult to learn from traditional classroom teaching, the project (via a series of workshops) provided systematic hands-on knowledge and training for our students.

2. In the process of setting up the student online news station, the project supported us to invite several advisers to bring the latest professional skills and operational techniques into our own practice. As a result, students had the opportunity to learn from professionals and current practice.

3. The HKBU and Nanjing University joint symposium on Online Media Development was another important programme in which an in-depth exchange between the two sides further advanced online media teaching and learning culture and opportunity.
In short, the project has provided the chance to let our students be aware of the rapidly changing media technology and its impact on our current teaching mode. Through offering training sessions and supportive activities, the project has achieved the purpose of equipping our students with cutting edge knowledge and practical skills.

**Limitations/Difficulties**

The main limitation of the project was the fact that it was conceived at the height of the “dotcom” frenzy but by the time the project was up and running the online sector had considerably diminished in size and excitement. The project team believes strongly in the future of journalism on the Internet, but our vision of exactly what that future might be had to be adjusted during the course of the project.

There was no separate feedback for this project. The Journalism Department closely monitored student opinion through the teaching evaluation, a detailed exit survey and numerous informal contacts. Different parts of this project were offered at different times to different students so it was possible to collect from students the useful input which was implemented as the project continued, including requests for more practice and workshops. Informal comments were positive and the outcome in terms of web publishing was extensive and impressive. In that sense, the project was useful and effective.

**Conclusion**

After more than two years of operation, this project displayed an important way for the Department to meet the challenges presented by technological changes. The project produced substantial and lasting improvements in the practice of teaching and the conduct of the workshop courses. We would like to express our deep gratitude to all parties concerned for their support and encouragement.
English Language Teaching in Action

Lai Kwok Hung, Yeung Siu Wing
Department of Education Studies, Faculty of Social Sciences

Preamble
In the field of English Language Teaching (ELT), different methods or approaches have been developed to enhance the learning and teaching of English. However, many frontline English language teachers may have difficulty in implementing those methods or approaches they learned in their teacher education programmes. One of the problems they are facing is that the application of ELT theories or concepts in their classroom is never an easy task for them. To this group of teachers, there is always a gap between theory and practice. They tend to believe that teacher education programmes can only provide student-teachers with subject knowledge but not pedagogic knowledge. Because of this, this project aimed to develop a DVD to bridge the gap between subject knowledge and pedagogic knowledge in ELT. Through in-depth in-class discussions of three English lessons conducted by three local English language teachers, it was hoped that student-teachers would be able to put theory to practice by applying their subject knowledge to their teaching practice and to start developing their pedagogic knowledge in the end.

Abstract
To bridge the gap between subject knowledge and pedagogic knowledge, a DVD entitled “English Language Teaching in Action” was produced. The DVD captured three different lessons which focused on three different skill areas, namely grammar, reading and speaking. Through viewing these lessons, interviews with the teachers involved and the commentary given by the ELT expert from the Department of Education Studies, Hong Kong Baptist University (HKBU), and the in-depth in-class discussions, student-teachers could examine some current ELT issues in detail and could think of some effective strategies to tackle the ELT-related problems and to facilitate effective learning and teaching in the English classroom.

Keywords
Teaching English, reflection, analysed video material
**Introduction**

The courses *EDUC 7391 and 7392 Subject Teaching I & II (English)* are core components of the Postgraduate Diploma in Education Programme offered by the Department of Education Studies. These courses aim at enhancing the effectiveness of student-teachers in teaching English language in local schools. They also foster critical thinking and creativity in curriculum design and implementation within the students' subject area. One of the objectives of the two courses is to train student-teachers how to enhance classroom teaching based on current ELT approaches or methods (For different ELT approaches and methods, see Brown, 2001). To better equip our student-teachers with ELT classroom techniques and tasks, they should be exposed to real-life situations found in Hong Kong English classrooms. A DVD demonstrating the high incidence of related issues or concerns in the English classroom which are puzzling or intriguing to English language teachers in Hong Kong (e.g. using authentic materials in the classroom, see Larimer & Schleicher, 1999) would be a good tool to compensate the limitations of classroom simulations. Through discussing the cases in the DVD, student-teachers could share their ideas among themselves easily and examine in depth the effective method(s) used to tackle pupils' problems in learning English as a second language and to facilitate effective learning and teaching strategies. A total of three lessons (each focused on a particular skill area in ELT, namely grammar, reading or speaking) were produced. Questions to consider, ELT principles and theoretical background were introduced after the presentation of each lesson. As a result, student-teachers could develop a repertoire of effective classroom strategies for ELT and demonstrate how to apply their subject knowledge gained in *EDUC 7391-2* directly to their daily practice.

**Aims and Objectives**

The project aimed at producing a DVD of three English lessons which investigated some current ELT issues found in the Hong Kong context. Each lesson was followed by an interview with the teacher involved and a commentary given by an Associate Professor from the Department of Education Studies, HKBU. With the help of the recording, in-class discussions and follow-up activities were conducted after the student-teachers had viewed the recording. These enabled student-teachers to examine the lessons from different points of view, consolidate their knowledge of effective ELT classroom strategies and practise their methods of monitoring pupils' learning in the English classroom. Through the learning and teaching activities, student-teachers could obtain useful information about the real classroom environment in which they are working. Student-teachers would also have a better idea about their future challenges in the English classroom and they could better prepare for their English lessons. The DVD would help student-teachers enhance learning and teaching in the classroom environment more easily.
The objectives of the project were to let the student-teachers:

• be familiar with contemporary ELT principles and methodology;
• know the role(s) of a teacher when dealing with pupils’ problems in learning English;
• be familiar with the learning and teaching strategies in the English classroom; and
• be familiar with the ways of tackling ELT issues in the classroom context.

Methodology

The main theme of the DVD was to capture the current ELT issues found in Hong Kong classrooms. Because of this, a local secondary school was invited to participate in this project. The participating school is an EMI girls’ school in Shek Kip Mei. The reason for selecting this school was that the project team would like to focus particularly on ELT issues rather than those of classroom management. There are in total three different lessons in the recording, namely (1) Grammar, (2) Reading and (3) Speaking. Each of the lessons was conducted by a different teacher from the participating school. To capture typical English lessons conducted by local English language teachers in their daily practice, all three lessons were shot on the same day according to the timetable of the participating school.

To better understand the overall design of every single lesson, each lesson was followed by an interview with the teacher involved. In the interviews, the three teachers involved explained their objectives of the lessons, the strategies and techniques used in the lessons in order to achieve the objectives and the rationales behind the classroom activities conducted in their lessons. Although the participating teachers were able to describe the design of their lessons, they did not focus much on articulating the ELT ideas, concepts or theories applied in their lessons. To bridge the gap between theory and practice, the interview after each lesson was followed by a commentary given by Dr Arthur McNeill from the Department of Education Studies, HKBU. He gave some comments on the ELT principles, strategies and techniques found in each of the lessons based on some relevant ELT theories and concepts.

The three lessons were used in three different tutorial sessions at HKBU. During each session, student-teachers viewed the lesson before they were divided into groups of five and discussed the lesson among themselves to identify the ELT issues found in the lesson and the possible ways to deal with the identified problems. After that, each group had to suggest some possible solutions to the problems. The instructor then gave feedback on the suggested solutions given by each group. After discussion, students viewed the interview and the commentary sections in the recording as consolidation of the tutorial session. Student-teachers were sometimes invited to do role-play to demonstrate how to tackle the ELT issues.
found in the recording and peer evaluation of the suggested solutions was encouraged during the tutorial session as follow-up in-class activities.

**Results/Findings**

The DVD turned out to be a useful instructional aid for both pre-service student-teachers and in-service teachers who were taking the ELT courses. A questionnaire about the usefulness and convenience of the DVD (see Appendix I) was administered to a total of 65 student-teachers of the two teacher education programmes offered by the Department of Education Studies, HKBU. Thirty-nine respondents from the Double Degree Programme were pre-service student-teachers and the remaining 26 respondents were in-service teachers taking the two-year part-time Postgraduate Diploma in Education Programme. The feedback collected from the questionnaire survey was generally positive and it provided useful information for future revisions of the DVD.

There are altogether 14 items in the questionnaire and they are as follows:

1. The DVD has helped me to comprehend the subject matter more effectively.
2. The DVD has increased my understanding of this academic discipline.
3. The DVD has been effective in developing my analytical power and critical thinking.
4. The use of the DVD has been helpful in my learning of the course EDUC 7391-2.
5. The DVD gives opportunity for me to apply and develop the ideas, concepts and theories learned in this course.
6. The content of the DVD has been clearly related to the overall objectives of the course EDUC 7391-2 Subject Teaching (English).
7. The content of the DVD has been effective in relating theory to practice.
8. The content of DVD is current and relevant to my daily practice.
9. The content of the DVD is current or consistent with the contemporary knowledge of English Language Teaching.
10. The content of the DVD is well-organised.
11. The lesson shown on the DVD is challenging for me.
12. The lesson shown on the DVD relates to my everyday experiences.
13. The lesson shown on the DVD has been useful to my daily practice.
14. The interview shown on the DVD has been helpful in clarifying the subject matter.

To elicit respondents’ opinions regarding the design and the usefulness of the DVD, each of the 14 items was scored on a five-point Likert scale, ranging from 1 “strongly disagree” to 5 “strongly agree”.

The results collected from the questionnaire survey are presented in Table 1.
Table 1: Means and standard deviations of the Double Degree 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>Double Degree Mean (N1=20)</th>
<th>SD</th>
<th>Double Degree Mean (N2=19)</th>
<th>SD</th>
<th>Part-time PGDE Mean (N2=26)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.1</td>
<td>4.0</td>
<td>.65</td>
<td>3.6</td>
<td>.68</td>
<td>4.2</td>
<td>.54</td>
</tr>
<tr>
<td>Q.2</td>
<td>3.8</td>
<td>.72</td>
<td>3.7</td>
<td>.73</td>
<td>4.0</td>
<td>.82</td>
</tr>
<tr>
<td>Q.3</td>
<td>3.9</td>
<td>.67</td>
<td>3.8</td>
<td>.60</td>
<td>3.8</td>
<td>.69</td>
</tr>
<tr>
<td>Q.4</td>
<td>4.4</td>
<td>.50</td>
<td>3.8</td>
<td>.71</td>
<td>4.1</td>
<td>.65</td>
</tr>
<tr>
<td>Q.5</td>
<td>3.9</td>
<td>.79</td>
<td>3.3</td>
<td>.89</td>
<td>4.1</td>
<td>.52</td>
</tr>
<tr>
<td>Q.6</td>
<td>3.9</td>
<td>.59</td>
<td>4.2</td>
<td>.60</td>
<td>4.0</td>
<td>.77</td>
</tr>
<tr>
<td>Q.7</td>
<td>3.9</td>
<td>.75</td>
<td>3.7</td>
<td>.65</td>
<td>4.1</td>
<td>.82</td>
</tr>
<tr>
<td>Q.8</td>
<td>3.8</td>
<td>.70</td>
<td>3.8</td>
<td>.69</td>
<td>3.4</td>
<td>1.33</td>
</tr>
<tr>
<td>Q.9</td>
<td>4.1</td>
<td>.60</td>
<td>4.0</td>
<td>.75</td>
<td>4.0</td>
<td>.85</td>
</tr>
<tr>
<td>Q.10</td>
<td>4.1</td>
<td>.60</td>
<td>4.1</td>
<td>.46</td>
<td>4.4</td>
<td>.58</td>
</tr>
<tr>
<td>Q.11</td>
<td>4.0</td>
<td>.86</td>
<td>3.3</td>
<td>.73</td>
<td>3.5</td>
<td>1.24</td>
</tr>
<tr>
<td>Q.12</td>
<td>3.7</td>
<td>.88</td>
<td>3.4</td>
<td>.90</td>
<td>3.3</td>
<td>1.12</td>
</tr>
<tr>
<td>Q.13</td>
<td>4.0</td>
<td>.73</td>
<td>3.9</td>
<td>.74</td>
<td>3.7</td>
<td>1.04</td>
</tr>
<tr>
<td>Q.14</td>
<td>3.9</td>
<td>.79</td>
<td>4.0</td>
<td>.67</td>
<td>4.1</td>
<td>.63</td>
</tr>
</tbody>
</table>

From the data presented in Table 1, it is concluded that the respondents found the DVD useful in the learning and teaching of the ELT courses.

Discussion

Since most of the existing supporting teaching materials for ELT courses are contrived or developed by overseas publishers, these materials often fail to show student-teachers the actual ELT issues found in Hong Kong classrooms. Because of this, there is a need for the Department of Education Studies to develop some interactive materials for delivering the subject matter of ELT in order to enhance the quality of learning and teaching.

Real classroom situations in the Hong Kong context should be emphasised in local teacher education programmes. However, the dynamic nature of a classroom makes it difficult for student-teachers to focus on a particular aspect of an English lesson in their in-class discussions. This is because a teacher has to handle too many different things at the same time in the classroom, such as pupils’ discipline problems, individual learners’ differences, various arrangements of resources, etc. All these complications
have a negative impact on student-teachers’ analysis of an English lesson. As a result, the learning pace and outcomes of student-teachers could be greatly affected in this respect. The complicated classroom situations also make student-teachers believe that applying theory to practice only happens in ideal cases. In the end, student-teachers will lose their confidence in dealing with ELT issues in the local context.

With the help of the DVD, student-teachers could identify the ELT problems more easily and single out the incident for discussions more efficiently. In so doing, they could acquire the subject knowledge of ELT more effectively and transfer their subject knowledge to pedagogic knowledge when dealing with ELT issues in the classroom more willingly. At the same time, they could build up their confidence in combating the challenges ahead in their teaching practice.

Some of the pre-service student-teachers found that the DVD had not given them enough opportunities to apply and develop the ideas, concepts and theories learned in their courses. This might be due to the fact that they did not have enough teaching practice in local classrooms and it took time for them to develop their pedagogic knowledge.

Some of the in-service student-teachers found the content of the DVD not relevant to their daily practice. When that group of student-teachers viewed the lesson, some of them immediately pointed out that they were having students with a very low degree of English proficiency and their teaching had to be very simple. Some of them told me that they had to use Chinese in their English lessons in order to help their pupils understand their teaching. As for the Double Degree student-teachers, they were interested in examining the lessons because they could apply the theories and concepts they had acquired in their English courses. For instance, some of them were eager to analyse the sentence patterns presented by the teacher in the grammar lesson. From their discussion, it was quite obvious that they were aware of the issue regarding the syntactic complexity and the semantic complexity of teacher input in a grammar lesson.

Some of the student-teachers found that the lessons shown in the DVD were not that challenging because they might not face the same situation in their daily practice. To train student-teachers to become reflective practitioners, it is necessary for student-teachers to learn how to explore teaching by developing their ability to look objectively at teaching and reflect critically on what one discovers (Richards & Lockhart, 1994). It seemed that some student-teachers still needed more training before they could make use of the lesson information presented in the DVD to develop a richer conceptualisation of teaching and a better understanding of teaching and learning processes.
Some of the student-teachers found that the lessons shown in the DVD did not relate much to their everyday experiences. Perhaps they thought their pupils would not behave in the same way as those pupils shown in the DVD.

**Enhancement on Teaching and Learning**

According to the in-class observation conducted by the Principal Investigator in the tutorial sessions, most of the student-teachers found the three lessons relevant to their needs. Some of the student-teachers’ responses to the lessons during in-class discussion are as follows:

**Lesson 1: Grammar**

Student A: “The examples given by the teacher are rather complicated. I think…the structure is SVA (Subject-Verb-Adjective)…”

Student B: “Is she teaching active and passive voice?”

Instructor: “Not really. Look at the first part of each of the examples given by the teacher: What’s it?”

Student C: “It’s a clause…”

Student D: “No, it’s a phrase…”

Instructor: “What kind of phrase is that?”

Student E: “It’s a gerund phrase…”

Instructor: “You mean a gerundive phrase? What about examples (b) and (d) then?”

Instructor: “Could you identify the approach adopted by the teacher?”

Student F: “Deductive approach…”

Student G: “The teacher adopted the P-P-P approach in her teaching. At the presentation stage, she gave four examples of the target patterns and then she asked the students to construct their own sentences as practice. Finally, she asked the students to complete a writing task by using the target patterns at the production stage.”

**Lesson 2: Reading**

Instructor: “What are the approaches adopted by the teacher in her lesson?”

Student H: “The Bottom-up approach.”

Instructor: “How do you know?”

Student H: “The teacher taught some of the lexical words at the pre-reading stage to help students understand the text they’re going to read.”
Instructor: “Is that the only approach you could identify?”

Student I: “The Top-down approach…”

Instructor: “Could you elaborate a bit?”

Student I: “She asked students some questions about the Olympic Games.”

Instructor: “That means…”

Student I: “She activated students’ knowledge of the topic to help them comprehend the text.”

Lesson 3: Speaking

Instructor: “Have you identified any relevant ELT concepts, principles or techniques in this lesson?”

Student J: “The teacher used authentic materials…that’s a song”

Instructor: “What is the literary genre of the song?”

Student K: “Narrative…”

Instructor: “What did the teacher ask students to do after listening to the song?”

Student L: “Group presentation. She asked the students to give a new ending to the story…”

Instructor: “What’s the teacher intention?”

Student M: “She wanted the students to respond to the song after they have listened to it.”

From the above teacher-student interactions during the tutorial sessions, we may notice that the students not only had a better understanding of the lesson observed, but also consolidated the relevant ELT theories, principles, techniques and strategies after viewing the DVD. More importantly, they gained more confidence when dealing with the ELT problems after viewing the DVD.

Limitations/Difficulties

As all three lessons were not simulations, the project team tried their best to record what exactly happened in Hong Kong classrooms in order to capture the true picture of ELT issues for learning and teaching purposes. This was why the project team did not aim at shooting scripted and rehearsed lessons. This made it extremely difficult for the project team to find appropriate teachers and the right schools for the project. Even though some teachers were willing to take part in the project, their lessons were not suitable for the project since there were far too many discipline problems found in their classrooms. After doing many classroom observations in different schools, the project team could only invite a band-one girls’ school to participate in the project. However, the school had to conduct the
External School Review (ESR) soon, so the project team started shooting the lessons four months after the ESR so that the participating teachers could prepare well for the ESR. The project team had to make use of the summer to do the editing of the DVD.

As the DVD captured three lessons in three different skill areas, the Principal Investigator had to use the DVD in his tutorial sessions according to his teaching schedule. That is to say he could only use the grammar lesson when he taught that skill area. To have different groups of student-teachers to help in evaluating the DVD, the Principal Investigator intentionally chose three different groups of student-teachers to participate in the evaluation process (two groups of student-teachers of the Double Degree Programme and one group of the Postgraduate Diploma in Education Programme).

As each tutorial session for the Double Degree student-teachers lasted for 1 hour and 50 minutes, there was not enough time for the class to have an in-depth discussion after the student-teachers had viewed the lesson, the interview and the commentary. This greatly affected the effectiveness of using the DVD to facilitate in-depth discussion in the classroom.

**Conclusion**

It is believed that the DVD “English Language Teaching in Action” has enhanced the learning and teaching of ELT courses. According to the feedback from the student-teachers of the Double Degree Programme and part-time Postgraduate Diploma in Education Programme, they benefited a lot from viewing and discussing the three lessons captured in the DVD. They generally found all three lessons very realistic and realised that these lessons revealed some of the ELT issues that they were facing or about to face in local schools. Student-teachers also found the interviews with the teachers involved very helpful because they could check if the teachers involved were able to achieve their lesson objectives by implementing their teaching plans and employing their ELT strategies. With the help of the recording of the lessons and the commentary, not only were the student-teachers given the opportunity to look at some current ELT issues in each of the lessons in detail, but also they could demonstrate a better understanding of the ELT theories, principles, techniques and strategies learned in their courses. After the tutorial sessions, student-teachers gained much confidence in dealing with ELT issues in the classroom setting. They also looked forward to having another DVD of the same kind covering more skill areas in the future.
References


Acknowledgements
Mrs Jane Or
   Principal, Holy Trinity College
Mrs Anna Ma
   English Panel Chairlady,
   Holy Trinity College
Mrs Angela Lai
   Holy Trinity College
Miss Claudia Lui
   Holy Trinity College
Miss Queenie Choi
   Holy Trinity College
Dr Arthur McNeill
   Department of Education Studies,
   HKBU
Information Technology Services Centre, HKBU
Appendix I: Teaching Materials Evaluation Form

As you may probably know, we are developing a DVD, entitled “English Language Teaching in Action”, for learning and teaching EDUC 7391-2 Subject Instruction (English). 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 subject.

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.


<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. The DVD has helped me to comprehend the subject matter more effectively.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. The DVD has increased my understanding of this academic discipline.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. The DVD has been effective in developing my analytical power and critical thinking.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4. The use of the DVD has been helpful in my learning of the course EDUC 7391-2.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6. The content of the DVD has been clearly related to the overall objectives of the course EDUC 7391-2 Subject Teaching (English).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7. The content of the DVD has been effective in relating theory to practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8. The content of DVD is current and relevant to my daily practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9. The content of the DVD is current or consistent with the contemporary knowledge of English Language Teaching.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10. The content of the DVD is well-organised.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11. The lesson shown on the DVD is challenging for me.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12. The lesson shown on the DVD relates to my everyday experiences.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13. The lesson shown on the DVD has been useful to my daily practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14. The interview shown on the DVD has been helpful in clarifying the subject matter.</td>
</tr>
</tbody>
</table>

END OF EVALUATION