MESSAGE FROM DETC

As we submit this latest issue of EXCELLENCE for your perusal and use, I trust that the Spring term is going well for all of you. The theme chosen for this issue is one that is familiar to any of you who have been Boy Scouts—"Be Prepared". Our interpretation is within the context of teaching here at HKUST.

Excellence in teaching, which is a stated goal at the university, requires being prepared in a number of aspects of the teaching process. These include content expertise in a given academic discipline, curriculum/course/unit planning, learning theory, communication and presentation techniques, use of AV materials and equipment, and assessment and evaluation. Every faculty member is prepared at the time they begin teaching with up-to-date content expertise in their respective academic disciplines. This is important as this is part of their professional responsibility to students. But content expertise does not mean that you are guaranteed to be an excellent teacher. Most excellent teachers are not born that way. They are trained. Obviously there is no need for help from ETC staff in content expertise preparation. We can, however, be of great assistance in the other areas mentioned above. From communication theory “interference” is something which occurs during the process from sender to receiver which keeps the message from 100% transmission. Inadequate planning or organization, not using AV materials well, using poorly designed visuals, or fumbling with AV equipment all serve as interference in the teaching and learning process. With your commitment, (which is absolutely imperative for success), and our in-house expertise we can help you be better prepared. Our staff in instructional development, graphics and audio visual can help you be better prepared. Think of the teaching process as flying an airplane. Your content expertise “enables you to take off from the runway”. How do you navigate to your destination and land safely? Through the assistance from ETC staff whose content expertise is in the areas of ID, AV, Graphics, and Video, we match our expertise with yours to create a well prepared, well orchestrated effort in the classroom.

We hope the contributions which follow in this issue, as well as all of our services, are as useful as they are professional. We are open to, and solicit you comments and suggestions. Criticisms are also solicited as they will help us to continue to do better and better jobs for you, our clients. You may contact me directly at 6802 or by e-mail at ETCDMB. Thanks.

Donald M Boehnker
Director
Achieving Excellence

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Instructional Development

TEACHERS AS CRITICAL, REFLECTIVE PRACTITIONERS

Self-appraisal and professional development for accountability

With the establishment of a sub-committee on quality in teaching under the auspices of the University and Polytechnic Grants Committee in Hong Kong, it has become increasingly clear to both senior tertiary management and faculty at the seven Government-funded tertiary institutions that there are now both externally-required and internally recognized reasons for the pursuit of excellence in teaching:

If professions are to maintain their traditional autonomy and freedom from influence by governments it will become increasingly necessary for them to be able to indicate publicly that they are engaged in their own internal schemes of accountability and self-monitoring. This applies as much to the academic profession as it does to medicine and law and others. Whatever may be the current reaction of academics to demonstrate their competence in teaching and other matters it is clear that they will have to establish their own mechanisms for self-appraisal if they are not to have external appraisal thrust upon them.

(Boud, 1980, pp.225)

The Educational Technology Centre (ETC) at the Hong Kong University of Science and Technology has been asked by the Pro Vice-Chancellor (Academic Affairs) to help with educational evaluation and the professional development of those who have to teach. Hence there are the ETC co-ordinated end-of-semester course evaluation, the training programme for teaching assistants, and the provision of a video-classroom for microteaching. But there are also many other ways of establishing schemes of self, peer and student-based appraisal which HKUST faculty can design for themselves or adopt, and this paper provides a brief introduction of one of them, the action research method. Addi-
In deciding just where to begin in making improvements, a researcher settles on a field of action - where the battle (not the whole war) should be fought. The four fundamental aspects of action research, to reiterate, are:

- To plan an action to improve what is already happening;
- To act to implement the plan;
- To observe the effects of action in the context in which it occurs; and
- To reflect on these effects as a basis for further planning, subsequent action and so on, through a succession of cycles.

(Kemmis and McTaggart, 1982, p. 7)

This description of the action research cycle may strike people as being neither unique nor new, and they are correct. Many teachers probably do most of the activities even subconsciously. However, the action researchers will treat the cycle of actions as a formal project to be undertaken systematically and collaboratively, involving others affected by the action in the process. It uses a team approach, and its time frame is long and cyclical. It is particularly suited to the study of incremental classroom processes:

The basic premise of classroom research is that teachers should use their classrooms as laboratories to study the learning process as it applies to their particular disciplines; teachers should become skillful, systematic observers of how the students in their classrooms learn.

(Cross, 1988, p. 3)

For teachers engaged in research, this method calls for communication with all affected parties (that is, other teachers, parents, and students), which helps to clarify unforeseen consequences and ramifications, makes defining the issues easier because explaining the projects to others demands clarifying one’s own thinking, and aids reflection by providing a variety of perspectives on the effects of action and the constraints experienced. Zuber-Skerrit (1992) believes that action research has a tremendous potential to improve the social context and conditions in which teaching, learning and professional development take place, that it can advance knowledge in higher education by gener-
ating grounded theory and documenting excellence in teaching. On the other hand, she points out that action research may not be attractive to many teachers as it requires:

- Time (the long term benefits are often not seen in the beginning);
- Developing a team spirit, group collaboration and consensus;
- Breaking old habits, traditions, inertia, hierarchy; and
- Getting support from top management.

(Zuber-Skerrit, 1992, p. 215)

The new interpretative paradigm for research

At the risk of generalizing, I would say that action research is still little understood by top management as well as new researchers in Hong Kong tertiary institutions, who are awed by the more traditional natural science paradigm based on empiricism, the deductive-nomological or hypothetico-deductive process and concentration of quantitative data collection. What David Hamilton and his fellow researchers called, in the seventies, the "numbers game" is still regarded as being the more reliable method, and conclusions drawn from means, median, chi squares, etc. still carry an air of infallibility. However, many Australian and British researchers are critical of this "scientific" paradigm for failing to take into account the many faceted actions, idiosyncrasies, meanings and purposes of people and argue for a new paradigm where the evaluative function is to interpret and render the meanings and purposes of teachers and students in situ for deeper understanding of all relevant issues and not just to invoke superficial universal causes or solutions. The interpretative paradigm, on the other hand, has as its focus the understanding of the subjective world of human experience, and actions are explained within a context which assumes that they are performed by the agent to bring something about, as in the case of our teacher in Figure 1. Subjective meanings and actions, socially located, are used by the research collaborators to re-define objectivity in terms of shared agreements between individuals.

While the merits of the interpretative paradigm are still being challenged by followers of the rational or scientific paradigm in the international academic research community, it has empowered many teachers to take research as their own responsibility, to reflect critically on their own motives and actions so that they can voluntarily effect changes which will ultimately benefit their institutions, their students and their own professional development. (Zuber-Skerrit, 1991) Reflection has thus provided a basis for critical analysis and constructive change and is therefore an extremely fruitful method for action researchers.

Critical reflection

Critical reflection is also referred to as critical theory, which has drawn upon the work of the social theorist Anthony Giddens to espouse a fundamental reflexive link between human agency and social structure.

(Giddens, 1979) What Giddens did was to extend the interpretative paradigm to embody a recognition that:

- That culture and social structure are constructed and reconstructed through history by the people who share and occupy them, and that people are themselves shaped as social beings by the cultural and structural conditions which surround them.

(Evans & Nation, 1989, p. 10)

This theory therefore has relevancy to the study of the ethos and culture of the classroom and the institution. The critical theory used for educational evaluation has these two premises:

- That education is seen to be a problematic field of practice riddled with contradictions, and hence there is no perfect way to teach and no one truth to teach;
- That teachers have the power to change their practice in their own terms.

(Evans and Nation, 1989, p. 9)

These two premises are almost self-contradictory unless one remembers that qualitative research is not predictive, what has happened in the past and worked does not mean that it will happen again or work in the future. It is for this reason that qualitative researchers tend to shy away from offering prescriptions and solutions, tips and clues on how people should teach, as these suggestions are usually context dependent and
are open to a great deal of modifications because of the preferences, experience and ideologies of the practitioner teachers. True, there are many books which have been written and published in response to teachers who say, "Don't give us all that theory. Give us something that works." And no doubt skill-oriented educational technologists would recommend such books as those by Erickson and Strommer (1991), Allen and Ruetter (1990), which are of dubious value when transported to a different cultural environment like Hong Kong.

It must be recognized that faculty are both teachers and subject experts and that they may be motivated to change or to modify their practices in the light of their own perception of their teaching style relative to their own perception of effective teaching. As their own researchers, they have the advantage of linking their professional development to their subject specialism, rather than being fed generalizations about learning and teaching by others. They themselves are quite capable of generating their own personal theories based on their own experience in teaching a subject. These generalizations about learning and teaching are subsequent to, not preceding, practical experience. (Schratz, 1992)

The aim of educational research, therefore, must be to develop and share "practical wisdom" through the identification of unquestioned beliefs and common-sense understandings of reflective "practitioners in order to show how these may stem from antecedent conditions". (Rumble in Ortner, Graff and Wilmersdoerfer, p.120). The ETC looks forward to collaborating with our faculty who are prepared to undertake such research into their own teaching.

References


Erickson, B. L. and Strommer, D. W. (1991) Teaching College Freshmen Jossey-Bass, San Francisco.


By Angela Castro, Instructional Development Manager, who is responsible for instructional design, research methods and multimedia development in the Educational Technology Centre.
UNIT ACTIVITIES

The NUDIST seminar (31 March 1993)

The ETC and the Division of Social Science jointly hosted a successful research seminar by Associate Professor Lyn Richards, an internationally renowned qualitative researcher from La Trobe University, Australia. More than eighty people attended the stimulating one-day seminar which had the catchy title of "Qualitative research methods, computers and NUDIST (Non-numerical Unstructured Data Indexing, Searching and Theory-building)." Of the 50 HKUST members who signed up, 40 actually attended the seminar and many of them told the ETC staff afterwards that they could see the potential application of qualitative research methods for their respective areas and would like the ETC to run some NUDIST workshops later on for them as a follow-up.

Associate Professor Lyn Richards at the NUDIST seminar

A training programme for the People's Bank of China
(2-19 April 1993)

Angela Castro was a guest lecturer at an intensive training programme jointly organized by the Hong Kong Association for Educational Communications and Technology and the Hong Kong Baptist College for 43 educational technologists and staff development managers from the regional branches of the People's Bank of China. These senior trainers visited the HKUST at the end of their programme.

TRAINING OF TEACHING ASSISTANTS AT HKUST-
A FOLLOW-UP SURVEY REPORT

Background

Between October and November 1992, a series of workshops was held for all teaching, laboratory and tutorial assistants (TAs) at HKUST to equip them with some basic professional skills. A report on the development and implementation of the programme appeared in the December 1992 issue of Excellence.

The report raised several questions, including

- Should all new TAs be required to attend the orientation programme?
- What are the incentives for TAs to attend a training/development programme like this?
- How best to impress on TAs the benefits of their participation in the TA training/development programme?
- In what ways do faculty who work with TAs have to be involved in supporting TAs in their job?
- What is the role of ETC in supporting TAs?

Angela S. Castro
Two questionnaires were subsequently sent in February 1993 to all department heads and TAs to find out their opinions on these issues. Eight usable responses from department heads and 55 from TAs were received.

To supplement the findings, five in-depth discussions were held between the researcher and TAs from different schools/division. All five were participants in the 92 TA Training Programme.

A full report summarizing all the major findings with a discussion of the findings has been submitted to the authorities concerned. This is an abstract of the report.

**A summary of the major findings**

1. Survey findings show that TAs from different schools/division have fairly different tasks to perform. Findings also reveal a need for the department/TA supervisor to re-examine their assignments for their TAs and their roles in supporting TAs' work. TAs and their supervisors may have different perceptions of what constitute the major duties/tasks of TAs. Such incongruity may greatly affect the TAs' job effectiveness and have a great impact on students' learning. A comparison of the perceived major and routine duties of the four schools/division is depicted in the following two line charts.

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2 line charts, major and routine TA duties
2. Responses from both department heads and TAs show that departmental support to TAs is of great importance to their performance. The following chart outlines the very essential support to TAs, opined by heads and TAs.

Head & TA: Very essential/essential support to TAs

3. 67% of the TA group said that they saw the need for an organized training programme for TAs. The majority, 100% from the head group and 60% from the TA group, would like to make the future TA orientation/training programme a compulsory one for all new TAs. The beginning of the semester is regarded as the best time to have the orientation while workshops/meetings can be organized throughout the semester.
4. Both respondent groups found ETC services and support for TAs useful. Making known to TAs and faculty available teaching/tutoring resources is the most urgent need, as expressed by both heads and TAs. But the two groups had slightly different expectations towards the six kinds of support services to be provided by ETC. The following chart shows the differences of the two groups on the issue.

HEAD & TA: ETC SUPPORT FOR TAs

<table>
<thead>
<tr>
<th>Service</th>
<th>HEAD (%)</th>
<th>TA (%)</th>
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<tbody>
<tr>
<td>Disseminate sf bulletin</td>
<td>90.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Organize workshops</td>
<td>70.00</td>
<td>60.00</td>
</tr>
<tr>
<td>Organize meetings for supervisors</td>
<td>60.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Provide books, video, etc.</td>
<td>50.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Provide consultation</td>
<td>40.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Introduce ETC services to faculty</td>
<td>30.00</td>
<td>20.00</td>
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</tbody>
</table>

5. Findings show that 'time clashes with work in department' and 'time clashes with personal commitment' are the two major barriers to TAs' participation in past workshops. The third major reason is 'lack of incentive to attend'. Since TAs' time is always scarce, alternative modes of learning should be explored. Compensation for personal time spent on development programmes is an issue to be explored.

In brief, responses from both department heads and TAs show their demand for an integrated approach, pooling the efforts of department, faculty who are TAs' supervisors, and various campus service centres, to provide on-going training and support to TAs to enhance their performance. The department is the major provider of job-related training and daily support to TAs while ETC will keep on in its roles of assessing the training needs of TAs, planning and coordinating/organizing orientation and workshops for both new and experienced TAs, disseminating information and providing consultation to TAs, etc.

For details of the TA Survey Report, please contact Winnie at ext. 6809 or email "etwinnie".

Winnie Wong
Assistant Instructional Development Manager
AV PRODUCTION SERVICES PROVIDED BY ETC

Production Output

The production team of the Audio-Visual Services Unit started functioning in July last year, after two crew members of the sub-unit reported for duty. From then to February this year, the Production Sub-Unit completed more than seventy jobs, ranging from video production, videotaping of classroom lectures, mass audio and video duplication to video conversion.

As indicated in the chart below, in the first two months, probably because the University staff were not so familiar with the production services, there were only four job requests each month.

However, after ETC held an Open House on the 4th of December last year, production service requests started pouring in. A total of thirtysix jobs were completed from last December to February this year, which amounted to almost half of the jobs done by the Production Sub-Unit in the last seven months. The Language Centre was one of our major users, nearly one-third of the jobs done in that period being requested by them.

Our Production team welcomes all the University staff to make use of our service. We expect and are prepared to receive more and more production work requests in future.

Production Format and Capacity

Our Production Sub-Unit is currently using the S-VHS format for all our video productions; our users might request finished copies in both S-VHS and VHS formats. We recommend the use of S-VHS format whenever possible simply because it provides much higher picture resolution and visual definition when compared with the normal VHS format.

The AV equipment set-up in the control room of our Video Classroom is quite similar to that of other production houses. It is capable of all kinds

NUMBER OF JOBS

<table>
<thead>
<tr>
<th>MONTH</th>
<th>JUL 92</th>
<th>AUG 92</th>
<th>SEP 92</th>
<th>OCT 92</th>
<th>NOV 92</th>
<th>DEC 92</th>
<th>JAN 93</th>
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<td>4</td>
<td>8</td>
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<td>15</td>
<td>11</td>
<td>15</td>
<td>10</td>
<td>20</td>
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</tbody>
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JUL 92 AUG 92 SEP 92 OCT 92 NOV 92 DEC 92 JAN 93 FEB 93
of audio-visual effects, and even some of the digital video effects which you see on TV.

With the facilities in our Production Sub-unit, we can produce all sorts of audio-visual programmes, both indoors and outdoors. The services we provide for the University staff include:

- videotaping a lecture in our video classroom or anywhere else on or outside campus;
- video recording a seminar or workshop;
- video production of experiments, demonstrations and tutorials for students;
- video production of research projects;
- or any other feasible ideas you may have.

We can say that, although our Video Classroom is small, our video production capability is in no way inferior to that of other production houses in Hong Kong. We have the facilities and the know-how to produce high-quality videos for our University community.

Production Charges

Talking about video production, our users might be concerned about the production fees we charge. We should like to stress here that our charges for video production are probably among the lowest compared with other production houses in Hong Kong. Since the University absorbs all the overhead costs, we only charge our users the cost for materials used and other related direct costs.

For instance, the 13-minute Orientation Video we produced for the University Library last August cost them just one hundred dollars for two copies of the Video and six hundred dollars for the copyright fee of the background music used in the video. The copyright fee of the background music was charged by the Music Publishing Co., which after some negotiation gave us a discount on account of our educational purpose.

Other production houses in Hong Kong would have charged at least $10,000 per minute for a similar video production.

Present Limitation

Our Production Team are most willing to try our best to serve the University community. However, it should be noted that there are only two crew members in our team, one AV Producer and one Technician. Every time when we take up a video production job, we have to call upon other members of the AV Unit to set aside their own duty and give us a hand. In practice, our Production Team members have to wear many different hats throughout the production process, serving at once as the Producer, Cameraman, Assistant Cameraman, Soundman, Lightingman, Video-editor, Audio-editor, Video-graphics Animator, Sub-title Typist, Post-production Technician and Sound-mixing Technician. In an established production house, these jobs are shared by different people.

Under these circumstances, where a video production job requires only simple editing and audio-video dubbing, we may have to advise our users to do the job themselves. This do-it-yourself approach has two obvious benefits - the users can share the fun (or frustration) of video production work while our production team can concentrate on more elaborate productions. Our AV Unit makes available a number of self-service facilities, which are accessible near the Loan Counter in Room 1030. Staff members are welcome to make use of these facilities for simple AV production jobs on a self-service basis.

Our technical staff would be more than happy to provide demonstration and simple coaching on the use of these facilities. The self-service facilities provided by the AV Unit include a complete S-VHS/VHS video editing suite, an AV viewing/dubbing suite and a fast-speed audio cassette duplicator.

In case you want to produce a video which is so complicated that you need our production services, you are most welcome to approach us by giving us a call (Ext. 6814) or sending us an E-mail (Address: ETSSHEK). We are always ready to discuss your specific production needs with you.

Kin Shing SHEK
Assistant Audio Visual Manager
VIDEO PRODUCTION SAMPLES
**Gr aphi cs U N I T**

**PREPARATION FOR PRESENTATION SLIDES AND OVERHEAD TRANSPARENCIES**

**Introduction**

Graphic presentation technology has made rapid advances in recent years, and the progress continues as the use of visuals escalates. Our users, engrossed in their own research and teaching, may not be aware of the advancing technology in this area. The purpose of this article is to introduce the current methods of producing colour slides and overhead transparencies. It is hoped that, with a general knowledge of these advanced methods, our users can be better prepared for their lectures and presentation.

**Production Methods**

Anyone first faced with the task of preparing a presentation will ask the same question: "How will I produce the visuals?" In the past, this meant contacting a production team of artists, phototypesetters, photographers and darkroom technicians to make arrangements for the production. Today, producing professional-looking visuals for presentation is far simpler, easier, and less expensive. At ETC, there are a number of ways to produce slides and overhead transparencies.

**Presentation Slides**

- **Original Image**

Colour slides can be made by photographic shooting of the real objects or occasions. This is the method for producing high-quality images and is particularly useful for recording experiments when fine and subtle details are critical. Different types of film are available to capture various subject matters in scientific studies. However, users should be aware that the shootings usually involve many people, a long set up time, preparation and coordination work. It should be used only when the image is unique and firsthand image is necessary to serve the purpose.
Presentation slides can be made by photographic flatcopy of colour images, other than real life objects, from other sources such as books and magazines. It is done by fixing a camera at the top of a copystand and shooting the picture directly.

The quality of the copied image depends on the original to be shot. Not all pictures are suitable for photo-flatcopy. Always try to avoid reproducing glossy pictures as there will be reflection of light while using flash for exposure. Images that spread across pages and cannot be kept flat are not advisable too as the reproduced image will be distorted.

Colour slides can also be made by duplicating images directly from other slides and negatives in various formats such as 35-mm, 6cm x 7cm and 4" x 5". This is a better way of duplicating images than copying from printed materials which, when enlarged during projection, will show blurred edges, undesirable paper texture and dots of printing screen. Nevertheless, the image quality will deteriorate after generations of duplication. The colour of the duplicated image will shift slightly from the original and usually has greater colour contrast while some subtle details will be lost. For legal considerations, users should also clear all copyright restrictions before they reproduce other parties' materials.

Mono-colour slides can be obtained by shooting black and white images, preferably hard graphics, with a special kind of mono-colour film like Polarblue film. Like other Polaroid products, it can be processed instantly within minutes and produces negative image by converting white background into blue and black type or graphics into "white" (transparent). Polarblue film adds colour to black and white text, figures and tables and is ideal for small quantity but urgent flatcopy work.

When preparing masters for Polarblue flatcopying, it is advisable not to have on the same page tinted block, bold and light typing fonts, or very thick and thin lines. According to our experience, the film cannot capture all these elements within the same frame clearly. The use of Polarblue is much more expensive than other films and therefore it is not advised for large quantity jobs.

Besides Polarblue, mono-colour slides can also be produced by diazochrome film, which gives similar effects as Polarblue but with more colour choices. However, the production processes are very complicated and time-consuming. Therefore, it is not adopted in ETC.

Computer slides can be generated without any photographic shooting involved. The visuals can be created on computer and recorded in a film/slide recorder which is attached to a camera. This is the latest development and a more convenient method of
creating visuals for presentation. No cuts and paste is needed to prepare the master. Every change can be done on the computer until the final version is approved for further processing. With the advancement in computer graphic technology, more and more presentation slides are produced by this method.

The limitation of computer slides is that the film recorder used must work with the application programs by which the images are generated. In ETC, we have experience in outputting Mac format files created by Persuasion, PowerPoint, PageMaker, Freehand, Photoshop and Illustrator. The only PC program that we deal with, for the time being, is Harvard Graphic. This does not imply that we are unable to handle other files. But more time is certainly needed for testing and trial. Usually, image quality and sharpness are determined by the software used.

Overhead Transparencies

- By Transparency maker/photo copier

Mono-colour transparencies can be produced by using a plain-paper copier or transparency maker. It is the fastest and cheapest way of producing transparencies and is available in black, red, blue or green. However, only hard copy originals can be used and the quality is relatively inferior.

- By Colour Photocopier

Colour transparencies can be made as easily as making an ordinary photocopy by using the colour laser copier in ETC. Besides hardcopy, the copier also accepts colour slides and negatives as originals for producing transparencies. This is the fastest way to reproduce full colour images in transparencies.

This method produces high quality results for both line and continuous tone images such as photographs and illustrations. It also allows adjustments in magnification, colour balance and contrast.

- By Colour Laser Printer

Computer generated images can be output through a colour laser printer into colour transparencies. Like other output devices, the laser printer must be compatible with the software with which the visuals are created. The laser printer in ETC accepts most Mac format word processing, drawing and desk-top publishing files. However, it is advisable for users to check the compatibility of their program if they want to create the visuals themselves and output through ETC. This method is a very convenient way to produce visuals for transparencies, but it takes long outputting time and the materials are rather expensive.
Ordering slides and transparencies through ETC

Ordering presentation slides and transparencies is simple and straightforward. It basically involves the following steps:

- Consult ETC staff about production method, cost and timing.
- Provide clear instructions, necessary materials and arrangement for photo shooting or flatcopying.
- Check compatibility of software if visuals are created by users themselves using the computer.
- Submit a signed ETC Work Request Form.
- Proofread and approve layout if visuals are designed by ETC before processing.
- Check and approve the final products.

By following the above procedures, working process can be kept simple and production time can be cut short. With a better understanding of the different methods available in producing presentation materials, users can better utilize our services and save a lot of effort when preparing their presentation.

Thomas Ng
Assistant Graphics Manager

SOME TIPS ON PREPARING ORIGINAL
FOR OFFSET PRINTING

The Graphics Unit of ETC is going to launch its colour offset printing services for HKUST users. To obtain the best result from offset printing and as the first step to ensure printing quality, we suggest that users pay attention to the following points when they prepare materials for offset printing.

Avoid using laser printout as original. The resolution of most laser printouts is 300 dots per inch (dpi), which is not sharp enough for offset printing. Bring your file to ETC and we will help output your file by using our imagesetter. We can output text and graphics with resolution up to 1600 dpi and 2400 dpi on bromide paper or film for professional printing.

Avoid using printed/screened image as original. All continuous-tone images must go through the process of screening before they can be reproduced by offset printing. This process breaks the continuous tone into tiny dots to give the illusion of the original tone. However, using for reproduction purposes a screened image (which usually will be rescreened again) will create an undesirable pattern (moire). The dots will become coarse and noticeable when the screened image is overly enlarged.

Using slide rather than photograph as original. Colour slides (transparent media) can always produce better tonal quality and richer colours than colour photographs (reflective media) in the offset printing process.

Don’t assemble picture and text on the same page to produce artwork. It may destroy the original picture for future uses. Pictorial and textual elements are usually handled separately in printing production. Please consult ETC staff on how to produce the appropriate artwork for your job.

Offset printing is not suitable for small quantity job. Offset printing requires many pre-production processes such as colour separation, film-making, striping, impositioning and plate-making. Therefore, it is not economical in terms of labour hours and costs involved to use offset printing for a job requiring less than 500 copies.

Thomas Ng
Assistant Graphics Manager