

Learning Study as an Approach to Teacher Development in Two Primary Schools

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Learning study involves collaborative lesson planning of teachers of the same grade level on a double lesson which has been reported to be an effective means of fostering teacher development (Lewis, Perry & Hurd, 2004). The researcher has been involved in two learning study projects in 2002 to 2003 and 2004 to 2005. This paper reports on the researcher's experience of conducting learning study projects in two different primary schools in Hong Kong. Drawing on field notes, discussion records, lesson plans and observation of the research lessons, this paper compares the process of teacher development through learning study in the two different schools and reports the researcher's evolved understanding of learning study and teacher development through the process of being a participant observer in the projects. It is found that though learning study was conducted by the same researcher in the two different schools, teacher development varied because of the different backgrounds and group dynamics of the teachers and the maturing understanding of the researcher on the process of learning study. The paper will shed light on how learning study and the interactions between teachers' enactive learning and conceptual input can facilitate in-service teacher development especially in the teaching of English to young second language learners.

Keywords: Teacher development approaches; primary teacher education; learning study

BACKGROUND OF THE STUDY AND THE DIFFERENCE BETWEEN LEARNING STUDY AND ACTION RESEARCH

Learning study or lesson study originated in Japan where teachers teaching the same grade level planned a double lesson together, evaluated the outcomes of teaching as it took place in different classes, worked on and improved the subsequent lessons. Lesson study has been taken up by Catherine Lewis in the United States and her project has involved a number of US teachers in lesson study. She and her colleagues have reported

positive teacher development outcomes as a result of her project. Some of the positive outcomes include increased understanding of subject knowledge and students' perspectives among teachers, sharing of teaching ideas, and the development of a collaborative culture among teachers in the project (Lewis et al., 2004).

Lesson study as it took place in different projects at the Hong Kong Institute of Education (HKIED) involved essentially the same idea of teachers co-planning a lesson or a double lesson, observing the outcomes of the different cycles of teaching and improving on subsequent lessons. However, it had further taken on the variation

theory developed by Ferrence Marton with the focus on helping students to discern the significant features of what they are learning and thus enhances the understanding and the learning outcome of the students. Lesson study as it takes place at HKIED focuses on enhancing learner outcomes and catering to learner differences and it is thus termed learning study. The central belief underlying learning study is that all learners will be able to understand the teaching through the teacher varying and using appropriate teaching strategies. According to Bowden and Marton (1998), learning is making ways of seeing visible. That is, the teacher challenges the learners to put aside “taken-for-granted and deeply felt assumptions that what we see and experience is the world exactly as it is” (p. 40). In gist, “Learning is seen here primarily as a change in our way of seeing or experiencing something in the world around us” (p.40). The teacher is able to “see” the concepts underlying the teaching and her role is to guide the students to “see” or discern the same concept or idea. With incorporation of the variation theory, lesson study as it takes place in HKIED projects is termed learning study (Lo, Pong & Marton, 2002). According to Lo, learning study is similar to action research done by teachers for improving teaching and learning. However, it differs from action research in that catering to learner differences is one of the key concepts behind learning study and also that the content of the teaching and learning is the key area to work on in learning study.

Through learning study, the teacher will be able to make students see and understand the object of learning which they have not been able to see before. Taking on Marton’s variation theory, Lo (2006) argues that “different ways of knowing depends on different ways of seeing the object of learning; and learning has taken place when one’s way of seeing changes” (p.138). She continues to explicate the concept of learning study concisely in the following quotation :

“...we believe that to help each student learn teachers should consciously make use of what has been learnt from the students (the

first form of variation) and from their colleagues(the second form of variation) as inputs to decide on what aspects to focus, which aspects to vary simultaneously, and which aspects to keep invariant or constant. The goal is to provide teachers with the competency to consciously design patterns of variation to bring about the desired learning outcomes” (p. 139, 140).

Lo regards the different teachers’ competencies to adopt pedagogies that suit the learners’ needs as the third form of variation.

Learning study starts with teachers of a certain level at a school sitting together to discuss a topic and do joint lesson planning for the said topic. The topic is then delivered to a class with the teachers who have been involved in the planning observing and giving feedback. Then, the second cycle of teaching occurs with another class based on an improved version of the lesson. The researcher took part in two learning study projects in two different schools in the academic years 2002 to2003 and 2004 to2005 respectively.

ROLE OF THE RESEARCHER AS FACILITATOR OF THE PROJECTS

In both projects, the researcher served as a facilitator who participated in the project as an equal partner and offered her understanding and perspective on the planning and outcomes of the lesson. The facilitator did not assume a superior role to the teachers and her perspective was put forward as one of the alternatives but not the final decision. Teaching consultants, who were experienced teachers well trained in learning study, also took up a similar role in their participation in the project. The researcher’s first experience with learning study took place in 2002-2003 with School A which was a primary school in Tuen Mun, a suburban area in Hong Kong, with more than 10 years of history. In that academic year, a total of about twenty meetings had been conducted with the teachers in their school. The research lesson

was a double lesson on the teaching of the subject verb agreement in the present tense with a particular focus on the addition of “s” to the third person singular verbs in the present tense in primary four. Only one teacher in the P4 panel had received training on learning study before the project.

With the second project in 2004 to 2005, two teachers and a curriculum leader who were in charge of the English subject participated in the six consultation meetings which took place at HKIEd. Each of the two teachers had previously received training on learning study conducted by the Institute. They served as leaders in their respective panel groups and brought back the ideas discussed to their panel members. These teachers served as key players and trainers themselves for other teachers in their school. The Primary 3 learning study topic was the understanding and use of pronouns in short texts and the Primary 5 topic was understanding time references in discourse and using corresponding verbs according to time references.

LITERATURE ON IN-SERVICE TEACHER CHANGE

How to initiate and maintain innovations in the classroom has been a topic for discussion in the last two decades. Educators generally agree that a mechanistic model which equates the transmission of knowledge about an innovation with teachers changing their practice is futile. In the present study, the researcher is influenced by research which views teacher development as a complex process that involves the interactions between the teacher’s thinking, their working environment, past history, and sense of efficacy. Many writers view teacher thinking and its development as a complex entity. (see for example Calderhead et al., 1988; Calderhead & Shorrock, 1997, Cooper & McIntyre, 1996 and Wilson, Shulman & Richert, 1987). The central theme behind many of these research is that teachers should be seen as thinking beings and that their thinking is of central importance to the understanding and

implementation of curriculum change (Brown & McIntyre, 1993). The complex nature of teacher thinking is explored by Clandinin (1986) who not only acknowledges the importance of teachers’ practical knowledge but also considers teacher experience as an important contribution to teacher thinking. Besides acknowledging that change is a personal process, in 1978, Hall proposed that there are a few underlying assumptions which have achieved some success in teacher change. These assumptions are as follows:

- 1) Change in schools is a process, not an event.
- 2) Individuals need to be the primary focus of intervention for change in the classroom.
- 3) Change is a highly personal process.
- 4) Full description of the innovation in operation is a key variable
- 5) There are identifiable stages and levels of the change process as experienced by the individual.
- 6) In-service teacher training can be best facilitated for the individual by use of a client-centred diagnostic/prescriptive model.
- 7) The facilitator of the change needs to work in an adaptive/systematic way (Hall, 1978 in Hoban, 2002 p. 17)

The learning study projects tackled teacher change at the classroom level and focused on the individual learning of teachers in a collective discussion environment. The different cycles of teaching carried out by the participants of the project demonstrated the emphasis of teacher change being a process and not a product. The starting point of the project with a topic identified by the teachers made the focus of the project diagnostic and client-centred.

These favourable factors for teacher change are further expanded by Hoban (2002) who suggests that teacher change should be approached with a systems thinking approach, viewing the school, the innovation, the teachers, the community as complex systems each having their own characteristics and constraints.

In gist, Hoban argues that the following conditions for teacher learning will support educational change as a complex system:

1. A conception of teaching as an art or profession
2. Reflection which will help teachers become more aware of the way they teach and how this affects the complex patterns of change
3. A purpose for learning which fosters a desire for change
4. A long-term time frame
5. A sense of community which allows teachers to share ideas, experiences and concerns
6. Opportunity to experiment the idea in action
7. A variety of knowledge sources as conceptual inputs to extend the experience of the participants
8. Student feedback which responds to the trial stage in the classroom (Hoban, 2002, pp. 68, 69)

In this paper, Hoban's model of a systems thinking approach is adopted for analysis of teacher development in the project schools as it seems to provide a contextualised approach to understanding teachers' development and is very relevant to the two projects which took place in different teaching and training contexts.

RESEARCH QUESTIONS

1. What are the processes of teacher development as realised through learning study in the project schools?
2. To what extent has the concept of variation been applied to the subject matter of the lessons?
3. Besides the factors put forward by Hoban, what other factors account for teacher behaviour in the learning study projects?

DATA COLLECTION PROCESSES

The observations reported below were drawn from a wide range of data. Minutes of the meetings with teachers were taken, research lessons were video-recorded and analysed; field notes and reflections of the researcher also served as another source of data. There were a total of twenty meetings with the first school and six meetings with the second project school. In each school, there were four research lessons each conducted by a different teacher. All the eight teachers involved in the projects were experienced teachers of English with teaching experience ranging from three to over twenty years. All their lessons were video-recorded and transcribed. These data were grouped together under different categories which could answer the research questions using Strauss and Corbin's (1990) grounded theory. According to the principles of grounded theory, all the data was examined holistically and data that answered the same research questions were put together and categorised using the same theme. This method of analysis, according to Cohen, Manion & Morrison. (2006), belongs to the tradition of 'interpretive researcher' (p. 23) and that the researchers "work directly with experience and understanding to build their theory on them" (p. 23). In this way, repetitive patterns which answered the same research questions were recorded and analysed across the different sets of data collected in the different schools.

FINDINGS

Processes of teacher development in School A

Teacher development in School A had come about rather slowly and a lot of discussion time had been spent on clarifying the concepts of learning study with the teachers. This was partly due to the fact that the facilitators, the researcher included, were new to the concepts, and had to take some time to grapple with them. Also, since the concepts were new to all but one teacher, quite a lot of reservations were held about the concepts

and the teachers were rather hesitant to allow other teachers to observe their classes. Teacher confidence only increased after the first cycle of teaching the lesson. The lack of confidence was observed notably when one teacher suggested to revert to the more traditional mode of teaching even after the meeting had agreed upon the teaching steps.

In meeting 12, a more senior teacher became worried about the teaching strategies discussed so far. She represented the group and made the following points which were recorded in the minutes of the meeting:

“The group agreed that this project employs some sound educational principles. The obstacle is the time constraint in which the teachers used to have to cover the whole syllabus in the school textbooks.

Since learning language (especially second language) is a long-term process, the group agreed that improvement may not be significant in post-test. Therefore, the research lesson is not targeted at the mere increase of marks in the post-test, but the students’ sensitivity in realising the use of “subject-verb” agreement in the present tense.” (minutes of the 12th research team meeting held on 20th, February, 2003)

For School A, the gaining of knowledge of the learning study concepts took place solely through the meetings with the teachers and the critical point of teacher development was in the trial stage of the lesson in the first teaching cycle. Teachers’ worries and concerns were lessened after that.

Moreover, teacher development was also evident after teachers disseminated the findings of the projects to other schools. Through the dissemination, teachers worked through their experience again and gained insights into what they had learnt in the process. Teachers had the following to say about their professional development:

“Although we had a lot of negative perceptions about class observation in the beginning, the concept changed after the lesson study. On the contrary, there is a more open attitude for the discussion of new issues.” (Teacher reflections on learning study as put on their school’s website)

All in all, teachers in School A went through the stages of doubts and unease before the trial stage of the lesson. They increased in confidence after the first cycle of teaching and their understanding of their learning matured through the dissemination of their projects to other schools.

Processes of teacher development in School B

Teacher development took on a rather different route in School B since two teachers who were panel chairs of Primary 3 and Primary 5 had received training on learning study prior to the project. The six meetings with them were truly consultative in nature. In the very first meeting, they had already come up with the focus of the research lessons and tentative lesson steps. Discussion time was spent on fine-tuning and doing minor adjustments to their proposals but no time was spent on discussing the basic concepts in learning study and agreeing upon common definitions. This had probably taken place in training sessions that these teachers had previously attended. Apparently, six meetings had been sufficient to cover what was accomplished in 20 meetings for School A.

Indeed, it was the second time for the P.5 panel chair to run a learning study project. She was confident about the procedures and positive outcomes. There was also a culture of lesson observation built in the school because of the previous learning study project. The obstacles in running the project were much fewer in School B.

The extent to which variation theory was applied in the lessons

Both projects embodied the three forms of variation expounded on by Bowden and Marton

(1998) and expanded by Lo (2006). The teaching cycles began with the group of teachers teaching a particular level sitting together and considering the learners' difficulties in a particular language topic. In the case of the first Project, the difficulties in using the simple present tense were considered and in the case of the second project, the Primary 3 learning study topic was the understanding and use of pronouns in short texts. The Primary 5 topic was the understanding of time references in discourse and using corresponding verbs according to time references.

In these projects, the teachers consciously made use of what has been learnt from the students; that is their learning difficulties. According to Lo (2006), this understanding of students' background and needs belonged to the first form of variation. The second form of variation was realised when the teachers learned from each other by discussing the lesson procedures in the cycles of discussion. Finally, each teacher's adoption of her own pedagogy in her class according to her understanding of the students' needs and input from the colleagues became the third form of variation. In the following paragraphs, the extent to which the third variation was realised will be discussed in detail.

In school A, the project focused a lot on helping students to grasp the subject-verb agreement in the present tense. The final lesson planned was not totally satisfactory as it focused too much on grammatical accuracy at the sentence level. Activities planned included pair work and group work in card games that involved matching the correct verb with the subject and groups of students filling in the blanks and putting jumbled sentences in order. The insufficiency of the final lesson was probably due to the teachers' lack of experience with the use of language arts in the language. The researcher was, to a certain extent, exploring the concepts of learning study with the teachers in the first project but had come to a more mature understanding and belief that the concept of variation as applied to the subject matter of English must go through some kind of adaptation when applied to English.

Bowden and Marton (1998, p. 35) argue the following:

“When some aspects of a phenomenon or an event varies while another aspect or other aspects remain invariant, the varying aspect will be discerned. In order for this to happen, variation must be experienced by someone as variation.” They further assert that “learning is seen here primarily as a change in our way of seeing or experiencing something in the world around us” (p.40).

Variation has always been applied to Math or science lessons as in Japan and America since experimental situations lend themselves more readily to vary one factor while keeping others constant. In applying variation to the English language, the concept of discerning is important but language use is affected by a variety of factors which cannot be kept constant. In the first school, attempts were made to help student discern the subject verb agreement by highlighting the use of “s” in the verb when the subject of the sentence is third person singular. Nevertheless, students were confused by the plural “s” and the third person singular “s” as in the sentence, “A cook cooks meals.” Also, another area of difficulty was the plural form of “drivers” and the third person singular verb “drives.” If examples are to be simplified so that students will not be confused, highly contrived examples which are unnatural may have to be used.

The second school was more willing to try out new ideas and acted on the input of the facilitator more readily. The focus of the research lessons was still a grammatical one, though teachers were able to include elements like stories and rhymes in presenting the grammar items to students and they were also more adventurous in planning and demanding student outcome not only in speech but in writing.

The following example from the P.5 lesson plan illustrates the use of a story as a context to contrast the use of the present and the past tense:

“Peter and Mary are good friends. They go to an English class every Saturday morning. They usually buy some bread for breakfast. After that, they eat and drink on the way to school.

Last Saturday, they went to the English class as usual. They bought some bread for breakfast at the same bakery. They ate and drank on the way to school. Suddenly, a policeman caught the children and said, “Hey, you left something.” Peter and Mary searched their schoolbag and said, “No, we didn’t leave anything.” The policeman said, “You left the bags of your food in the street.”

When using a story as a context, the second school moved away from the strict version of learning study where the emphasis was getting students to distinguish different language forms in different tenses. The story illustrated the use of language form in context, and meaning was generated from the context. The enjoyment of the story came from the little twist in the story. The contrast of the language forms was achieved through the understanding of the events of the story and not only the structure of the sentences themselves. The structures of the sentences were secondary to the understanding of the text. In the first school, the emphasis of teaching had been put in the language form and understanding and distinguishing the language forms became an end in itself, instead of a means to understand the text.

Hoban’s (2002) factors affecting teacher development

Hoban’s proposal that teacher change is enhanced by the teacher being engaged in a learning community was also realised to a large extent in the two project schools, especially with reference to points 2, 3, 5, 6, 7 and 8 in his model. The structure of learning study which built in different cycles of teaching and reflections to cater to learner needs (points 2, 3 and 6) enhanced a sense of community among the teachers (point 5). The researcher and the teaching consultant served as

sources of conceptual input (point 7) and student learning outcomes which had been thoroughly discussed in meetings were also useful sources of data for feedback to the learning process (point 8). Nevertheless, the projects shed light on other factors that affected teacher development in the project schools and will be discussed in the section below.

DISCUSSION

Factors that affected teacher development in the two schools

While the positive outcomes of learning study as reported by Lewis et al., 2004 can be confirmed, the extent and quality of teacher development varied in the two schools because of the background of the teachers, the group dynamics among them, the different modes in which lesson study took place and the evolving understanding of the facilitator on the concept of learning study. These teacher differences might be summarised using Bandura’s (1986) notion of enactive learning which can largely account for teacher behaviour in School A and Huberman’s (1995) concept of the importance of conceptual input which accounts for teacher behaviour in School B.

Enactive learning versus systematic conceptual input

Bandura (1986) offers the following insight about enactive learning:

“In learning solely through response consequences, people must depend on the information conveyed by the effects of their actions. During transactions with the environment, some of their actions prove successful, others have no discernable effect, and still others produce aversive outcomes. On the basis of informative feedback, successful courses of action tend to be selected and ineffective ones discarded “ (p. 106).

It seems that the teachers in school A learned through enactive learning mainly and therefore their progress was much slower. They only gained confidence about the approach after experiencing success in the first cycle of teaching. On the other hand, Huberman (1995, pp. 202-203) argues that conceptual input enriches community discussion by introducing ideas that extend the understanding of the participants on his practice. Some of these inputs include relevant readings and input from a faculty staff of an academia. Huberman contends that experience sharing and conceptual inputs are the two starting points for collective cycles of teaching change (p. 202). In fact, Huberman proposes two kinds of conceptual inputs. What has been described previously serves as starting point for teaching change. However, it seems that Huberman places more significance on “conceptual inputs (2)” which take place after the first experimentation and he reckons that this type of conceptual input will constitute “conceptual articulation of individual frames, didactic and pedagogical leads, the creation and execution of an experiments and the analysis of results (p. 205). Huberman contends that this kind of input is “decisive.” In the second school, teachers had the conceptual input in formal input sessions conducted at the teacher training institution first. These conceptual inputs were modified and usefully extended after the try out. This might explain, according to Huberman’s notion of decisive conceptual input, why learning study took place more smoothly in School B.

It seems that familiarity with the concepts of learning study can lead to conservation of time and increased confidence in the practitioners as in the case of School B and was therefore conducive to the successful implementation of the project. In the case of school B, it seemed that formal training on the concepts and procedures of learning study could take place separately from the project itself. As for School A, the introduction of the learning study concepts and the implementation of the project together was rather time consuming in that teachers needed to grapple with the concepts on one hand and struggle with the implementation on

the other. Learning study also came with its own sets of terminology. The object of learning was geared towards student difficulties instead of the more common lesson objectives which might have centred on what the teacher felt to be the focus of the lesson. The process of learning these new concepts and putting them into practice was rather stressful for the teachers.

Familiarity and mastery of the central tenets in learning study helped the researcher who was also a facilitator, in giving more precise comments on the teachers’ proposal in School B. Thus, experience of the project was helpful to all participants, facilitators and teachers alike. The projects differed mainly in terms of the conceptual input the two groups had before the project. Smylie (1995, p.106) suggests that “accessibility of external sources of learning” is strongly related to creativity and innovation which “may also be constrained if individuals must rely on enactive learning.” Smylie credits the notion of enactive learning to Bandura (1986) who contends that enactive learning involves learning from doing and also the consequences of one’s actions. In this way, it seems that although teacher change and adaptation of new strategy is unlikely in a one-off knowledge transmission context, a clear understanding and foundation on the concepts behind the change can actually facilitate the implementation process and increase the confidence of the teachers. When the understanding of the underlying concepts was not firmly grasped as in the first school, teacher confidence was boosted only after the first trial. This echoes the point raised by Smylie (1995) that creativity and innovation may be constrained if teachers rely solely on enacted learning.

Reciprocal relationship between collegiality among teachers and successful implementation of project

The importance of the teacher as a learning community has been pointed out by Hoban (2002). However, Hoban did not give us any details of this learning community. These two projects illustrated that although both schools started as learning

communities, how much teachers could learn in each group depended on the dynamics of the groups. While it has been established in the literature that collegiality among teachers will aid teacher change (Smylie, 1995; Placier & Hamilton, 1994), these project schools demonstrated that the process of learning together could enhance collegiality among teachers.

The first group was much less cohesive. Nevertheless, the opportunity of the learning study actually brought about a change of perception for teachers in the first school. They reported that they felt more comfortable talking to each other professionally and observing each others' lessons after the project. This reciprocal relationship between the project and its participants was not captured in Hoban's model.

Teachers in School B seemed to belong to a more heterogeneous group. Two of them were panel chairs and one was the curriculum leader. Both panel chairs had received training on learning study and besides teaching in their own panel level, they also took up teaching in each other's level and were experienced in peer lesson observation and support. On the other hand, as teachers in School A were not familiar with learning study before the project, their confidence of the project was gained only after the first trial lesson. Moreover, since their grasp of the concepts was not firm and their confidence level was low, there was an easy relapse to old patterns of behaviour. This occurred more easily with the more senior teachers who were also more powerful in the school and therefore more ready to speak out their thoughts.

The tension between the facilitator and practical knowledge of teachers

The researcher agreed more professionally with the lesson planned in school B which was more in line with recent understanding of how English should be taught to second language learners, namely in a contextualised way at the discourse level using language arts materials. However, as an equal participant, the researcher could not impose her opinions on others as it was not good

or effective to do so. As a facilitator, the researcher believes that the teachers in both schools had achieved considerable progress in their understanding of how the particular topic would be taught in the school through her input and discussions with fellow teachers. The facilitator was caught in a dilemma when she perceived that there was a gap between her perception of the best practice as informed by theoretical knowledge and what teachers felt that they could achieve in the classroom which was informed by their theory in action. This gap was bigger or smaller depending on the background of the teachers and the dynamics of the group as illustrated in these cases. Nevertheless, the facilitator could only start with where teachers were and not dictate her will over what teachers could manage although some disappointment might have been resulted when she felt that a better lesson could have been taught.

IMPLICATIONS

In introducing change in schools, various models have been adopted, for example, the research-based model, the collaborative model and the bottom up action research model. Learning study with its emphasis on the variation theory can be viewed as a combination of the research based and the bottom up action research model. Amid these different models, there is often controversy on the extent to which participants need to be familiar or inducted on the central tenets of the proposed change. In the case of learning study, it seems that it is useful for separate training on the central concepts to take place before teachers are involved in the implementation. This saves time for the discussion and help teachers gain sufficient confidence in what they plan to do and thus avoiding relapse to old patterns of behaviour.

Teachers who have received training on learning study function well as a group. However, merging teachers with different background and understanding of learning study also allows cross-fertilisation of ideas and may induce change in teachers and cultivation of collaboration among

them. In this way, there seems to be no distinct advantage to either a heterogeneous group or a homogeneous. It seems that the facilitator's role is important then to help cultivate mutual respect, trust, and sharing of ideas in the groups. Variation theory is useful in helping language teachers adapt their teaching input and focus students' attention on important features of language forms in language learning. Nevertheless, in keeping the language forms constant to avoid confusion on the part of the students, a balance should be kept between language forms and meaning so that natural language use will not be sacrificed.

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