Enhancing Tertiary Teaching Through Action Learning: A Preliminary Evaluation of the Action Learning Project

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Introduction

Universities the world over are paying closer attention to the quality of their teaching than ever before. This is due, first, to their expansion. In Hong Kong we have seen the proportion of students seeking university level qualifications increase from about 6 % in 1987, to nearer 20% at the present time. The new clientele of students is different from the academic elite we have been used to, and they require more student-friendly and more effective teaching methods than lecturing (Biggs, 1993a).

Second, universities in Hong Kong, as elsewhere in the world, are increasingly being held publicly accountable for their efficiency and effectiveness, particularly in teaching. But unlike any other system in the world, Hong Kong can boast a centre or unit responsible for enhancing the quality of teaching in every university in the system. In Australia, on the contrary, such centres are being 'downsized' or eliminated, which in the tertiary education crisis that is occurring there is like lightening an aircraft by throwing all doctors overboard when the pilot is having a heart attack.

But back to Hong Kong. The UGC has also made large sums of money available specifically for the improvement of teaching. In the 1992-5 triennium, $33 million was so dedicated and distributed to each UGC institution to be disbursed as each thought fit; another $150 million materialised in the following triennium. Much of this money was used to fund staff-initiated projects, of which most were product-oriented: that is, a particular product, frequently a software package or some ed tech device, was adapted and evaluated for use with a particular course. Product-oriented development may possibly lead to better learning outcomes, probably to more comfortable teaching, but it does not necessarily lead one to think about teaching itself; the teacher continues to teach much as before.

A fish provides a meal today; a net provides meals for the rest of one's life. Action learning, which focuses not on add-ons to teaching but on the teaching/learning process itself, promises to be such a net. In 1994 the UGC was persuaded that it was worth punting $13 million on the Action Learning Project to investigate the cost-effectiveness of the approach, this money coming not from the above sources but from the UGC Central Allocation. Our task today, when many of the funded action learning projects are nearing completion, is to begin addressing the questions: 'Does it look like the ALP is working?' and 'Was it worth $13 million?' You will have begun to form your own ideas on these issues from the sessions you have attended, and now we, as the official Evaluation team, will give our preliminary conclusions.

Evaluation of the ALP is taking place at several levels. First, each project team is expected to evaluate its own project. Then the ALP team itself is evaluating collections of projects, looking at

such questions as the factors determining what makes a successful project (Kember, Ha, Lam, Lee, Ng, Yan and Yum, 1996). Our task is broader still: it is to evaluate the functions, organisation and general effectiveness of the ALP itself, and specifically to address four questions (*op. cit.*):

1 Is action research an appropriate concept for improving the quality of teaching and learning?

2 Was the ALP an effective implementation of the concept?

3 What lessons can be passed on to other universities which desire to implement measures to improve the quality of teaching?

4 Does this method of educational development appear to offer reasonable returns compared to alternative measures for quality control and enhancement?

We cannot of course give final answers to all these questions today, but we can certainly at this stage give an indication of how we see the project functioning. First, we need to be clear about what is meant by action learning and how it relates to enhancing teaching.

Is Action Research an Appropriate Concept for Improving the Quality of Teaching and Learning?

Action Research and Action Learning

'Action learning' is closely related to the term 'action research', but is both more general and more particular (Kember and Kelly, 1994). Action *research* is a research tradition extending back 50 years or more; like all respectable research its results are intended for publication. Action *learning* is less formal; it is not necessarily intended for publication, and so does not have to be generalisable enough to contribute to the research literature (although it is highly desirable that it should), but it uses the same cycles of reflection, planning, implementation and monitoring in order to improve the target of the research, in this case the teaching of an individual teacher. The 'learning' in action learning thus refers not only to student learning, but to the teacher learning about student learning, to learning about research methods, to learning about teaching and particularly to learning about *oneself* as a teacher, and to learning how to use reflection to become a better teacher. Action learning, then, is not product-oriented, trying some teaching innovation out to see if it works, but process-oriented, the processes of one's own teaching and of one's students' learning. It is the net that provides a continuing supply of educational fish.

There are several different paradigms of action research, each with its various gurus — Lewin (1946), Stenhouse (1975) and Elliott (1991), and Kemmis and McTaggart (1988) — but we think the paradigmatic way of looking at action research leads those on the inside to dogmatism, and those on the outside to mystification. We would rather talk about the practicalities. What should action learning projects look like? What are the essential ingredients?

1 the aim is the *improvement* of current practice

2 the researchers are the *participants*, not outsiders brought in to propose expert solutions, and the topic is decided by the participants.

3 the driving conceptual process is *reflection*, on the part of the participants

4 action is *systematic*, involving the cycle: reflect, plan, act, observe, reflect on the results, and so on into cycle two.

Some writers stress that action research must be social and collaborative. Kemmis and McTaggart (1988), of critical-emancipatory bent, see action research as a process for collaboratively bringing about political change. So can email. We are talking here about the improvement of teaching,

nothing else. Some ideas obviously need collegial support, and many innovations need a supportive systemic structure (which makes a department a more powerful focus for action learning than an individual), but it is not *essential* for action learning as such. Projects can effectively be run by individuals, with respect to their own teaching, but most projects are team efforts, and enhanced collegiality as we shall see is one of the major benefits of action learning.

The Role of Theory

Kurt Lewin (1946), regarded by many as the father of action research, put *theory* at the centre of action research: the sort of theory that drives decision-making. 'There's nothing so practical as a good theory', as he put it. Every teacher has some kind of implicit theory of teaching. The initial jolt that says 'There's a problem here' comes about because one is reflecting on what's happening. A theory is that network of assumptions, implicit or explicit, that causes the light to glow, but it is only useful if it throws light on the path along which we want to walk. Kemmis (1994) emphasises that action learning is specifically to help practitioners investigate the connections between their own theories of education and their day to day educational practices; reflection illuminates those connections.

Reflection

The reflective component in action research comes not so much from Lewin as from John Dewey (1910). More recently, Schon's (1983) notion of the reflective practitioner has become influential in professional education. Reflection is the observation and evaluation of one's own actions through a conceptual framework, which leads to changed decision-making. It is reflection that turns the novice teacher into the expert.

Targets of Action Learning

What is it precisely that we want to change? That depends on the aim of the particular project, and each of the 50 project directors here had their own aims and purposes in carrying out their project. Three sets of targets can be distinguished:

Table 1: Targets in action learning projects

To do with Students	To do with Teachers	To do with the Institution
approaches to learning	teaching skills	curriculum, workload
learning outcomes	attitudes	logistics of delivery
attitudes	perspective transformation	assessment, grading,
coping strategies	inter-collegial skills	course design

Other targets could be listed under each of these three heads, of course. Whatever they are, they need to be clearly thought out in advance, and then other phases in the project's design fall into place. The observation and gathering of compelling evidence, depends on what it is that one is interested in gathering evidence about. Of course, we should allow also for evidence bearing on unintended outcomes.

One outcome, *perspective transformation*, is held by some to be vital, whatever the specific targets of an action learning project (Mezirow, 1981). That is, as the subject (and object) of reflective enquiry, the action researcher should undergo a *personal change* in his or her perspective on teaching. Such a change might refer to the *conceptions* of teaching held: one's views of the nature of the teaching and assessment processes, of the nature of student learning, and of oneself as a teacher: one's strengths, weaknesses, areas needing improvement, and so on. Reflection if it is effective brings with it changes in one's self-concept as a teacher, but it is important that the researcher becomes consciously aware of these meta-theories of teaching, and of their relation to changed practice.

Systematic Enquiry

1 *Reflection on current practice: what is wrong?* Pinpoint a problem and define it in such a way that it is soluble. 'The stuff isn't getting across' doesn't define a soluble problem, while 'The students aren't giving me back anything that isn't in my lectures' does, and one based on a theory of how students *should* be behaving.

2 *What to do about it?* Planning, involving possibilities of change, new teaching strategies, all involve complex, theory-based decisions, and in most cases the resource to advice (see below).

3 *Implementing the new ideas.* This needs to be done with an eye to two aspects: (1) implementing from the teacher's point of view, that is in the way that fits the present context, resources and educational purposes; and (2) implementing from the researcher's point view, that is in such a way as to make it possible to gather compelling evidence as to the success or otherwise of the new strategy. It may not mean using control groups but certainly baseline data need collecting.

4 *Gathering compelling evidence* by observing rigorously and systematically to see if any of the desired changes (in student learning, in attitudes, whatever the target is) are taking place. This involves not hunches and gut-feels, but systematic observations by colleagues or others, questionnaires to students and/or others, interviews, achievement test results, attitude scales, A/V taping, and so on. One source of evidence is not compelling, but triangulation, or confirmation from several sources, is. Such evidence should also be formative as well as summative, giving information on how it might be done better, what the problems were, and so on. Student feedback in teaching projects is usually quite essential.

5 *Reflecting on the results*, and *planning what might next be done.* Depending on the results, so one needs to take matters further. What problems emerged? What needs retuning?

6 *Action research is ongoing.* Step (5) above is the start of a new, modified, cycle that could go on for several more times. This cyclical feature is arises partly because it is unlikely one will get everything right the first time, but essentially because reflection is not a one-shot deal but a continuing state.

The 'Critical Friend'

It begins to look as if a well-meaning attempt to improve one's teaching has turned out to be a major, highly structured operation, involving issues that a teacher of physics or hospitality management might feel inadequately prepared to cope with: how to think up alternative teaching or assessment methods, how to obtain suitable evidence, how to process the data from questionnaires or tests, how to evaluate the results and write them up, and so on. Yet action research is not action research if one goes to experts to provide ready solutions.

Such considerations led Stenhouse (1975) to propose the idea of the 'critical friend', who while not taking over the topic or the conduct of the research, was nevertheless available to offer advice and assistance when called for, and to facilitate the process of reflection. The critical friend is originally conceived as an 'insider', a shoulder to lean on, rather than as an 'outsider' providing expert advice. There is obviously a fine balance here, as the teacher will need expert advice, or advice on

where to go in order to get it, but the project must at all times 'belong' to the teacher. When ownership over the topic or research design slides towards the critical friend, the point of action learning has been lost.

Action Learning and Enhancing Tertiary Teaching

The obvious question is: Does action learning improve tertiary teaching? We can answer that more fully when we have the results of the ALP itself. There have been some studies reported, but they describe work in progress (Schratz, 1993; Zuber-Skerritt, 1991a), or 'how-to' (Zuber- Skerritt, 1991b), rather than evaluations of progress. The approach at the University of Innsbruck (Schratz, 1993) is interesting in that it gets the process of reflection going by facing teachers in groups with protocols of interviews with students about how they go about learning; this usually provides plenty for the teacher to reflect about, even if some teachers at that point feel sufficiently uncomfortable to leave the project!

However, to answer our first question, it would seem in the absence of hard data at university level that 'yes': action learning is a highly appropriate paradigm for improving the quality of teaching and learning. Precisely because the focus is on the *process* of teaching, and the use of systematic reflecting and monitoring to see that it is improving, it is a model that is not only concerned with an immediate innovation but with the teacher maintaining a watching brief on the quality of his or her own teaching, and on the quality of student learning. The benefits of action research thus do not end when the project itself ends, as in product-oriented research, but become part of the teacher's continual and ongoing repertoire.

Was the ALP Itself an Effective Implementation of Action Learning?

As far as we know, the scale and design of the ALP is unique. Most of the British and Australian action research is ideological, particularly the latter, and has been conducted in schools with school teachers. There has been relatively little at tertiary level, and the paradigm, such at that at Innsbruck, is different, having an institutional rather than an individually initiated focus (Schratz, 1993). The ALP on the other hand is entirely practical, and involves tertiary teachers exclusively.

The ALP originated from the results of an earlier project 'Encouraging self-managed learning among Hong Kong Polytechnic students', funded by the UPGC in 1988, in association with similar student learning projects being carried out at the University of Hong Kong and the CPHK. The theoretical background of all projects was that of 'student learning', an approach originating in Sweden and focusing on how students go about their learning, and on the conditions that foster deep or surface approaches (Marton, Hounsell and Entwistle, 1984). In the twenty years since then, student learning has become the major paradigm for understanding teaching and learning in general (Biggs, 1993b), Kember adapting it as the generic framework for action learning.

The results of the HKP project stimulated several lecturers to seek to improve their teaching, which led to a group of nine action learning projects (summarised in Kember and Kelly, 1994). The success of these nine projects in turn prompted the present project, to be operative in all UGC-funded institutions. The $13 million allocated to the ALP was intended in part for salaries and other administrative costs, and part for funding individual projects, in two rounds. Five Associate Project Coordinators, who were allocated to act as critical friend to groups of projects, averaging about ten projects per associate coordinator, and an Administrative Assistant, who also had expertise in quantitative analysis and who did basic analyses on request, were appointed. The large scale and the organisation prompted by that, the student learning framework, and its entirely practical focus on tertiary teaching, has brought into being a Hong Kong *genre* of action research.

At the same time, the sheer number of projects necessitates a degree of organisation, deadlines, and so on, that puts pressure on project directors that may alienate, distancing them from 'their' project, and that may put the action learning concept at risk. This possibility clearly warrants investigation.

Methodology

Interviews

For this evaluation, we interviewed the Project Coordinator, the Assistant Coordinators and a random selection of 8 project directors, on site where possible.

The Closed Questionnaire

A 73-item closed questionnaire was devised by the coordinating team and circulated to all project teams; there were 71 returns. The overall results have already been reported in the *Interim Evaluation Report* (Kember et al., 1996). We shall report here only those responses that address our evaluation brief. Beyond we gathered additional information as follows:

The Open Questionnaire

The open questionnaire comprised four questions relating to

- success of the project;
- impact on teaching and learning;
- organisation and support of the ALP staff;
- other comments.

The questionnaire was circulated to all members of the research teams. As membership kept changing with staff movements the total population cannot be nominated, probably about 150, and there were 56 returns. Many had completed the larger 73-item questionnaire, seeing this as an optional extra if they wanted to elaborate.

Head of Department Questionnaire

In an attempt to assess the impact of projects within their own teaching departments, we asked Heads of Departments where projects were located to assess the success of the project, and its direct and indirect effects on teaching within the Department. However, this was ready only during the summer vacation and only three returns were received.

What is Evidence for a Successful Project?

We would regard the ALP as a successful and effective implementation of action learning if the projects supported by it were themselves successful in their aims and in their implementation of the principles of action learning. In order to make this judgment, we would require evidence that (1) the method of systematic enquiry had been followed; that (2) change had occurred in the thinking and teaching practices of the particpants; and that (3) there were impacts on student learning, and perhaps on institutional practice.

We do not yet have at this stage all the relevant information to allow us to make these judgments, but we can make a progress report.

Foci of Evaluation

The Aims of the Original Projects

Unlike many action research projects, where the researcher is proactive in initiating the project, the very design of the ALP, asking teachers to put in applications for funding, made the researchers reactive. Thus arose the perceived opportunity to obtain a 'research grant'. One associate coordinator thought in the few projects that did not succeed, that this was a major reason for failing; there was no real intention of doing action learning in the first place.

The majority however had mixed motives: 50% agreed that obtaining a grant was a reason for applying, and 44% agreed that that they participated because they thought it would lead to publications, but over 90% said they participated to improve the quality of their teaching and 68% to improve student learning. We look at the role of motivation later.

Initial Conceptions of Action Learning

Similarly, conceptions of action learning were mixed. Although 97% saw action learning as a 'suitable framework' (what else?), there were some who in the final analysis saw it as R&D or product-oriented research; proportionately more multi-media and ed tech projects fell into this category than other kinds of project. While such a target is good in itself, it does not include a fresh look at teaching, and thus cannot be classified as action learning. However, if these in time convert to action learning, that then becomes a real victory. The Church is there to help the sinners, not the saints.

For example, one large project required use of commercial software, but when it arrived it turned out to be based on an inappropriate and outdated theory of learning. Reflection kicked it into action learning mode. Students were run through the programme and asked to think aloud as they worked. This led to reflection, planning, implementation, observing and more reflection, which had positive results not only for student learning but for the conceptions of teaching held by the research team, and at the end a much better product.

In deciding what projects to fund from their proposals the Coordinator therefore has a problem. Of course projects that are clearly conceived in the action framework should be selected, and these are highly likely to be successful, as we found, but the real challenge is when it works with those not already action learners: that is when perspective transformation is maximal. So taking on R&D type projects, and then through the critical friend build in reflection, and the other stages of action learning, is one strategy. It may seem a strange selection procedure that seeks to fund those that *do not* fit the requirements of action learning, but that is where the real gains are to be found. One needs to be a good judge of the potential penitent.

The Role(s) of the Associate Coordinator as Critical Friend

The Interim Evaluation Report (Kember, Ha, Lam, Lee, Ng, Yan and Yum, 1996) outlines the various metaphors to capture the work of the critical friend: 12 in all, ranging from consultant to coffee-maker. A very daunting set of roles, requiring both interpersonal skills and technical expertise ranging from research methodology, content expertise and expertise in teaching and instructional design, not to mention a vision of educational reform. One associate coordinator (AC) put it thus:

> I think my responsibility is to provide advice and support to the project teams, not only to facilitate the progress of their research but also to enhance their teaching development. ...(a third) role is to link up the different projects and provide opportunities for them to share

ideas. I think what we are trying to do is to establish a culture or a community of academics interested in teaching development.

There is also a role beyond the ALP itself. The ACs quickly became known within the institutions to which they were attached as useful consultants on educational and methodological issues, which is clearly a valuable role, but one to be indulged only when ALP time allows. Further to that, the ACs have accrued a unique knowledge base about the conduct of action learning and its role in staff development, which can continue to have an important bearing on the improvement of tertiary teaching long after the ALP is over. Already they have produced a video on action learning and staff development, the target audience being university educational development units so that they may initiate action research within their own institutions.

But as far as the ALP itself is concerned, the ACs came with qualifications and experience in a particular content area, as well as educational qualifications. They also need interpersonal skills, as all-purpose critical friends. The question arises as to how these variously multi-skilled people are best deployed. The projects themselves fell into content groups — multimedia, English language, problem-based learning, and so on — and so they were allocated to projects on the basis of their affinity to the area. They had sufficient educational and methodological or other technical expertise either to respond immediately or to know where to go to obtain the answers.

While tension is inevitable between the roles of expert and of critical friend, the latter was always more important than that of expert, even if a few project directors themselves did not always agree (see below), some of whom mistakenly saw ACs as secretaries and as research assistants. But as far as the ACs themselves were concerned, allocating a project to a particular AC meant that a relationship could be built that was crucial to the success of the project. For example:

> The role is not well defined and it varies from project to project. What we need from the start is to build up good rapport with the team. Throughout the period of research we try to discuss with the teams issues, problems, evaluation strategies, and so on. … to establish a working pattern with them so that they feel comfortable to approach us…

And another:

> At first they wanted to see the data at the end of the first cycle as needing only to be presented neatly and then published. My role will be to stimulate them to think about the data and then make use of the data to inform the teaching … to use the data, then to help them reflect on their teaching and to help them improve the next cycle….because we had a good relationship, so from time to time he would tell me the progress and then he would discuss with me his ideas … then I discovered that he had set out something, but … he did not quite make use of the data in the interviews.. He said 'I haven ot got much' .. So I said 'I think there is actually something in it… would you think about changing the assessment?' When you interpret the interview data, you really need to have some insights. You have to see beneath the data and he lacked that kind of experience … Of course the suggestions are open to him….he would try to think about what he can do with those issues… After that discussion, the next time he came to see me, he had a much more thorough planning.

Another:

> It is through interaction that we become reflective. I join their coffee break and that is a very good chance. …The biggest difficulty is with those teams that that hesitate to make contact with you because they worry that you are the spy… the monitor we may need to use more techniques to handle this,… maybe the time we call for proposals.. then may be in the initial contact meeting to tell them how you can help them…

Unfortunately, some ACs were appointed after projects had actually started, and that made it rather more difficult to establish the kind of openness and trust that these comments make so clearly are essential for proper action research.

In one project, the lecturer did not ask for money:

> she just wants experience and to have a coordinator to work with her to improve her teaching. …. Some have no idea how to conduct educational research,… and then in this process we can show them how to do it. But then we need to be careful because we are partners and not higher than them.

The role of the AC is 'second order' action research:

> …first order …is teachers doing action research with students… in second order we try to engage teachers in action research activity and facilitate them in the process. …we learn because we develop ourselves, and we are trying to develop those involved, the teachers and the students.

These comments illustrate very well the tensions between the technical and the interpersonal skills, but that when to comes to the crunch, the interpersonal is the most important if the reflective process is to be facilitated.

The inevitable question arises: What if you see that what the teacher is doing is most unlikely to succeed? How do you handle that? Do you intervene?

> It needs techniques. It is one of the biggest challenges we are facing. The research assistants are often good (go-betweens).

Another:

> being critical, we really need to intervene… (but) you will break the relationship if you intervene in the wrong way… (some) feel 'we know what we are doing and we do not need any help'.

One problem was that the project director was too busy and delegated:

> He asked his research assistant to ring me. He employed part-time research assistants and different people contacted me at different times. He assigned to me the responsibility of explaining his project to his new RA every time… it is not supposed to be my work. The project cannot succeed. It is not just an activity. It is part of his academic life, or should be. …(then) he wanted me to do the writing (up), he said he was not familiar with educational issues and the style of writing … he is concerned with publication. When he was requested to make a presentation in the interest group meeting he asked me whether the paper will be published, This is really bad when I heard that.

The feedback from those project directors who did interact seriously with their coordinators (some chose not to) was uniformly positive. Overall, 79% rated the ALP staff as 'helpful' and the project as 'organised efficiently'. In the open-ended comments, the great majority of comments were highly favourable, both of ALP organisation in general and of particular ACs: 'helpful and supportive', 'friendly, efficient', 'academics are not easy to coordinate and they have done a good job'.

A few were negative: 'rather ill-defined', 'support that one can expect is not clear', 'never seen anybody' (not a project leader). Other comments were neutral rather than negative: five 'did not need' a critical friend, and thought that the money would have been better spent on equipment or research assistance. These directors were in complete control of their projects, but such comments suggest that they did not really appreciate what *action learning* was about. Choosing not to call for

the AC meant they were most unlikely ever to find out. This is not to say however that some of these projects were not successful in their own way, as product-oriented projects.

We believe that undoubtedly much of the success of the projects can be attributed to the interpersonal skills, expertise and effort of the present ACs.

Estimated Success of the Project

In response to the open-ended question: 'Do you think your project was successful?' replies were Yes: 44, Partially: 10, No: 2. The closed questionnaire addressed the question of outcomes in more detail (Table 2: 'agree' and 'strongly agree' combined):

Table 2: Was your project successful?

lasting effect on my teaching   87%

greater awareness of factors affecting the quality of my teaching   92%

have become more reflective about my teaching   89%

strengthened my belief in the value of research into teaching   90%

deeper understanding of educational research in general   82%

has improved my research ability   59%

similar work will continue after the end of this academic year   72%

In answer to the question 'Has your project had any impact on teaching and learning?' 41 answered 'Yes': 13 'Some impact' and 2 'No impact'. The closed questionnaire questionnaire specifically asked whether the project had led to an improvement on particular aspects (Table 3: 'agree' and 'strongly agree' combined):

Table 3: The project led to an improvement in:

students' performance   61%

students' learning approaches   69%

students' attitude   62%

teacher-student relationships   69%

my teaching   82%

others' teaching in my department   38%

In the three Head of Dpartments' returns, two rated the project '5' on a 6-point scale (6 = 'very successful'), the third rating as three out of six, but comments:

> The students evaluated this course well this year and generally perfomed well in the course assignment. However the project has been heavy on staff teaching time and resources...

Clearly, students and department heads judge success from two quite different perspectives.

The Important Factors in its Success or Lack of Success?

In the open questionnaire, the stated reasons for *success* were often project-specific and cannot be easily summarised. 'Cooperation within the project', 'an excellent Research Assistant', 'support from the ALP and the ACs in particular' were the commonest. The fact that within-team cooperation was cited so often certainly supports the contention that collegiality is an important factor in producing a successful project.

One *unsuccessful* project cited lack of institutional support 'the data collected did not stimulate discussion or debate. No follow up action taken.' The other blamed lack of ownership amongst the team members: presumably this means lack of collegiality.

The criteria indicating *impact* were quite varied, as were the targets impacted, ranging from curricula changes, enthusiasm of staff, enthusiasm of students, discussion and working relationships amongst staff. Some saw success in terms of the finished result: software successfully developed, a new curriculum plan, which is of course only part of the story. Some impacts however related to perspective transformation:

- 'awareness of the students' perspective on my teaching'

- 'I'm not afraid to innovate any more'

- 'more impact on the quality of learning than any top-down quality initiatives I've encouraged!'

One project director put it that while the project in itself was successful, 'integration with our teaching programs is the real challenge'.

Stufflebeam (1985) provided one method of evaluating a project such as the action learning project. His method suggested examining how the outcomes of the project — in his terminology, the products — are related to what goes into the project and how the project has been implemented — the inputs and the processes.

A content analysis of the items of the questionnaire used in the evaluation survey suggested that the items of the questionnaire can be grouped into a number of subscales, each measuring a different aspect of the project. There are three types of subscale:

Input factors

1 *Motivation.* This subscale represented the overall keenness of the teachers in participating in the action learning project.

2 *Framework.* The reflective and cyclical paradigm for reflective teaching was used as a framework for this action learning project. But how appropriate and how practical was the framework from the perspective of the users. This subscale assessed the considered appropriateness of the framework by teachers who participated in the project.

Process Factors

1 *Process.* The subscale assessed how well the project had been implemented: whether the project completed on schedule, whether there were any changes to the plan or procedural hitches.

2 *Teamwork.* An essential aspect of the action learning model is the togetherness among the teachers as well as teamwork between the teachers and the support staff that helped the teachers in collecting data on their teaching and in evaluating the teaching methods they adopted. The subscale assessed whether good teamwork was obtained in the project.

3 *Departmental support.* Extent to which the project director's department head and colleagues supported the project.

Products

Intermediate Outcomes

1 *Commitment to action learning.* Found the ALP to be useful and would continue with trying action learning in future.

2 *Reflective thinking.* Action learning led to a better understanding of the role of research in teaching, and to be more reflective about teaching.

Ultimate Outcomes

1 *Improved teaching.* The teacher's perceptions that teaching and teacher-student relations had improved.

2 *Improved learning.* The teacher's perception that students' performance, learning approaches and attitudes had improved.

Using the computer package LISREL, a causal model was used to examine the factors that lead to the success or failure of the action learning project.

The *motivation* of the teachers to participate in the program was clearly an important determinant on how successful the project was. Motivation was the only factor that had a direct effect on improved teaching. Indeed, it had the largest effect on improved teaching with a calculated total effect of .39.

Although *motivation* was important, what the results indicated was the need of an action learning *framework* for motivated teachers to guide teachers in how they should approach teaching and how to implement particular teaching methods. *Framework* had the largest indirect effect on improved teaching and improved learning, 0.22 and 0.27 respectively.

The three process factors — *process, teamwork and departmental support* — had less effect on the outcomes of the project. Indeed, *departmental support* did not have any significant effect on the success of the project.

The causal model provided a satisfactory description of the data in that 50% of the variation in improved teaching and 30% of the variation in improved learning, which gives strong support to the assumption that the action learning model workd successfully. However, it must be realised that we are dealing here with ratings by project directors. We would need to triangulate by using other data sets; student ratings and performance data where available. As a preliminary look, however, these analyses fit with expectations and interview data obtained so far.

Other Comments

In their open comments, participants voiced requests for more funding, more seminars and more workshops on research design. An important group centred on the *recognition* of action learning as research, or even as a legitimate activity: 'I have no assurance that either administration or government genuinely value this work…'

Greatest difficulty mentioned by several directors was to retain good research assistants. In general, the response is mostly positive, and that when it worked, which was most of the time, it worked well. Occasionally and not unexpectedly, the project did not work and the reasons for that seem due to a misconception about action learning. The reasons for that need deeper exploration than we have been able to put in here, but they seem to include: funding projects where the focus was not on teacher development but on a product, for which research assistance and equipment

were more appropriate. Requests to fund equipment not staff, or funding more research assistants instead of the coordinator, were a good indication that a product rather than an action learning orientation was prevailing.

What Lessons Can be Passed on to Other Universities?

In order to answer this question, we need to analyse on a project by project basis, to see what successful projects have in common, and what unsuccessful. Nevertheless, there are some points that we can make at this stage.

1   *Key role of the critical friend.* Any attempt to implement action learning requires the 'critical friend', which is sensitive and complex, requiring a depth and extent of expertise that is incommensurate with their academic status. It is a distinct advantage that they are full-time and come in from outside. Some tertiary institutions are addressing the UGC quality assurance and quality enhancement initiatives by using action research, which is fine, but the role of critical friend is played by colleagues in the same department. This may work in some cases but in general it would seem unlikely that teachers in content areas would have the specific educational expertise to act as consultant. It is also likely that a colleague would be far more threatening, as an observer and as confidant, than a 'professional'.

2   *Understanding and acceptance of the action learning concept.* The most powerful factor in producing positive outcomes was not surprisingly acceptance of the action learning framework. This again puts emphasis on the role of the critical friend as change agent, but it also places emphasis on the need for careful selection of existing projects, and on the importance of good conceptual support.

3   *More workshops, seminars and between-project interaction.* Participants were strongly agreed that, when time permits, they appreciated the workshops, seminars and involvement with similar projects. On the other hand, project directors were interested only in their own work and did not have time to attend workshops or meetings that did not bear directly on their own specific project. While this is understandable, the nature of action learning is such that participants should where time and resources allow be open to ideas and innovations they might well incorporate into their own teaching. Action learning is by nature an open, evolving, framework for reflective practice.

4   *Valuing by university administration, departments and personnel procedures.* In questionnaires and interviews the issue arose many times that some institutions did not see action research as counting as 'real' research. This is an unfortunate disincentive, and it is counter-productive both for morale and, more importantly even, for the teaching health of the institution. If administrations are sincere about their concerns for quality teaching then the results of the ALP make it abundantly clear that action learning is a cost-effective and utterly practicable way of going about both quality enhancement, and the development of pedagogically aware teachers. Staff should be given every encouragement to conduct action learning projects both in the provision of resources, and in rewarding successful efforts in the personnel policies of the institution.

5   *Role of action learning in university teaching/learning centres.* One particular locus of action learning is in the units and centres for teaching and learning enhancement already existing in the universities. We are not claiming that centres should become exclusively preoccupied with action learning as even the major method of staff development, but it certainly is one highly effective approach. The videotape already made by the ALP team is an encouraging start. Perhaps centres could see action learning as complementary to their usual endeavours.

Does Action Learning Offer Reasonable Returns Compared to Alternative Means?

There are two questions hidden here:

1   Does action learning compare favourably to other means of enhancing teaching?

2   If so, is it cost-effective?

Of course, we have no means of directly comparing action learning with other methods, but the present data certainly suggest that the ALP is for the most part achieving its aims, in the way expected of the action learning process, as our path analysis indicates.

Let us first look at the *completion rate* of funded projects. In the ALP, 51 projects were started, 2 project directors left Hong Kong, one project ran into internal difficulties, leaving 48 projects completed. The completion rate is thus 94%, 98% of those that possibly could have finished. It is hard to know what to compare this with. The original funding of $13 million came from a massive grant which included the funding of the Student Experience project ($10 million and nearing completion), and a miscellany of large projects including the building of a Marine Biology Centre.

The UGC also awarded $33 million in Educational Development Grants to institutions specifically for the improvement of learning and teaching in the previous triennium. This was used in a variety of ways; an institution-wide development of a teaching evaluation questionnaire, various special purpose teaching rooms, multimedia equipment, curriculum development, CAI software, electronic bulletin boards, a teaching development unit and hundreds of individually funded projects. It might be instructive to compare the cost-benefits of the ALP projects with this last group, but the data are too complex. Several institutions topped up the funding of individual grants with internal funds, and it would be very troublesome to obtain and evaluate the reports from each project. All one can say is that it is very unlikely that these projects would have anything like a 94% completion rate (anecdotally, we know of several such projects that were poorly thought out, or that never really got off the ground), but even such a comparison is unfair given the infrastructure and support system that is built into the ALP.

Conclusions

We were asked to address four questions. Our preliminary answers are clear:

1   Is action research an appropriate concept for improving the quality of teaching and learning?

   Most certainly.

2   Was the ALP an effective implementation of the concept?

   On the whole, yes. The completion rates, and the self-ratings of project directors are very encouraging. Precisely what makes a successful project will require much harder data than the self-ratings we have used, but the picture here is encouraging.

3   What lessons can be passed on to other universities which desire to implement measures to improve the quality of teaching?

   There are several, as noted above.

4   Does this method of educational development appear to offer reasonable returns compared to alternative measures for quality control and enhancement?

   Action learning is assuredly a cost-effective approach to staff development.

Finally may we offer our congratulations to David Kember for his initiative in proposing the project and his skill and dedication in seeing it through, to his team for their enthusiasm and high professionalism, to the project directors for their courage and insight by coming to be involved, to Dr. John Jones and his staff at the Educational Development Unit at HKPU for so generously housing and otherwise supporting the ALP, and finally to the UGC for its sound judgment in backing it in the first place.

Figure 1: Path analysis: factors influencing teaching and learning