

The Outcomes of the Action Learning Project

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Abstract

The outcomes of action research are examined through the 90 projects supported by the Action Learning Project. This was an initiative which aimed for quality enhancement of teaching and learning through supporting academics to engage in action research projects addressing some aspect of courses they taught. The evaluation of the individual projects indicates that almost all were successful in introducing the promised reform or innovation and of impacting for the better upon the learning of students enrolled in the target courses. There were also longer term outcomes associated with engaging in the process of action research. The large majority of the participants felt that they perceived the following longer term benefits: a lasting improvement to their teaching; a knowledge of how to conduct action research; development of their capacity to monitor and reflect upon their own teaching; and better teamwork skills. About half the participants felt they had also had some impact upon others in their departments. Overall these longer term outcomes indicate that action research by teachers is a highly cost-effective means of enhancing the quality of teaching and learning.

Introduction

The Action Learning Project has supported teachers in the higher education sector in Hong Kong to engage in action research projects concerned with some aspect of teaching and learning in their own courses. The first round of the initiative supported 50 projects and the second round a further 40.

Since the Action Learning Project is approaching its end, it is time to consider what it has achieved. It is also pertinent to consider the mode of quality enhancement through action research. This chapter, therefore deals with *outcomes* from the projects. It uses the specific cases of the projects supported by the Action Learning Project and extrapolates from these to the general case of projects and initiatives based upon an action research framework.

The issue is of considerable significance for the justification for the Action Learning Project was that it would act as a mechanism for quality enhancement of teaching and learning. Since the initiative started there has been a degree of shift, in the higher education sector in Hong Kong, away from a reliance upon quality assurance or control schemes towards a more plural system in which both quality enhancement and quality assurance play a part. The outcomes of the Action Learning Project provide evidence to maintain a healthy level of resources devoted to quality enhancement through action research and for a further shift in this direction.

Evidence for the outcomes claimed in this chapter comes from the three level multiple-voice and multiple-method evaluation design described in the previous chapters. This chapter draws upon and gives quotations from all elements of the evaluation gathered.

Development or Change to Curriculum

All of the projects were introducing some change or innovation into the curriculum. This could be revising existing practices to deal better with an identified need or problem, or introducing a new form of teaching, such as learning through the world wide web or problem-based learning. These innovations constitute an outcome which impacted on those students enrolled in the course at the time and those who will enrol in the same courses in the future. The nature of these curriculum changes, for first round projects, are described in Kember (2000). The reports of the first round projects are in Kember, Lam, Yan, Yum, and Liu (1997).

In some other schemes which administer grants to teaching development projects there is a heavy stress on the product-oriented outcomes. In some it appears that these are the only anticipated outcome. This would definitely seem to be the case with a number of schemes which fund developments in computer based learning or web site delivery. The Action Learning Project has had more diverse outcomes by incorporating the implementation of innovation within an action research framework.

It is instructive to compare the initiative with one of the largest teaching grants schemes, formerly operated by the Committee for the Advancement of University Teaching (CAUT) in Australia. The guidelines for CAUT proposals specifically excluded educational research. The projects were also only funded for one year which, as Hayden and Speedy (1995) pointed out in their evaluation of the scheme, was insufficient for projects to be implemented and evaluated.

These guidelines appear to have led to a marked distinction to the nature of the projects supported by CAUT. The CAUT awards for the 1996 academic year, for example, have a much higher proportion of information technology based projects compared to the Action Learning Project. A pedagogical classification of their projects (CAUT, 1995, p. 65) puts 73 in an 'information technology based' category, two were shown as 'internet applications' and seven as 'distance education'. Only 23 projects were in the remaining seven categories so at least 78% of the projects were information technology related. By contrast a little over one third of the Action Learning Project's projects over the two rounds were directly focussed upon information technology development.

This comparison is not meant to imply that all information technology projects are entirely focussed upon developing a product. Indeed many of the computer based projects supported by the Action Learning Project showed evidence of the participants reflecting critically upon their teaching practice. That this happened, though, may have been because of the explicit action research framework and the requirement that all projects were thoroughly evaluated.

Improvement in Quality of Student Learning

In keeping with an action research philosophy the project teams were responsible for evaluating their own projects and in almost all cases the primary focus of these evaluations was on student learning outcomes. Advice and support was available from the coordinating team for devising, analysing and interpreting these evaluations, and this was a facet of support which was called on more than most (Kember, Ha, Lam, Lee, Ng, Yan, & Yum, 1997).

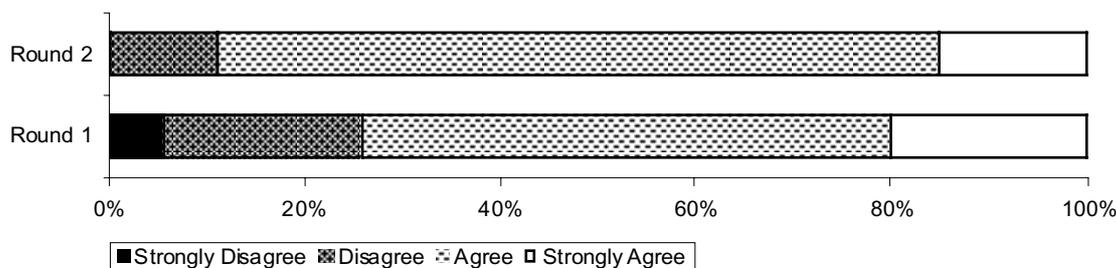
This means that the prime evidence on the effect of the projects on student learning outcomes is contained in the final reports of the teams, of which the first round ones are collated together in Kember, Lam, Yan, Yum, and Liu (1997). The types of evaluation utilised were diverse, reflecting the varied nature of the projects. This makes it hard to derive succinct overall conclusions from this source.

One way to obtain an overall measure of the effect upon student learning is to quote from the report of the independent evaluation panel, who examined preliminary versions of most of the first round final reports. At the end of their report they make the following statement.

... valuable outcomes can be reliably associated with probably most projects (and less reliably with all completed projects), the positive outcomes are in fact considerable. If, as seems likely, most participants got *something* of value as far as their teaching was concerned, then it follows that the teaching of at least one hundred teachers, and the learning of thousands of students, were improved at a cost of [...]. This seems pretty good value for money. (Biggs, & Lam, 1997, p. 171)

A further global measure comes from the responses of the participants. Figure 1 shows that the large majority felt that their students had improved their approaches to learning. The respondents would have had available their evaluation data when these judgements were made so they might be considered more reliable than most self-reported data.

Figure 1: Responses to the statement, 'The project has led to an improvement in students' learning approaches'.



Learning Experience

A more fine-grained picture of the impact upon student learning comes from typical quotations from the interviews and the open-ended responses. Some said the students found their new teaching method exciting or interesting.

... makes students have more interest. They won't feel bored when attending lessons.

My own experience and informal responses from the students indicate that the multimedia software has made teaching and learning in my course more enjoyable.

Students were reported to have said they had much deeper learning experience than before.

The project was really quite successful in giving students an alternative learning experience.

The PBL approach engaged students far more actively and sustained their involvement far more than any other courses within the Department.

Learning Behaviour

The project seemed to have changed the learning behaviour of students in some cases.

- students more active in learning
- students contribute more in discussion

As far as learning is concerned, I feel that students are gaining - their attendance and participation is good, skills are developing and their performance is improving.

There were also negative comments, but largely limited to a small number of students.

Some prefer the traditional one more... For example, some say that 'I am conservative in thinking, so I like the traditional one.'

The Process Leading to Outcomes

The two outcomes dealt with above were ones which were forecast in the proposals originally put forward by the project teams when requesting a grant. The call for proposals required proposers to describe the nature of the curriculum change or innovation to teaching they wished to introduce. They were also expected to provide a convincing justification for their prospective project by explaining how they expected it to result in an improvement to the quality of their students' learning.

These two requirements were the main selection criteria for determining which proposals were awarded grants. On this basis it might be expected that all successful projects would have introduced their proposed innovation and found a resulting impact upon student learning. As just about all of the participants felt their projects had been successful, this was generally the case and there is evidence for this assertion in the final reports (Kember, Lam, Yan, Yum, & Liu, 1997). The outcomes may not always have precisely matched those foreshadowed in the original proposal. These shifts, though, should surely be seen in a positive light, as it is evidence that the participants appreciated the nature of action research, and modified their plans in the light of observations and reflections from the initial cycles.

What became clear as the Action Learning Project progressed was that the outcomes were not confined to those specified in the original proposals. Under the remaining headings this chapter looks at outcomes which relate to the process of engagement rather than the promised products. There is evidence of enduring long term outcomes which last beyond the formal completion date for the projects.

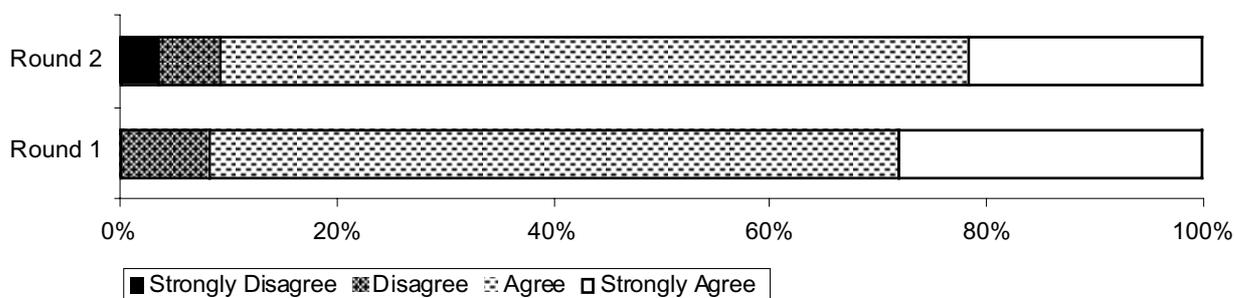
In many cases the journey appeared to be as important, or even more so, as reaching the final destination. The abilities and attitudes acquired on the way left the travellers well equipped to travel down similar paths in the future and keen to do so. There seemed to be some evidence that it was those who had the more troublesome journeys who developed the most on the way. The tribulations of meeting rocky or winding paths caused a rethinking of what the journey was about.

These longer term outcomes are important because they considerably magnify the extent of the impact. The two types of planned outcomes discussed so far benefit students enrolled in the courses which are the focus of the projects. If there is a lasting effect on the participants there could potentially be a benefit to all students they teach in the future.

Lasting Effect on Teaching

The first of these longer term outcomes was a lasting effect on the participants' teaching. The overwhelming majority of the respondents to both rounds of the survey felt that participation in the projects had led to an improvement in their teaching.

Figure 2: Responses to the statement, 'The project has led to an improvement in my teaching'



Many participants said they had acquired a deeper understanding of teaching and this led to a greater willingness to employ more innovative approaches to teaching.

It has changed my approach in teaching - now I am not afraid to try out innovative methods e.g. problem-based learning.

They became more knowledgeable about teaching and more aware of what others were doing.

You know, because there is a set of the educational papers that I read through. Definitely it allowed me to read through them and to get a much better idea of what other people are doing.

Teaching Became More Student-centred

Examining the comments about teaching made in interviews and open-ended responses, the most common characteristic was a shift towards more student-centred approaches. This is a significant change because it has been shown (Gow, & Kember, 1993; Kember, & Gow, 1994) that those with student-centred conceptions of teaching are more likely to foster a deep approach to learning in their students than those with more teacher-centred beliefs.

Any change in the way they conceptualised teaching appeared to have stemmed from greater awareness of their students' views about their teaching. The teams were all required to thoroughly evaluate their initiatives as part of the action research cycle. The feedback they obtained from this component of the spiral gave them a greater awareness of the impact of their courses upon their students.

I am more aware of my teaching effectiveness and teaching style through students' feedback and regular recordings of students' discourse.

It was also successful in that it provided the team with a much richer understanding of the approach to study and the 'consumer' characteristics of study of students.

Many of the teachers were already student-centred in their attitude but the greater and more detailed feedback obtained through the observation phase of their action research gave them a much clearer perspective of their students' feelings and needs.

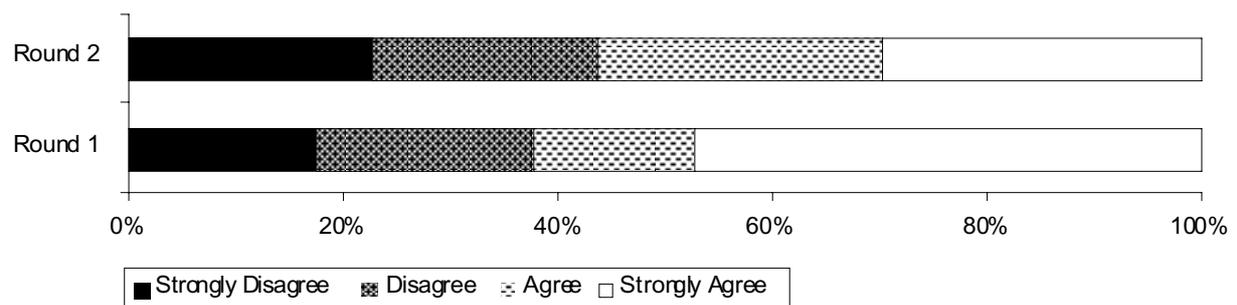
We have some idea on that before the research... Yet from the in-depth interviews with the students, we found that our ideas on students' anxiety are very different from the real situation.

The effect seems likely to have an on-going impact. The teachers will take with them a greater knowledge of their students and their educational needs which can inform their teaching and curriculum development. In time this knowledge will become out dated or not relevant to emerging contexts. The teachers, though, should still recognise the importance of having a good understanding of the learning needs of the students and an ability to obtain this feedback.

Learning How to Conduct Action Research

Another outcome was that the participants developed their ability in all facets of action research so could complete projects. The majority of participants in both rounds of the Action Learning Project admitted to no previous experience of action research. The proportion with experience rose somewhat in the second round. This is partly because a few had projects in both rounds, and, perhaps also partly, a more general awareness of action research in the Hong Kong academic community.

Figure 3: Responses to the statement, 'I had no previous experience of action research before participating in this project'



Of the majority with no action research experience some would have had experience of other research paradigms and others, from the newer universities, were relatively inexperienced in any form of research. Regardless of their lack of previous experience, the participants found that action research provided a natural framework for work of this type. They were not overtly pushed towards the approach but seem to have found it a natural way to tackle the issues they had highlighted.

The focus of action learning is to search for something and make changes... The method is very suitable for us to improve our teaching.

Q: Is this your first time doing action research using this kind of research paradigm?

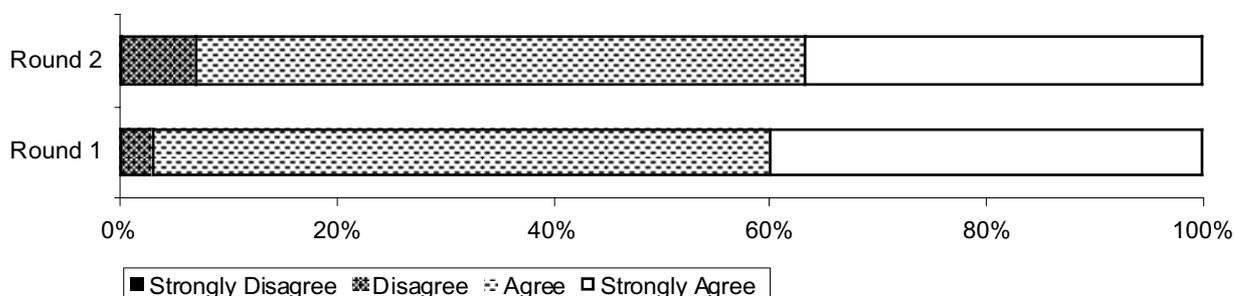
A: Yeah.

Q: How did you find it?

A: I didn't feel very much pressured into the action learning approach. The whole paradigm seems to me quite common sense, ... it simply means you get the opportunity to apply your common sense.

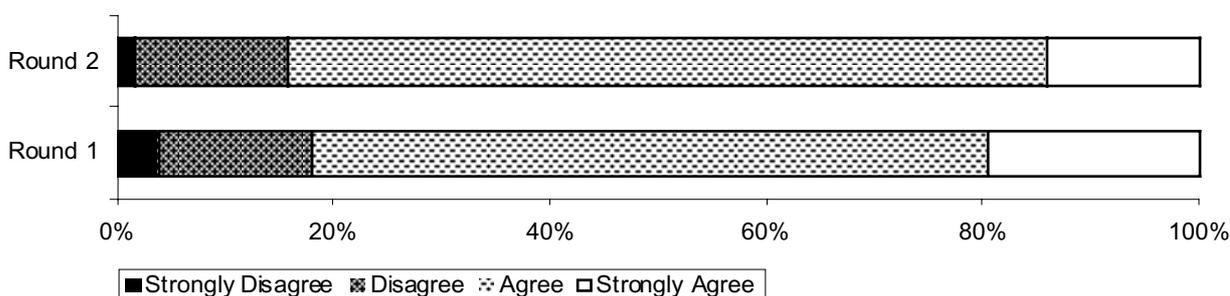
In general the overwhelming majority of those involved found that action research was a suitable approach to carrying out this type of activity. Given that the majority lacked previous experience of action research, this must be taken as a significant statement.

Figure 4: Responses to the statement, 'Action research provided a suitable framework for conducting the project'



Having learnt how to conduct educational action research projects, the large majority felt that they would do similar projects in the future. This is obviously a highly significant long-term outcome.

Figure 5: Responses to the statement, 'I think I will do similar types of action research into my own teaching after this project'



Developing the Capacity to Monitor One's Own Teaching

The action research approach to educational development assumes that the teachers involved have an appropriate attitude and will be able to develop necessary abilities to carry out their project. By being engaged, the participants are learning to become self-sufficient and underlying attitudes can change through critical reflection and discourse. Empowering participants to take responsibility for monitoring the quality of their own teaching is seen as a key outcome.

This outcome depends upon the participants accepting responsibility for their own quality monitoring. This was not a big step for most of the participants as many saw their involvement in the Action Learning Project as an expression of a belief in the importance of teaching and a latent desire to implement innovative methods. They were convinced of the appropriateness of bottom-up approaches to quality enhancement even if those above them in the hierarchy had not been.

I think this was a far-sighted initiative. It was able to support such a variety of different projects generated bottom-up, from the delivery point of instruction. It had more impact on the quality of learning than any of the top-down quality initiatives I've encountered!

As well as accepting responsibility, the outcome requires the participants to develop the competence to evaluate their own teaching. This they felt they had done and the final reports they wrote provide evidence that they had succeeded in this (Kember, Lam, Yan, Yum, & Liu, 1997).

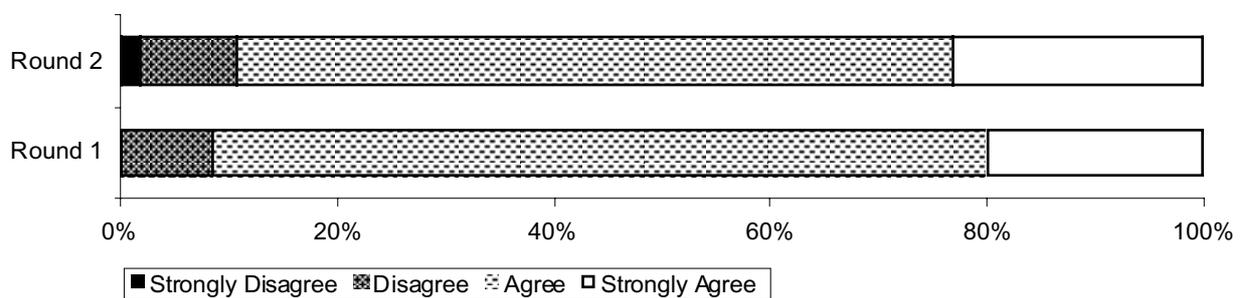
It helped me to learn research methodology and [that] benefited both teaching and learning in this course.

Some developed some very practical approaches to the evaluation methods employed, such as how to record the process of a student working with a computer.

When you transcribe only what you hear on the tape, it is very difficult to relate it afterwards to what the students had actually done on the computer. So what [...] did on top of transcribing it, was when she went through the whole exercise again and identified and printed it out the screens at each point when students was working. So then we could sort of verify what was actually going on.

Overall the large majority felt that they were better equipped to monitor the quality of their own teaching and their students' learning. They were more aware of what affected teaching quality so would have less need to rely upon imposed quality assurance processes.

Figure 6: Responses to the statement, 'Having conducted this project, I have a greater awareness of important factors affecting the quality of teaching'



Becoming More Reflective

A closely related quality is that of being able to reflect upon teaching. The interviews revealed evidence of individual self-reflection but there was greater emphasis upon reflection as a group activity. The majority of the teams noted the importance of reflection-in-action in fine-tuning their teaching practices. They expressed the need to discuss and listen to others' experiences.

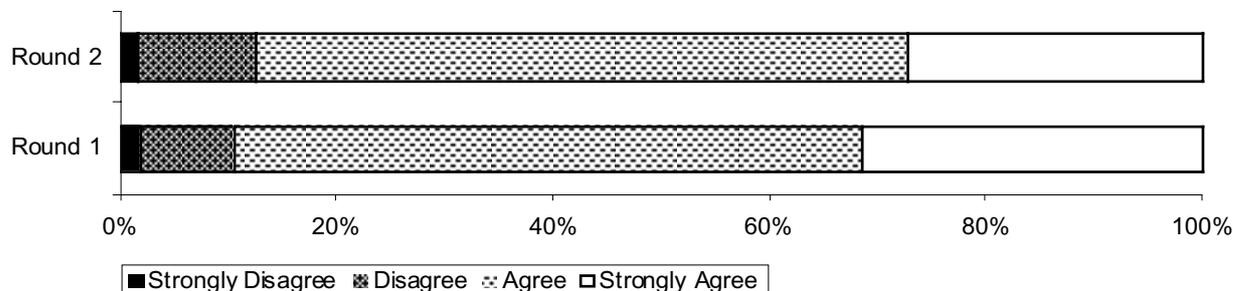
The most useful was the team meeting in reflecting the results and the experience.

... by involving a group of colleagues in active regular discussions of teaching styles and learning needs, it has raised questions about what we are trying to do and how best we should go about this.

The surveys showed that the large majority of participants felt that they had become more reflective about their teaching. This is another example of the process being an outcome. Firstly the process of reflection led to insights into better approaches to teaching and a greater

understanding of student learning. Secondly, and perhaps more importantly, by engaging in this collective reflection the participants realised the importance of reflecting on their teaching and hopefully should adopt a reflective stance in the future.

Figure 7: Responses to the statement, 'Having conducted this project, I have become more reflective about my teaching'



Developing Teamwork Skills

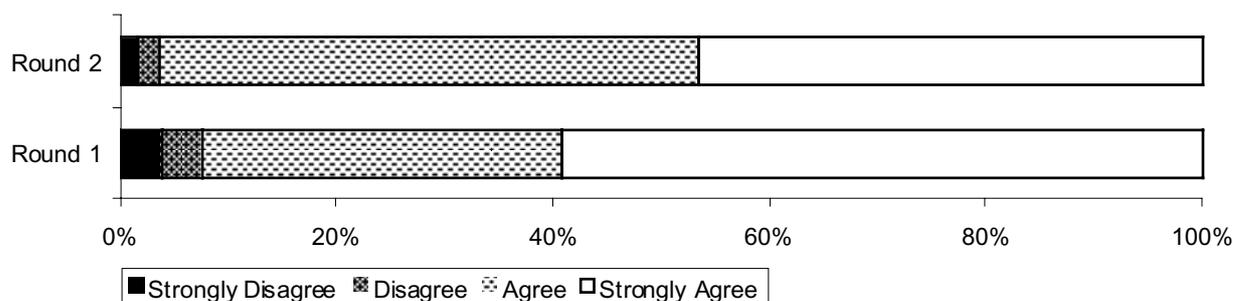
In many of the projects it was clear that a great deal of effort had been committed. It was also clear that, with very few exceptions, the work involved more than one person. The participants must, therefore, have developed cohesion of purpose to jointly make major commitments to common goals.

I think the most important factor (that makes our project so successful) is the commitment of people. Although there were problems in coordination at the beginning and technical difficulties, all of us are very committed. We are determined to complete the project. Otherwise, we could not have done the evaluation. So although there were some delays, it's because everyone of us wanted to give our best. We all put in great effort to make it work.

This suggests they found a way to work together as a team. Even though many teams contained participants at markedly different formal levels (often from full Professor to Research Assistant), for purposes of working on the project, formal relationships appear to have been set aside in place of democratic and open partnerships.

Besides, everyone is willing to speak out. If there's a problem, it would be known. Everyone is willing to make suggestions and accept the need for changes when necessary. All of us are willing to be open. So if there is any problem that needs to be solved, it will be solved first. We are not afraid of criticising our own systems. This is also very important.

Figure 8: Responses to the statement, 'Teamwork is important to the success of the project'

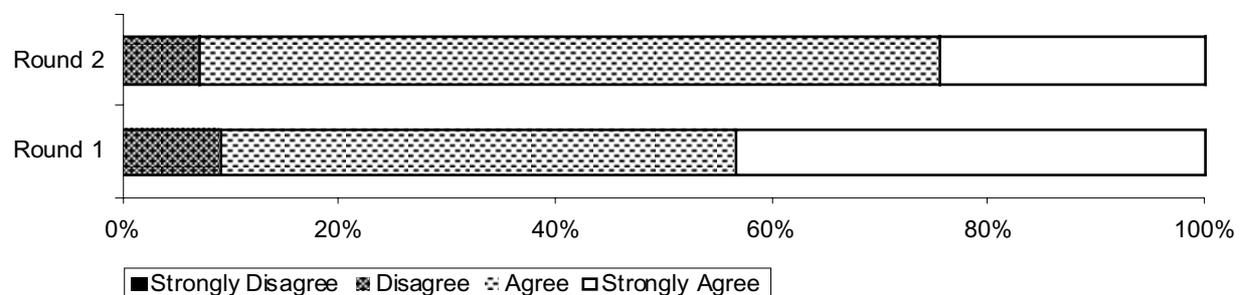


This observation is interesting in the light of a recent article complaining that there was a lack of action research in Hong Kong (Li, Yu, Lam, & Fok, 1999). One of the reasons cited was that in Hong Kong 'administrators do not encourage power sharing and pluralistic participation' (p. 38). If this is the case in schools, which was the focus of the article, it is certainly not a Chinese characteristic as the participants in Action Learning Project initiatives were certainly able to form the type of democratic partnerships conducive to action research.

Changing Attitudes

The large majority of the respondents felt that they had strengthened their belief in the value of research into teaching through being involved in their projects. As they would have felt reasonably positive to participate in the first place, by the end there must have been very high levels of commitment.

Figure 9: Responses to the statement, 'This project has strengthened my belief in the value of research into teaching'



The qualitative data gives a similar picture. At least some of the projects' participants felt that they had had an impact upon course design and the way teaching took place within their departments.

My department head has expressed interest in developing similar tools for other courses in the department.

... it will inevitably affect the ways in which other courses are taught in the future.

Yes, more problem-based approach in teaching and learning has been considered by many departments in the Faculty.

Less Effect on Others

When asked if the project had any effect on other members of their department not involved in the project, many said it raised their awareness of innovative teaching methods.

Yes, it has challenged staff to a 'new' form of teaching and learning.

I think definitely it enhanced the awareness of such programme exist. As any influence on their behaviour, I really don't know.

But not all of them are so positive about having an impact on departmental colleagues. Educational developers always hope that their initiatives will have a wider impact through a knock-on or trickle-down effect to those not immediately involved. Action researchers have

widened the circle of involvement to include others not initially engaged, which might be seen as an emancipatory process (Carr, & Kemmis, 1986).

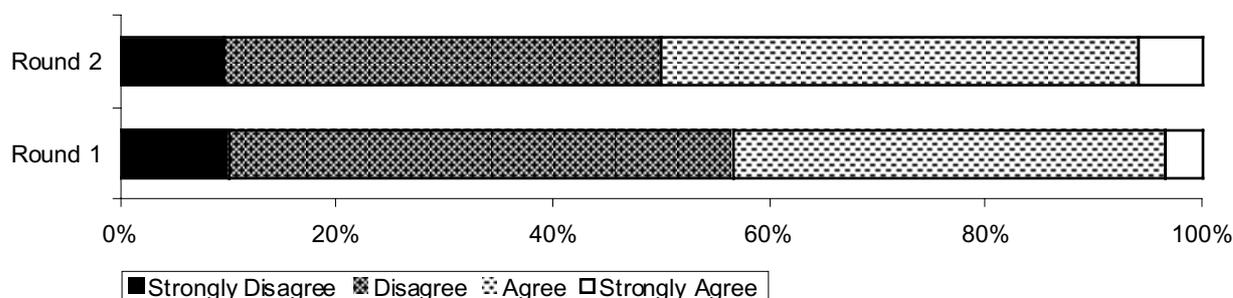
There were divided opinions as to whether this happened or not. In contrast to the above quotations were those who had little or no impact on others in their department.

Actually the department is resistant to this style of teaching, they did not accept it. They did not see the progress from this method of teaching.

Its goal to provide a model for further development within the programme is not so certain.

The quantitative data suggests that over the two rounds, roughly half the respondents felt their projects had made some impact on the teaching of their colleagues. If this is the case it should be seen as quite a significant impact as it is not easy to influence others to change their teaching practices.

Figure 10: Responses to the statement, 'The project has led to an improvement in the teaching of others in my department'



Conclusion

This study has something to say about the nature of action research. The literature makes it clear that there is a divergence of opinion on the nature of action research. A convenient framework for discussing the differing forms of action research is provided by McKernan (1991) who makes a division into three types:

- 1 The scientific-technical view of problem-solving
- 2 Practical deliberative action research
- 3 Critical-emancipatory action research.

The majority of the Action Learning Project teams in both rounds admitted to no previous experience of action research. Of these many came from disciplines in which the scientific or positivist paradigm predominates. The closest parallel to action research for many participants would be a product development cycle in which an initial prototype is developed and tested, followed by the development of a revised version based on the evaluation of the initial model. Those from disciplines such as engineering, applied science or business would be familiar with processes like these and might have been expected to adopt an action research process along similar lines, in which case one might have expected that these teams would adopt a scientific-technical approach to action research. It would be seen essentially as the development of a curriculum innovation which was tested and refined using a developmental testing process.

However, the feedback from the participants suggests that this technical development approach was rarely applicable. The earlier parts of the article have presented evidence of: reflection upon practice through critical discourse; the development of cohesive teams; and of the participants changing their attitudes to their practice as teachers. McKernan (1991, p. 21) notes that 'The practical is also connected with the *process* rather than the end *products* of the inquiry.' There was a concern for the product, but it would be questionable if there was not. Abundant evidence has been presented about the process itself as an outcome, so in this sense the large majority of the participants adopted practical deliberative, rather than scientific-technical, action research.

It is doubtful though whether many of the projects could be classified as critical-emancipatory. Certainly the reports from the projects (Kember et al, 1997) eschewed the rhetoric of the critical-emancipatory school. McKernan (1991, p. 25) characterises the critical-emancipatory process by 'The heightening of understanding through hard critique is the *modus operandi*.' The Action Learning Project participants were mindful that universities reward publications which are more likely to result from studies with hard evidence than hard critique. There was definitely evidence of reflection through a process of critique, but in all cases this was accompanied by data gathered through evaluation.

It might be seen as encouraging that so many participants, the majority with no previous experience of action research and many from scientific research backgrounds, could find action research to be a suitable process for researching and improving their teaching. Furthermore, the type of action research undertaken, in the main, does not seem to have been of a narrow technical problem-solving type, but did involve critical reflection upon practice as a communal action.

Action Research as a Quality Enhancement Mechanism

The other important lesson to be drawn from this review of the overall initiative is that action research works well as a process for quality enhancement of teaching and learning. There is also evidence that it is a very cost-effective mechanism. The outcomes of the Action Learning Project show that the initiative achieved what was promised to the UGC, namely a set of teaching and curriculum initiatives which had an impact upon the student learning of those enrolled in the respective courses.

There were, in addition, more significant longer term outcomes. The large majority of participants felt that engagement in the process had improved the quality of their teaching and about half felt they had had some impact on the teaching of others. The participants developed their abilities to monitor their own teaching and became more reflective. They developed their ability to work with others teaching the same course. All of these outcomes reflect attitude changes which will endure and should impact upon the teaching of the participants well into the future. Through engagement in the process of action research, the outcomes have been long term changes to the attitudes and practices of those involved.

It is unusual to find action research employed as a quality enhancement mechanism on the scale of the Action Learning Project. It is more common to find quality assurance mechanisms which commonly involve some form of review of the teaching process. There is no evidence that such reviews produce the kind of longer term outcomes shown to be an accompanying feature of action research. I have argued at length elsewhere (Kember, 2000) that in many contexts it would be more cost-effective if there was a shift in resources away from top-down quality assurance measures towards greater faith in teachers monitoring their own students' learning through action research.

Acknowledgements

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