

Inculcation of Action Research Culture Among Science and Technology University's Lecturers

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Abstract

This paper discussed how National University of Malaysia (UKM), propagated and established on action research culture among its science and technology lecturers. Having a humble beginning of inviting lecturers to work collaboratively with science education lecturers in order to carry out research on improving the teaching and learning at the science faculty, the university took as its responsibility to improve the quality of teaching and learning in all of the faculties. Professional Development in service training courses were held research incentives and funding were provided for the lecturers. It also gave recognition on the study and its publication. Special workshops were also held by invited action researchers from Britain and Australia to train the lecturers on the concept of action research and infuse the knowledge and skills in planning an action research. An annual seminar was held to encourage lecturers to share their action research findings. A special proceeding was published, which was refereed by internal judges. The setting up of a special committee to coordinate the work at the faculty level which was headed by the Deputy Vice-Chancellor has helped the running of the research. Thus, a new beginning was made in inculcating action research culture into the teaching and learning at the university. This paper reports some of the strategies that was used to propagate the inculcation of the action research culture among university lecturers. A model for establishing this culture is then proposed.

Introduction

Action research is always associate with classroom research. It is considered as alternative methodology of research in which the practitioners embark on their own research problem and take action in order to improve their practice or their students learning. Through action research, practitioners will be able to improve their practice as well as to become better professionals. The approach is considered as a form of continuous professional development for the university teachers (Sagor, 2005; Calhoun, F. Emily, 2009; Mc Niff, Jean & Whitehead, Jack, 2009; Taylor, P. & Pettit, J. 2007; Tinkler, P. & Jackson, 2004). Action research can be taken up by an individual, a small group or school wide participants to improve their practice. There seems to be a number of advantages gained by practitioners in embarking on action research. The higher education lecturers rarely should research on improving their teaching or students' learning. The practice of university action researchers often go unnoticed and is not a sustainable activity in institutions of higher education (Greenwood, D.J, 2007).

A few of our university lecturers has participated in school action research, more often in collaborative action research with teachers in school. They act as a consultant or expert to assist teachers in each phase of action research including school-wide action research. Currently, there is

a movement on teaching improvement in higher education moving towards scholarships of teaching (Trigwell et.al, 2000).

Transforming Teaching

The transformation of higher education is brought about with the setting up of Higher Education Department and creation of Malaysian Quality Framework which provide guidelines for institutions of Higher Education to follow in order for their programmes to be accredited. Regular reviews are being made in order to conform with these requirements. Government institutions have to show that after their programmes were reviewed and regular improvements were then made. Programme providers were also required to evaluate the quality improvement of their taught courses and for improvements of their programmes.

Part of the exercise was related to accreditation and to ensure the institutions make continuous quality improvements of their programmes. The National University of Malaysia thus, decided to invite all of its academic staffs, irrespective of their field of specialization to embark action research for quality improvement on their teaching and learning or move towards scholarship of teaching. The ambitious move has its humble beginning, initially through the initiatives of some of the lecturers from the faculty of education in inviting lecturers participation in action research. A coordinator from the faculty was appointed to disseminate the concept of action research to other faculties and informed the faculty's willingness to collaborate with the lecturers in carrying the research. The education lecturers have earlier been exposed to a two days workshops action research and discussed on organizing collaborative action research. A few of them has already been involved in action research at schools level and helped the running workshops on school action research. Similarly two alternate workshops were held for the university lecturers, who have volunteered to attend the discussion on how to improve the teaching and learning of university courses through action research. Those who attended, gave positive reactions. The common questions raised during the workshop were more on the funding and the value such form of research as compared to the normal research in their field of specialization.

The education lecturers did not commit on own fundings arrangements and neither on the 'merit' of the action research papers for promotion purposes. But in general, the advice was it should have its own importance looking from the perspective of scholarship of teaching. Not much progress was made except that some positive reactions and some thoughts were given on the need to accountable to the outcome of their courses or programme.

Preparing

The message caught the eyes of the dean of faculty of engineering and he decided to propagate action research among university engineering faculty lecturers. As soon as he took up the office of a Deputy Vice- chancellor of the university, he set up a committee on the teaching and learning to plan an action research activities (see figure 1.0). Some allocations of fund for action research

were secured for university lecturers to carry out action research or research relating to teaching and learning. Research proposals were called for and a committee was formed to review the proposals. Each proposal with a suitable focus on teaching and learning at the university obtained a minimum fund of ten thousands to start with. A promise was made to get the university authority to recognize this form of research and the related action research publications. The organizations that was set-up as shown in the figure below:

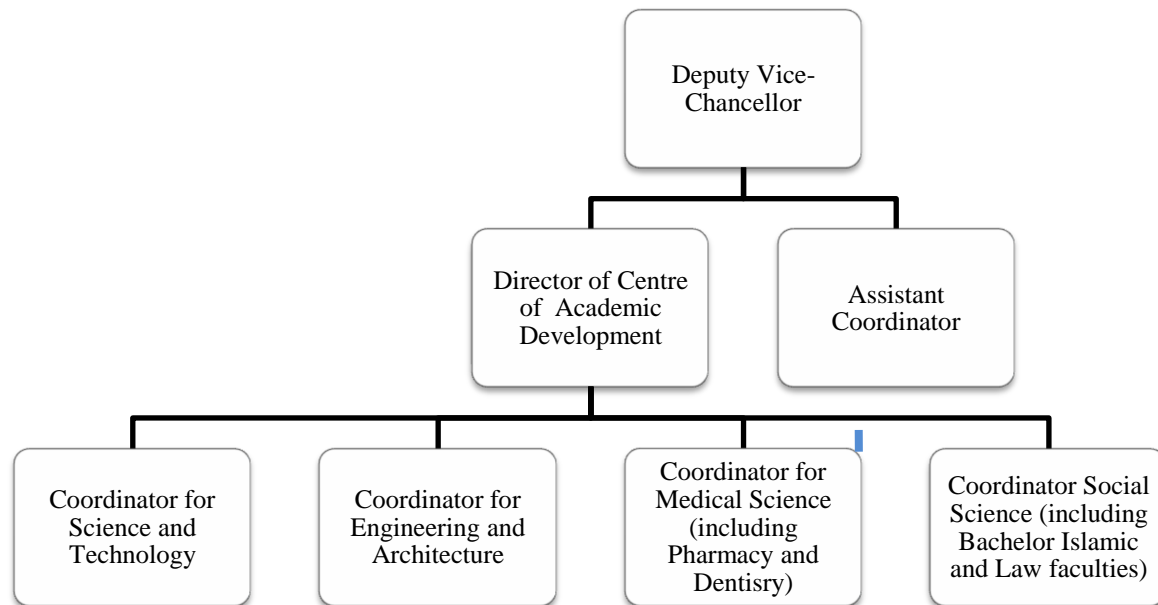


Figure 1.0 Committee Planning University Action Research

A coordinator was elected for each discipline area to assist in propagating action research and was given responsibility to form a selection committee to approve funding and organize yearly Action Research Congress on Teaching and Learning for the lecturers to disseminate or share their findings on action research through presentations working papers or exhibits. The proceedings of the congress which were later published. The publications of the action research works have succeed very well and articles were published in Scopus proceedings as well as in recognized journal. Three books which contain selected action research papers, have also been published thus far.

The positive impacts of this endeavor can be seen in the number of participations involved, the papers presented, the participants in the congress on action research beside the publications of the papers.

Table 1.0 The Number of Proposals by Faculties.

YEAR	FACULTY														TOTAL
	FSSK	FEP	FPI	FUU	FPend	PPU	FST	FTSM	FKAB	FFar	FGG	FPer	FSKB	CRG	
2009	24	2	12	7	17	27	1	7	3	1	1	1	4	4	116
2010	21	10	17	3	13	9	10	7	17	3	1	4	8	6	136

FSSK	-Faculty of Social Sciences and Humanities
FEP	-Faculty of Economics and Management
FPI	-Faculty of Islamic Studies
FUU	-Faculty of Law
FPend	-Faculty of Education
PPU	-Centre for General Studies
FST	-Faculty of Science and Technology
FTSM	-Faculty of Technology Science and Technology
FKAB	-Faculty of Engineering and Built Environment
FFar	-Faculty of Pharmacy
FGG	-Faculty of Dentistry
FPer	-Faculty of Medicine
FSKB	-Faculty of Health Sciences
CRG	-Collaborative Research Group

Lastly, some other institutions have adapted or followed our example and they have invited our participation. Through this experience one can draw a number of inferences, which can be called a model of action research culture at university. To sum-up the whole cycle of the inculcation of the action research culture can be represented by the following stages of education.

Stage 1

Concern of student outcome.

Concern on the quality of the graduate in term of human capital requirement or in specific area of teaching and learning at university.

Stage 2

Engage lecturers to reflect on teaching and learning outcome.

Awareness on the need to improve the quality of teaching, through professional development courses and embarking action research. Drawing-up an action plan.

Stage 3

Sharing of ideas on research culture.

Action research dialogues/sharing between faculty education and other faculties lecturers on the action research culture. Workshops on action research by invited trainers (expert trainers) internal as well as external (Bridget & Somekh , Trigwell and McNiff).

Stage 4

Motivational drives. Formation of action research committee/ fundings /monitoring.

Professional Development Training.

Getting started motivational and recognition of action research/ drive to improve teaching and learning for accreditation and auditing purposes.

Stage 5

Development organization structure to foster action research.

Planning and embarking of action research proposals in ones teaching and learning concern.

Stage 6

Dissemination of action research findings. Planning next cycle.

Reporting and presenting and sharing the action research findings to colleagues during teaching and learning congress.

Stage 7

Study on impact of the culture.

Review, feedback on the impact of action research.

Discussion

Overall, the experience gained from the inculcation of action research culture in the National University of Malaysia could provide the framework for other to adapt and be informed, each stage of the development requires a continuous reflection and gaining feedback. Recognition on the needs and problems of the action researchers should be considered in order to provide the drive and motivation beside equipping them with that knowledge and skills on action research. In addition, a series of workshops and dialogues were held to foster action research culture among the university lecturers, which were as follows:

- i. Why? What? and How? Action research for university teachers
- ii. How to prepare an action research proposal?
- iii. How to write an action research report (and paper for congress proceeding). Evaluation action research
- iv. How to reflect? Evaluation action research
- v. Dissemination of action research findings and publications

These workshops were sometimes conducted by invited lecturers from within as well outside the university.

The workshops or seminars were held both at the faculty as well as the university level. Some of the workshops were held on requests of the lecturers. The coordinators at the faculty level also held workshops in reviewing the proposals before submitting for approval of fundings.

Group and collaborative action research are encouraged including inter faculty group researching. The number of the lecturers who participates in the annual seminar, annual congress on teaching were increasing and so were the number of proposal received (see table 1.0).

Similarly the number of publications from these research have increased not only in terms of articles in the (Scopus) proceedings but also books and journals. The members of the committee are enthusiastic and have the passion to ensure the sustainability of the culture, with the ultimate aims of raising scholarship of teaching at the university level.

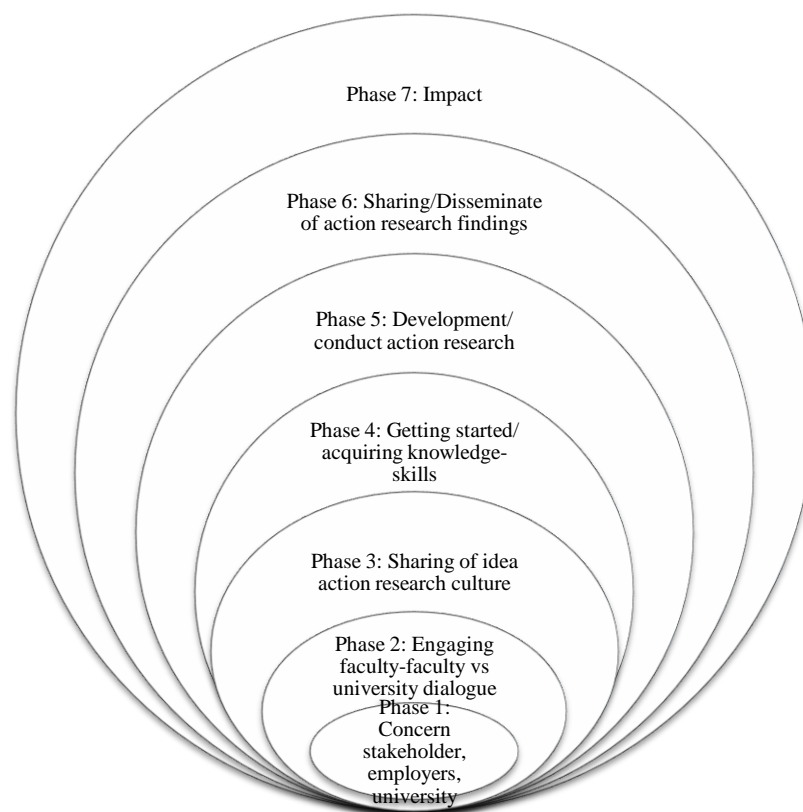


Figure 2.0 A Proposed Model of Action Research Culture

To conclude, the experience discussed provide a model as above to encourage action research at the higher education. Providing the knowledge and skills are important but one should not forget the need to provide motivation, to sustain lecturers positive attitudes by offering fundings and recognition. A study is now underway on the impact of the research on the teaching and learning at higher level and the scholarships of teaching of the lecturers involve.

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