Using Collaborative “Action Research” for a Genuine School-Based Educational Change: An Exemplar Case and Reference Notes for Novice Teacher

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Abstract

Background: Collaborative Action Research has been a popular form of research method conducted by the BEd (Hons) in-service and pre-service students studying the early childhood education at the Hong Kong Institute of Education. With a thorough understanding of the theory and practise of the collaborative action research by these novice teachers in this form of research methods, they could be benefited by an understanding on how they might develop a genuine school-based curriculum for an educational change in their schools.

Aims: This paper aimed to provide guidelines on how to conduct a Collaborative Action Research for facilitating school-based Curriculum Development by theory and practise. A case study on how to carry out a collaborative action research is quoted for reference of those who would conduct this kind of research for the first time. The insertion of this case study is to highlight the meaning of “collaborative” in an action research; it is not suffice to provide chances for teachers to voice out their opinions. What needs more to be done is to incorporate voices of teachers when formulating the plan in next action research cycle. With a thorough understanding of the theory and practise underpinned the Collaborative action research, it is anticipated that the novice teachers would gain in knowledge of what a “child-centred” curriculum and its pedagogic application would be like.

Arguments: Allied with Coulter’s argument in his What Counts as Action in Educational Action Research (2002), the author of this paper is keen to reiterate the differentiation of the three forms of Action research. In order to launch for an educational change to gear towards a child-centred practise, the genuine form of “Action” research is needed in lieu of the Educational “labour” research and the Educational “work” research.

Conclusion: The paper ends with a Question and Answer section to conclude the special features and commonly asked questions of collaborative Action Research. In other words, the author of this paper expects the readers to work out the conclusion of this paper by answering the questions themselves.

Keywords: collaborative action research, school-based curriculum, kindergarten teachers.

以合作性「行動研究」為校本教改帶來「真正」轉變：
個案範例及給新手教師的參考筆記

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摘要

背景：合作性行動研究是一種時下廣受香港教育學院在職及職前幼兒教育學位課程學員採用的研究方法。這些新手教師若對合作性行動研究的理論和實踐有深入的認識，便能透過校本課程為學校帶來教育改革的成效。

目的：本文旨在提供如何推行合作性行動研究的理論及實踐，以期促進推動校本課程的施行。為能提供給初次進行合作性行動研究的教師及準教師一些參考資料，本論文會引述一項合作性行動研究個案作例子，目的主要是強調所謂「合作性」的行動研究不能單純給予機會老師表達意見，而是要實際在在去認真思考老師的意見作為下一步行動循環的計劃。預料當教師能掌握合作性行動研究背後的理念及實踐方法後，教師會加深認識何謂之「以兒童為中心」的課程及其運用的方法。

論點：鑑於現今的教師研究員在施行合作性行動研究上的差異，本文會從文獻中的哲學角度及理論回顧合作性行動研究的根源。筆者認同曲他(2002, 189)在其《在教育行動研究上，何謂之行動？》中指出的論點，因此熱切期望並重申，有需要界分三種類型的行動研究。若要成功地推行以兒童為中心的課程教育改革，那就務須採用教育「行動」研究，而非教育「勞動」研究或教育「工作」研究。

總結：本文在總結部份以問與答的形式突顯強調一些有關合作性行動研究的特徵及常被問及的問題作結論。換言之，筆者期望讀者透過問與答的過程自行得知這篇文章的總結。

關鍵詞：合作性行動研究、校本課程、幼稚園教師
Background of Using Collaborative Action Research for Curriculum Development in Hong Kong

In the year 1999 the Hong Kong Government initiated an educational reform with the aim to raise the ‘quality’ of learning and prepare the future generations to cope with the rapidly changing needs of a 21st Century society. Play in connection with child-centred approaches, which are dynamic and creative by nature, was promoted to meet the dynamic needs of society. The degrees to which this philosophy and its allied approaches have been embraced by teachers and implemented in Chinese Kindergarten classroom practice, varies to a great extent.

In his 2006 Policy Address, the Chief Executive of Hong Kong SAR Government has introduced the School Voucher scheme. This scheme is designed for 3 to 6 years old attending non-profit making kindergarten. Education voucher system is such a system that subsidy is allocated according to student enrolment. Under the scheme, teachers will be subjected to classroom inspection to make sure they are practising a curriculum specified in the 2006 New Curriculum Guide to Early Childhood Education. The Guide has stressed the core value of Pre-primary Education as one being “Child-centredness” which advocates “Informal learning” for children through play (EdB, 2006).

Following the voices to support the 15 years free education, the likelihood to launch another round of monitoring exercise to the schools has increased. It is anticipated that the Government would further reinforce the child-centred curriculum model which has introduced in the 2006, in this way, schools which used to adopt “traditional” didactic curriculum have to change their practises into a “child-centred” ones if they are to abide by the standard set by the Education Bureau. Having said that, these schools are usually under pressures from parents and teachers alike, adhere to the traditional teacher-centre curriculum. With the provision of the new form of subsidy and the continued adoption of the 2006 Curriculum Guide, both administrators of the school and the teachers have to face the dilemma of having the “right” kind of curriculum for their schools that could satisfy the needs of all. As the needs of schools differ as with their unique missions and ideologies, there is a need to do action research collaboratively by the respective school management body and their teachers so that findings of the action research could provide genuine benefits to the school-based concerned. For example, Singapore schools are also on the same track of promoting action research at the turn of this century (Soh, 2006). In this understanding, curriculum should not be imposed on teachers alone nor decided solely by teachers either.

In respond to the views of the practitioners represented by principals and teachers in the field when implementing the curriculum in the direction set by the Education Bureau, I used the definition of Kemmis and McTaggart (1988) to define an action research as, “an systematic inquiry conducted by teacher researchers, principals, school collaborators, or other stakeholders in the teaching/learning environment to gather information about how their particular schools operate, how they teach, and how well their students learn after considering factors like government policy, school missions, cultural and socio-economical background of the students.” This information is gathered through knowledge gained in the process of action research with the aim of improving student outcomes, the realization of government policy and the up-keeping of the school.
mission, while at the same time, minimizing the variables encountered on the way”.

In view of the need to implement a child-centred curriculum reform carried forward from 2006 to its full swing, early childhood teachers are in need of a genuine knowledge both in theory and practise of what constitutes the research method. In this connection, this paper aimed to provide a good reference for the early childhood teachers and teacher-trainee, both for pre-service and in-service trainees who would attempt to do this kind of research for the first time.

The Role of Collaborative Action Research in Effecting School-Based Curriculum Development for the Child-Centred Curriculum

Action research has long been recognised to be a powerful agent of educational change. Action research helps to develop teachers and administrators with professional attitudes that embrace action, progress, and reform rather than stability and mediocrity. Apart from this, the action research process fosters a democratic approach to decision making (Mills, 2003) while, at the same time, it empowers individual teachers through participation in a collaborative, socially responsive research activity for an effective school-based curriculum development. In other words, an effective action research depends upon the agreement and commitment of those affected by it, and hence a good action research is collaborative by nature.

This practise is essential for fostering a child-centred curriculum in the classroom. A child-centred curriculum is allied with a play-based curriculum. Since the nature of play is diverse and ambiguous, the use of action research which aims at open ends of research findings on play fits perfectly with the purpose of doing the research. By operating action research in a collegial fashion, teachers and administrators would have chances to voice out their opinions though conversational exchange on the effective implementation of learning through play.

Application of the Knowledge Gained in a Pioneer Action Research Conducted in 1997

The guide to early childhood curriculum in 1996 was published in response to the demand of the changing education platform in Hong Kong. But since the introduction of the reform guide, it has still been repeatedly reported up till the present moment that there are cases in which theories are said not to go hand in hand with the practises in the early childhood education (ECE) field. The enduring difficulties are found on the misunderstanding of the practitioners regarding the nature of action research. Essentially, the mode of practise by the practitioners could be identified as the ‘labour’ or ‘technical’ action research instead of the ‘genuine’ action research. As such, the case studies quoted in this manuscript might seem initially not so relevant because the study seems to have happened a long time ago, however, one might say it is still relevant to use as an exemplar for reminding the in-service teachers as they have manifested similar approaches as reported in the case. Or alternatively, the in-service teacher might make reference to this paper so as to identify the form of action research that they wish to conduct on a school-based nature.
What this 1997 Research Is About?

The research was designed to examine teacher’s understanding of using blocks as materials to promote child-responsive practices in an early childhood classroom in Hong Kong.

Action research together with Narrative Inquiry method with a small group of teachers as co-investigators were used, the researcher and was then the principal of the school had gained in knowledge of the potential of materials as curriculum tools as well as the teachers. In the pursuit of curriculum ideals, the action research group, however, has encountered frustrations in situations where they perceived their ideals to be in conflict with traditional classroom culture and the expectation of parents.

The study aimed to give a deeper, and more comprehensive understanding of teachers on their perceptions of materials in play, hence, qualitative research was used as a generic term for investigative methodologies such as narrative and participant observation. It had elements of action research in it as the author of this paper in her position as action researcher implemented, reflected, observed and made changes to the study. The essential cyclic steps mentioned in the literature review have all been basically practised. For details of the steps, please refer to the latter half of this paper. The tools and techniques for monitoring in action research in this study includes diaries, portfolio, field record, interviews with teachers and students, document analysis, attitude survey, tape recordings, photographs and questionnaires.

Participants of the research include four kindergarten teachers and two affiliated participants respectively teaching K1 (children aged 3) and K3 (children aged 5) classes.

Through the reflections in the action research, all the participating teachers involved in the research have gained in understanding of how block as playing-learning materials could enhance the quality of children’s play in the progressive classroom. Basically, teachers have unanimously agreed with the researcher that block play could enhance children’s cognitive development in (a) understanding of physical quality of blocks, (b) in acquiring spatial concept, (c) in understanding symbolic activities (d) in acquiring Mathematical concepts and (e) in engaging and participating fully in dramatic play (Lau, 1998). Having said that, voices of these teachers have also been recorded as to their discoveries that ‘block play belonged to middle class early childhood activities, and have the opinion that why children from the relatively poor family in Mainland China found it difficult to improvise and play creatively in Block play activities.’ On top of that, a K3 teacher, Linda (fictional name) thinks that teachers need to give guidelines and directions for children to initiate the play. When children have acquired more experience through teacher’s instruction, they could be left alone to play (Lau, 1998).

Gloria (fictional name), a K3 teacher is of the opinion that, “The role of teacher is crucial to guide children in the Block Play activities. Without teacher, children would simply play blocks aimlessly. (Lau, 1998)”

Cindy (fictional name), a K1 teacher finds that, “K1 children did not understand what they were constructing. Teachers need to tell what their construction were represented” (Lau, 1998).

Nancy (fictional name) as a K3 teacher discovers that even in the non-threatening block play activities, children were afraid to make mistakes, “they all wanted to be successful in every attempt.”
Nancy explained that in the traditional classroom where children have to sit for examinations, children were trained to be mark-conscious and dared not willing to try out things at their chance. This attitude had been carried to block play activities as well (Lau, 1998). In order to let children have more chance to solve their problems, teachers should refrain from interrupting too constantly as lamented by Nancy. Nevertheless, Nancy also acknowledged the importance of using questioning techniques to encourage children to pay attention to the ideas of the teachers alongside of their own ideas.

**The Limitations of This 1997 Research**

Technically speaking, the limitations of this research as recorded in the thesis is the (a) different timing schedules for different groups; and (b) the lack of varieties of the types of block material used.

But far more on that, it is reported in the captioned study on the ethical questions and considerations involved (Lau, 1998). What was reported was that, “having a study such as this in a traditional institution raised many ethical and political issues. Political in a sense is that why some teachers were being invited while some were not. Questions were also raised about the ownership of the data collected, as well as the responsibility of the researcher to feed back information to the participants (Elliott, 1988).

It is precisely the above mentioned reflections on the ethical aspect of the research done by the author of the present paper prompt the author to further reflect on what constitutes a genuine action research. As could be seen in the findings reported a few lines earlier, the teachers did voice out their concerns over the ‘difficulties’ of having a child-centred curriculum in the school-based situation as represented by the use of unstructured block play. When reading the findings again some 14 years later, it seems that the researcher has only recorded the voices in written words but has not yet fully taken seriously the voices expressed by the teachers. In the implication section of the thesis, all of the three implications are concerned of doing further research work on realizing the child-centred play curriculum through the media of block while forgetting to insert the voices of the teachers regarding the suitability of the said curriculum in a religious school, the one which is sponsored by a Catholic-run organization. In this way, the author of this present paper has lounged a self-critique exercise regarding the unbalanced power relationship between the researcher and the participants in a process of implementing the researcher’s pre-determined goal.

It is found in this pioneer action research project by the author of this paper that despite the elements of collaboration has been practised as freedom of voices have been heard and recorded duly in the research report, there is still chances that the research might not be a genuine one as voices have not really been taken care of for a detour of the research to take place.

In this regard, what constitutes a genuine action research is cited for the reference of the novice teachers who would have to undertake collaborative action research in their respective school-based situation, and with due respect to the missions of their schools concerned. This paper therefore could perhaps serve as a soft reminder for the prospective researchers to pay genuine concern over the specific needs of the school instead of doing research just for the sake of introducing something bland new to the school and targeting only at some pre-determined goals to be realized. This is an important lesson I
have learnt from the 1997 research project since then I came to realize that the child-centred philosophy is presented as oppositional to traditional, teacher-directed approaches. The teacher-directed academic model is found to be the most prevalent curriculum model that the religious schools would employ before 1997 (Lau, 2006) and is still employing, though without being openly declared on that. The central difference between these two philosophies lies in the emphasis that each philosophy places on the children’s freedom with respect to their learning initiatives, and the nature of the teacher’s control over them (Tzuo, 2007). It is my understanding that no matter which philosophies your school is to take, be it a child-centred one or the one which gear more towards the teacher-directed direction, you as the action researcher needs to practise the ‘genuine’ educational action research so that your findings will lead to ethical ends, the ends that will give you the insight and findings that will suit best the needs of your school. Following on this line of thoughts, this paper aims at drawing reflections on the prospective researchers rather than a set of empirically based findings to be lamented. As I said earlier in this paper that an action research in order to be effective, has to be collaborative in nature, what comes next in the subsequent paragraphs is discussion based on a further literature review for the readers as reference material on what constitutes a genuine and ethical collaborative action research. To start with, it is worthwhile to mention what defines a research as an action research.

Defining Action Research

Elliott (1991, p.69) in his “Action Research for educational change” mentions that action research might be defined as “the Study of a social situation with a view to improving the quality of action within it.” It aims to feed practical judgement in concrete situations, and the validity of the ‘theories’ or hypotheses it generates depends not so much on ‘scientific’ tests of truth, as on their usefulness in helping people to act more intelligently and skilfully.

Kemmis and McTaggart (1982) have tried to define action research as “a deliberate, solution-oriented investigation that is group or personally owned and conducted. It is characterized by spiralling cycles of problem identification, systematic data collection, reflection, analysis, data-driven action taken, and, finally, problem redefinition. The linking of the terms “action” and “research” highlights the essential features of this method: trying out ideas in practice as a means of increasing knowledge about and/or improving curriculum, teaching, and learning. In the next paragraph, I will try to make clear the concept of what constitutes a genuine action research. This is the area where I have overlooked in my 1997 research practice.

Theoretical Foundations of Action Research

Educational “Labour”, “Work” and “Action” Research

Coulter (2002) in his What Counts as Action in Educational Action Research uses Adrent’s (1958, 1988) tripartite division of human action into labour, work and action to show how each version of practice involves a different link to theory, knowledge and research. Educational “labour” research focuses on finding a better means to achieve predetermined ends and educational “work” research concentrates on developing new ends, both of which somehow
bear characteristics of the positivist model of “technical-rationality” propounded by Schon. From an Adrenditian perspective, educational “action” research would attempt to use research to understand how human freedom might be exercised in dialogue with others (ibid.). Hence, one could argue that educational “labour” and educational “work” action research are different from the ‘authentic’ educational “action” research, in that the latter ties theory and practice together in the course of the research. The use of the term ‘authentic’ is borrowed from Clarke (1998) to describe the more preferable form of action research. According to what I have learnt from my 1997 research practise, only the Educational “Action” research, talking in Coulter’s term could be taken as the ‘genuine’ or ‘authentic’ action research. What I am going to discuss next, is to introduce another terminology of action research. In my understanding, Carr and Kemmis’ classification of “Practical” action research could relate to Coulter’s “Educational action research”.

“Technical”, “Practical” and “Critical” Action Research

“Technical” action research.
Carr and Kemmis (1986) in Becoming Critical: Education, Knowledge and Action Research mention that there are sharp differences between variants of action research in the way they theorize the relationship between research and social (educational) change: some see it as a technical (or instrumental) connection, some see it as a version of what Aristotle, and Schwab (1969) after him, described as practical reasoning, and others see it in terms of critical social science. Hence, Carr and Kemmis try to delineate three forms of action research according to the practical interests they serve. First, there is “technical (or instrumental) action research”. Secondly, there is “practical action research” directed towards the realisation of moral ends and involving a form of practical reasoning that does not separate reflection about means from reflection about ends. Aristotle called such reasoning phronesis (see Schwab, 1969). Thirdly, there is “critical action research” directed towards human emancipation (Carr & Kemmis, 1986, cited in Lau, 1998).

Among Carr and Kemmis’ (ibid.) three models of action research, it is not recommended to use the “technical action research” which is shaped by a technical rationality that separates reflection about means from reflection about ends. Up to now, perhaps we could understand the link between technical rationality or educational “labour” research, collegial or democratic rationality or “practical action research” and educational “action” research. With the understanding of this link, it would be easier for the readers to operate an ‘appropriate’ form of action research in their own research circumstances (ibid, 1998).

Discarding the possibility of having “Technical” action research, let us now concentrate into the other two perspectives of action research, namely the “Practical” action research and the “Critical” action research.

“Practical” action research.
It assumes that individual teachers or teams of teachers are autonomous and can determine the nature of the investigation to be undertaken. It also assumes that teacher researchers are committed to continued professional development, school improvement, and want to systematically reflect on their practices. Finally, the practical action research perspective
assumes that as decision makers, teacher researchers will choose their own areas of focus, determine their data collection techniques, analyze and interpret their data, and develop action plans based on their findings (Mills, 2003). This kind of research in the eyes of Carr and Kemmis (1986) is along the lines advocated by Donald Schon (1983) in the US and John Elliott (1978, 1991) in Britain.

Although Carr and Kemmis made a categorical distinction between the “practical action research” with the “critical” or “emancipated” action research, Elliott disagrees this distinction by arguing that critical dimension can be an integral aspect of practical reflection that focuses on how to realize educational values in action.

Mills (2003) has devised a set of key concept for the readers to identify the features of “Practical” and “Critical” action research which is worth sharing. I have adopted the key concept though replacing the examples given by our own examples in Hong Kong.

The Key Concept of “Practical” Action Research

Key Concept (Mills, 2003):
Teachers as Action researchers have decision-making authority
Example:

Your school has adopted a school-based decision making approach that provides teachers with the authority to make decisions on the teaching and learning of children which they think are most effective.

Teachers as Action researchers are committed to continued professional development and school improvement.
Example:

Based on the results of “self-evaluation” exercise and classroom observations, teachers and administrators at your school determine that children have low motivation to learn. Collaboratively, the action research team members determine the focus for a school improvement strategy for improving the motivation of children.

Teachers as action researchers want to reflect on their practices.
Example:

You are a successful classroom teacher who always reflects on your teaching practise and to identify which areas could be improved. It is your belief that being a professional teacher, you have to continually examine your teaching effectiveness.

Teachers as action researchers will use a systematic approach for reflecting on their practice.

Example:

Teachers will employ different data collection techniques to collect data on how children could be motivated by play activities, such as using diaries, analytic memos, video-taping a play scenario.

Teachers as action researchers will choose an area of focus, determine data collection techniques, analyze and interpret data, and develop action plans.
Example:

You have focused on how to motivate young children to learn. You have decided to collect data using videotapes of lessons, interviews, and observations. During the research period, you try to interpret the data you are collecting and decide what these data suggest about the effectiveness of the play-based curriculum and the setting up of environment to facilitate the play activities. When all the data have been collected and analyzed, you decide what action needs to be taken to refine, improve, or maintain the play-based curriculum and the setting up of environment.
“Critical” action research.

“Critical” action research is also known as “emancipated” action research because it is always connected to social action; it always understands itself as a concrete and practical expression of the aspiration to change the social (or educational) world for the better through improving shared social practices, the shared understandings of these social practices, and the shared situations in which these practices are carried out. It is thus always critical, it is about trying to understand and improve the way things are in relation to how they could be better. But it is also critical in the sense that it is activist: it aims at creating a form of collaborative learning by doing (in which groups of participants set out to learn from change in a process of making changes, studying the process and consequences of these changes, and trying again) (Kemmis, 1993, cited in Lau, 2006).

In short, the values of critical action research dictate that all educational research should be socially responsive in the following ways (Mills, 2003):
1. Democratic – enabling participation of people.
2. Equitable – Acknowledging people’s equality of worth.
3. Liberating – Providing freedom from oppressive, debilitating conditions.
4. Enhancing – Enabling the expression of people’s full human potential. (Stringer, 1993)

The Key Concept of “Critical” Action Research

Key Concept (Mills, 2003):
Action research is participatory and democratic.
Example:
You have identified an area in your teaching that you believe can be improved (for example, how to integrate subjects according to Multidisciplinary Integration recipe). You decide to investigate the impact of your intervention and to monitor if it makes a difference at your own initiatives).

Key Concept (Mills, 2003):
Action research is socially responsive and takes place in context.
Example:
You are concerned about how children from low socio-economical families could learn better by integration activities through play. You decide to learn more about how best to teach in an integrated manner and to implement some of these strategies.

Key Concept (Mills, 2003):
Action research helps teacher researchers examine the everyday, taken-for-granted ways in which they carry out professional practice.
Example:
You have adopted a new integration approaches in subjects like art, music and physical education and decide to monitor its impact on student performance through observations and analytic memos.

Key Concept (Mills, 2003):
Knowledge gained through action research can liberate students, teachers, and administrators and enhance learning, teaching, and policy making.
Example:
The students in your school have a low motivation to attend schools in spite of a newly adopted school-initiated policy on absenteeism. You investigate the perceptions of colleagues, children, and parents toward absenteeism to more fully understand why the existing policy is not having the desired outcome. Based on what you learn, you implement a new policy and systematically monitor its impact on absenteeism levels and students’ attitudes toward school.
In the next paragraph, the process of action research is explained. In the 1997 research project, the cyclic model on which the action research is based on belongs to the simple model for the beginners.

The Process of Action Research

Models Set by Lewin and Elliott

Kurt Lewin is also generally credited as the person who coined the term ‘action research’.

According to Lewin (1946, 1948, cited in Kemmis, 1980), the action research model involves a ‘spiral of cycles’. The basic cycle of activities is identifying a general idea, reconnaissance, general planning, developing the first action step, implementing the first action step, evaluation, revising the general plan. From this basic cycle the researchers then spiral into developing the second action step, implementation, evaluation, revising general plan, developing the third action step, implementation evaluation and so on (Elliot, 1991).

The basic cycle involves the following (reproduced by Smith, 2001) in Figure 1.

Figure 1. Basic Cycle of Action Research
Elliott (1991, p.70) has revised this model and present it in the following Figure 2.

*Figure 2. A Revised Version of Lewin’s Model of Action Research by Elliott (1991)*
This revised model has allowed:
- The general idea to shift;
- Reconnaissance should involve analysis as well as fact-finding and should constantly recur in the spiral of activities, rather than occur only at the beginning;
- Implementation of an action step is not always easy, and one should not proceed to evaluate the effects of an action until one has monitored the extent to which it has been implemented.

A Simple Model Recommended for Beginners
Apart from Lewin’s model and Elliott’s revised model, a variety of forms of action research have evolved (Carr & Kemmis, 1986). All adopt a methodical, iterative approach embracing problem identification, action planning, implementation, evaluation, and reflection. The insights gained from the initial cycle feed into planning of the second cycle, for which the action plan is modified and the research process repeated (Figure 3).

Collaborative action research engages teachers in the following steps. The following steps illustrate the basic cycle in action research:

**PLAN**
- Identify an area of focus
- Collect data (fact finding)
- Develop an action plan

**ACT**
- Implement the action plan

**OBSERVE**
- Collect data by employing different data collection techniques
- Observe the action taken
- Analyze and interpret data

**REFLECT**
- Reflect and refine the action plan

**REVISED THE PLAN**
- Start a new cycle of action if necessary
Methods and Techniques Used to Collect Data in Action Research for Data Analysis

Field Notes / Field Records
The written records of participant observers are referred to as field notes. For teachers undertaking participant observation efforts in their classrooms, these field-notes may take the form of anecdotal records compiled as part of a more systematic authentic assessment of portfolio effort. As a researcher, you could observe and record everything you possibly can, including the time, action taken by the teachers, reaction of the children, the arrangement of furniture, the decorations of classrooms…etc. You can try to see the routine in new ways. If you can, try to look with “new eyes” and approach the scene as if you were an outsider (Mills, 2003).

Analytic Memos
From your field notes, you could then write your analytic memos. Analytic Memos contain one’s systematic thinking about the evidence one has collected, and should be produced periodically; normally at the end of a period of monitoring or reconnaissance (Elliott, 1978). These memos may record such things as:

- New ways of conceptualising the situation under investigation which have emerged;
- hypotheses which have emerged and which one would perhaps like to test further;
- citations of the kind of evidence you need to collect in the future, in order to ‘ground’ emergent concepts and hypotheses more fully;
- statements about emerging problems and issues within one’s field of action.

The analyses contained in these memos, which may be as short as one or two pages, should be cross-referenced to the relevant evidence on which they are based (Elliott 1991), for example, to certain entries in the field-notes, in the diary, in the interviews record or to sections of transcribed tape/video recordings.

Diaries
It is useful to keep a diary on a continuous basis. It should contain personal accounts of “observations, feelings, reactions, interpretations, reflections, hunches, hypotheses, and explanations (Kemmis et al, 1982, cited in Elliott, 1991).” As far as I understand, writing is fundamental to the disciplined form of reflection upon practice which is one of the characteristic of the action research.

My experience of using diary:
At the beginning of my PhD research, “Teachers’ Understanding of Children’s Play in the Early Childhood Curriculum” (Lau, 2006), teachers were requested to record their reflections on teaching in diaries. However, after observing that the reactions of the teachers were not very positive, I decided to abandon this method. Instead, I, as the researcher, recorded my reflections on a diary albeit in an intermittent manner due to the lack of time to do so.

Document Analysis
Documents can provide information which is relevant to the issues and problems under investigation (Elliott, 1991, Mills, 2003). In the context of school-based action-research, relevant documents could include:

- Syllabuses and schemes of work
- “Curriculum” reports of school working parties and committees
- “Activities sheet” for evaluation
- Minutes of school cyclical meetings
- Sections used from text books or self-designed activities book
- Samples of children’s work

Photographic Evidence
Photographs can capture the visual aspects of a situation. In the context of school-based action research they can visually capture (Elliott, year unknown, as cited in Lau, 2005):
- Children work and play in a classroom activity,
- What is going on ‘behind the teacher’s back’?
- The physical setting of the learning environment,
- The pattern of social arrangement within the classroom,
- The gestures and physical posture of the teacher.

Tape/Video Recordings and Transcripts
In the context of classroom action-research, tape or video can be used to record lessons in whole or in part. Video recordings can be set at a fix position to minimize the distraction caused to children (ibid., year unknown, as cited in Lau, 2005):

- Portable tape-recorders with built-in microphones are convenient for researcher to carry around the classroom.

Using an “Outside” Observer
The ‘outsider’ can collect information and convey it to the teacher (as researcher as well) by reporting to teacher of his/her observations in notes or what was recorded in video-taping/audio-taping.

Elliott (1991) suggests that the ‘outsider’ may be a fellow member of the action-research team but operating outside ones immediate field of action; a colleague who is not involved in the research; or an external person who ‘visits’ the school (or site) as a consultant. Observer’s accounts should be cross-referenced to appropriate Analytic Memos.

In the 1997 action research project, the two affiliated teacher part-taking in the research process could be deemed to fit into this category of research technique.

Interviewing (Informal Ethnographic Interview, Structured Formal Interviews, E-mail Interviews)
Interviewing is useful for issues which are being explored rather than clearly defined from the onset (Kemmis 1988, p.102). Interviews take the form of Informal Ethnographic Interview:

The informal ethnographic interview is a casual conversation that allows the teacher to inquire into something that has presented itself as an opportunity to learn about their practice. Agar (1980, cited in Mills 2003) suggests strategies that allow teacher researchers to have a ready set of who, what, where, when, why and how questions to ask participants in a study. Following the episode, the teacher might briefly jot down in a plan book a summary of what the children had to say and refer back to it later in an analytic memo.

Structured Formal Interviews
The interviewer has worked out a series of questions to ask and controls the conversation along these lines (Kemmis, 1998).

E-mails interview
With schools becoming increasingly networked, the use of e-mail to interview colleagues can easily
be achieved. For busy teachers, it may be a far more effective use of time to engage in an ongoing conversation using e-mail (Mills, 2003).

The Running Commentary

Elliot (1991) wrote that “there are periods in most practical situations where a participant can pause to observe what is going on. Observation should continue for at least 5 minutes. Do not intervene in the task the pupil is engaged on. Note things like ‘tone’, ‘gesture’, etc. Keep the commentary as descriptive as possible, avoiding judgements and high level interpretations from which it is difficult to tell what was actually happening. (e.g. the children can surely do it). ‘Running Commentaries’ should be cross-referenced when relevant to appropriate Analytic Memos.

Check-lists

Check-lists are basically sets of questions one answers oneself. They structure observations by indicating the kinds of information needed to answer the questions. Checklists should preferably used in conjunction with more open and less structured techniques of monitoring (Elliott, 1991).

Triangulation

The technique of triangulation is used to collect data where they differ, agree, and disagree. Where disagreement arises, it is advisable to encourage discussions among parties with different point of views under the chairmanship of a “neutral” party (ibid. 1991).

Case Studies

According to Elliott (1991), case studies are a way of publicly reporting action research data. Case study has no set methodology. It is defined by its focus and the study of particulars. In order to collect and report data by case study, there are three processes involved in the work. Stenhouse (1978) makes a useful distinction between case study, case record and case data. These distinctions are drawn by Stenhouse to address concerns about the validity of interpretations contained in case studies. Hence materials are selected from the case data for the case record in terms of their relevance to questions that might be raised about the validity of aspects of a case study account. The reader can then test the account against the data in the case record. In the context of action research the case data consists of all the evidence one collects, for example, in the form of recordings, transcripts, diaries, notes, photographs, etc. The case study is essentially an analysis of one’s experience to date. The case record will consist of an ordered selection of evidence from the case data, which is organized in terms of its relevance to the issues addressed in the case study. Elliott (1984) further suggests that if a team of teachers want to report similarities and differences of outcomes from several cases, cross-case analyses could be employed where data are reported as chapters.

Artefacts

Visual and written sources of data are termed as artefacts. Examples are worksheets, textbooks, photographs, portfolios of student work.

Observe the Action Taken

This step involves observing what has taken place in the process of collection of data. Styles of observation could be participant and non-participant observation:
Participant Observation

According to McMillan (1996 cited in Mills, p.53), if the researcher is a ‘genuine participant in the activity being studied,” then the researcher is called a participant observer. Participant observer has two roles to be taken:

1. To observe the activities, people, and physical aspects of a situation; and
2. To engage in activities that is appropriate to a given situation that provides useful information. (Spradley, 1980 cited in Mills, 2003)

Non-participant Observation

In non-participant observation, the researcher is unobtrusive and does not engage in the roles and work of the group as a group member, but remains aloof and distanced from the action. McKernan (1996, p.61) reminds us that the researcher is more concerned with participants’ behaviours than with gaining meaning through personal participation. The focus is on valid recording of behaviours using an unobtrusive strategy of data collection so as not to interfere with the natural sequence of events; care is taken not to disturb the ethos and culture of the setting by intrusive activity. The use of video-tape technology is a kind of non-participant observation.

Analyze and Interpret Data

This step involves analysing and interpreting of data. In order to do the captioned step well, one needs to employ data analysis techniques. The following are guideposts to move the researcher through their analysis as efficiently as possible. The steps involve are respectively (a) Identifying themes, (b) Connect findings with personal experience for an interpretation of data, (c) Contextualize findings in the literature; and (d) Coding Interviews and Questionnaires.

Reflect and Refine the Action Plan

Since action research has an on-going nature, it goes through a number of spirals and collect data during these processes. The cyclic nature of action research has facilitated the research to undertake steps of ongoing analysis and reflection. Anderson et al. (1994, cited in Mills, 2003) suggested that “Stopping periodically in the data collection process also allows you to see if you have any gaps in the data, holes where you need data to answer the questions. Seeing this early on in the research allows you to develop the correct techniques for a complete study.”

Start a New Cycle of Action If Necessary

If the researcher thinks that the outcomes of the research still could not provide satisfactory answers to the research questions asked or that further actions need to be taken in order to substantiate the findings, the researcher could start a new cycle of actions again.

What Is Considered As a “Good” Action Research?

A review of literature on Dick (2000) shows that a good “action research” should have the following qualities in that:

A “good” action research is emergent and responsive. To achieve both action and research outcomes requires responsiveness to the situation, the participants and the growing understanding on the part of those involved. Using a cyclic process in most circumstances enhances responsiveness (ibid, 2000).

It is the cyclic nature of action research which
allows responsiveness. The fact that research questions could be set during the process could reduce the chances of the reader being misled by questions set at the start of the research (ibid, 2000).

A “good” action research is empirical and is responsive to the evidence. It is important that the evidence is used critically rather than uncritically (ibid, 2000).

A “good” action research has used multiple sources of evidence within all or most cycles. Differences between data sources, can lead the researchers and participants towards a deeper and more accurate understanding. Alternatively, literature could be skilfully used as data source. The researcher could disprove the interpretations arising from earlier cycles. The fact that at each cycle the researcher challenge the emerging conclusions by pursuing disconfirming evidence has become the rigour of action research. It is most effective when the end result emerges from the data (ibid, 2000).

In sum, the major justification for action research methods is that they can be responsive to the situation in a way that many other research methods cannot be.

Lastly and most importantly, a “good” action research should have rigour.

The ‘Rigour’ of Action Research

Data Collection Considerations: Validity, Reliability, Generalizability, and Ethics

Action research has often been criticised by its opponents for its lack of rigour. Atkinson (1994) argues that “the spiral spin offs might cause the research to lose sight of the main issue and that having multiple investigations on the go at one time could result in the loss of rigour and discipline in the entire research process”.

To action researchers, what have been accused as the shortcomings of action research (undisciplined and lack of rigour) by the opponents are indeed viewed as the strengths of action research. Action researchers understand that the researchers’ interaction with the objects of their inquiries is always complicated, mercurial, unpredictable and complex. This assertion is particular true when applies to the complex concept of ‘understanding’ as the present research has confirmed. I agree therefore with Kincheloe’s (2004) perception that “the concept of ‘understanding’ in the complex world viewed by bricoleur is unpredictable”. Such conditions negate the practice of focusing on one single issue and testing against it like what the positivists do while losing sight of some more important and unexpected valuable issues uncovered along the way (Lau, 2006).

In order to capture the ‘reality’ of the situation and secure the relevant data to match the research aims, action researchers would allow circumstance to shape the methods employed and would not plan research strategies in advance. Action researchers would judge the particular circumstance and employ suitable strategies to seek out the ‘reality’. This situation would entail the use of multiple methods and strategies and spiraling up and down the different research steps whenever the circumstance deems appropriate. Thus, in Kincheloe’s words (ibid., 2006) “bricoleurs are freed from reductionist conventions in ways that facilitate their moves not to an anything-goes model of research but to a genuinely rigourous, informed multi-perspective way of exploring the lived world”. In this perspective, I could argue that the triangulated data generated from the multiple techniques and methods employed in this action research have provided strong ground to establish the
rigour of the research.

To the question of what is considered as ‘rigour’ in the action research process, Kinchelo (ibid, p.14, cited in Lau, 2006) gives us a convincing answer. He (ibid.) writes,

Here bricoleurs take the opportunity to move beyond traditional definitions of rigour as the degree of fidelity to the unquestioned steps in the research process and the degree to which the research accurately reflects ‘true reality’. In this context they study the socially constructed nature of what passes as rigour in research. In doing so, they move a step closer to the complexity of the act of knowledge production. Such proximity helps them redefine rigour in a way that involves developing numerous ways of recognizing and working with this complexity.

In order to test the rigour of a research, action researchers are advised to apply the research principles of validity, reliability and objectivity to verify his/her methodology in doing the research. Since it has been argued that the conventional criteria for judging the rigour or trustworthiness of action research include internal validity, external validity, reliability and objectivity are not always appropriate. Guba and Lincoln (1989, cited in Lau, 2006) offer the following criteria as alternatives:

Credibility

It is parallel to internal validity. The conventional internal validity deals with how one’s findings match ‘reality’. It addresses the concern of whether the researcher is observing and measuring what they think they are measuring. Since the assumption underlying action research is that ‘reality’ is holistic and changing, thus determining how one’s findings match reality is an inappropriate measure of validity. Rather, ‘reality’ is “a multiple set of mental constructions…made by humans” (Lincoln & Guba, 1985). What is being studied is how people understand the world. Therefore, the focus of credibility is on judging the validity or truth of a study that involves the investigator showing “that he or she has represented those multiple constructions adequately, that is, that the reconstructions that have been arrived at via the inquiry are credible to the constructors of the original multiple realities” (ibid). It is the researcher’s task to present an honest account of how informants view themselves and their experiences (Merriam, 1988, cited in Lau, 2006). When reality is viewed in this manner, internal validity is strength of action research.

In a research, a researcher is advised to use the following strategies suggested by Merriam (1988) to ensure credibility. The first strategy was member checks. I took data and interpretations back to the research team members from whom they were derived and asked them if the results were plausible. The second strategy involved co-researchers examination. The researcher should ask the team members to comment collaboratively on the findings as they emerged. It was found that in the course of the research, the team members were eager to express their opinion and a lot of information was exchanged which facilitated further self-reflection to reach for multiple ‘realities’ (Lau, 2006).

Transferability

It is parallel to external validity or generalizability. The conventional external validity concerns with how generalizable the results of a study are (Merriam, 1988). External validity deals
with the question: To what extent can the findings of one study be applied to other situations? Traditionally the ability to generalize to other settings or people is ensured through using standard sampling procedures. This is not possible in action research that deals with the study of a particular case or setting. Since external validity in the traditional sense cannot be applied to multi-method research, Lincoln and Guba (1985) suggested the notion of “transferability” of the results obtained from qualitative data. In short, external validity in case study research can be thought of in terms of the reader or user of the study. Reader or user generalizability involves leaving the extent to which a study’s findings apply to other situations up to the people in those situations (Merriam, 1988, cited in Lau, 2006).

In order to ensure generalizability or transferability of findings, it is advised that the action researcher to provide the reader with a “rich and thick description” of his/her research methodology in order to facilitate transferability judgments on the part of others. It is good to establish the typicality of the case by describing how typical an individual is compared with others in the same school, so that the readers can make comparisons with their own situations and then follow by cross-site comparisons to build an integrated framework. The above mentioned strategies are suggested by Merriam (ibid. 2006).

**Dependability**

It is parallel to reliability. The conventional reliability refers to the extent to which one’s findings can be replicated (LeCompte & Goetz, 1982, cited in Lau, 2006). Reliability addresses the question: if the study is repeated, will it yield the same results? Merriam (1988) stated that reliability in research designs is “based on the assumption that there is a single ‘reality’ which if studied repeatedly will give the same results” (p.170). However, since qualitative research seeks to explain the world as those in the world see it, there are many interpretations of what is occurring and thus, no “benchmark” by which one can take repeated measures and establish reliability in the traditional sense” (ibid.).

Since reliability in the traditional sense cannot be applied to action research, Lincoln and Guba (1985) suggest thinking about the “dependability” or “consistency” of the results obtained from qualitative data. The idea is that given the data collected, the results make sense – they are consistent and dependable.

In order to ensure reliability, the action researcher is suggested to employ the following techniques suggested by Merriam (1988) in his/her research process to make sure that the results are dependable. For example, he/she could explain the assumptions and theory behind the study during the various stages of the research project to the team members. An explanation of a researcher’s position as the first order action researcher and at times step back as a second order action researcher to the team members is recommended. According to Denzin and Lincoln (2000), such a step back allows me “a conceptual distance that produces a critical consciousness. Such a consciousness refuses the passive acceptance of externally imposed research methods that tacitly certify modes justifying knowledge that are de-contextualized and reductionist” (Lau, 2006).

Another technique which the action researcher could use to ensure reliability is that he/she could leave an audit trail so that other researchers can “authenticate the findings of a study by following the trail of the researcher” (Merriam, 1988). For example,
Confirmability

It is parallel to objectivity. The conventional objectivity refers to neutrality, a demonstration that the inquiry is free of bias, values and or prejudice. To satisfy confirmability, action researchers need to show that data, interpretations and outcomes are rooted in contexts and persons apart from the evaluator and are not simply figments of the evaluators’ imagination. All data needs to be able to be tracked to its source and that the logic used to assemble the interpretations into structurally coherent and corroborating wholes is both explicit and implicit in the narrative of the case study (Guba & Lincoln, 1989, cited in Lau, 2006).

In order to ensure objectivity, action researchers could compile the case study by making detailed reference to every piece of raw data collected throughout the entire research stages. The raw data was compiled into readable form and could be listed in Appendices to enable its source to be tracked. In addition, objectivity in the research is maintained by systematically including the data in the analysis and the signatures of the providers of information to enable their authenticity to be verified (Lau, 2006).

Questions to Ponder

What is the role of Action Research in effecting School-based Curriculum Development?

What is considered as a “good” ‘genuine’ and ‘authentic’ action research?

How long should one take to complete ‘a cycle’?

How long should one continue the spiral of action research?

Should there be power relationship existed among the Principal researcher and the co-researchers?

References


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