The cluster model for conducting Learning Study for minor subjects in schools.

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ABSTRACT

We can observe that “Learning Study” becomes more and more popular in Hong Kong. Many educators agree that it can help to make teaching and learning more effective and is a feasible way for staff development. However, due to limited resources, most schools can only start their studies from core subjects like languages and mathematics. As a result, we can hardly find adequate references for subjects involving fewer teachers in a school. In fact, we know little about the procedure and the benefits for conducting Learning Study for minor subjects in schools. In this paper, we used a case study on junior form Computer Literacy to explore and highlight the problems encountered in the research. We hope we can share our experience in using the cluster model for conducting Learning Study for minor subjects with teachers.

Introduction

In recent years, a lot of new initiatives have been introduced in schools in Hong Kong, for examples, learning to learn, project learning, life-long learning, using IT in education. However, the outcomes of most new initiatives are controversial and difficult to observe in real classroom. Lo (2004) concluded that those educational reforms only have little substantial effects on students’ learning. Under these circumstances, there is a demand for shifting the focus on actual classroom practice. We can observe that “Learning Study” becomes more and more popular in Hong Kong. Many educators agree that it can help to make teaching and learning more effective and is a feasible way for staff development.
What is Learning Study?

“Learning Study” is the Hong Kong version of “Lesson Study” (Lo, 2004). In Hong Kong, Learning Study has gained huge support from the government and becomes a powerful means for improving teaching and learning in the classroom as well as staff development. Learning study was first introduced to two primary schools and a total of twenty-nine learning studies were developed for different topics in four subjects areas of Chinese language, mathematics, general studies, and English language in three academic years (2000/2001, 2001/2002, 2002/2003). Learning Study attracted support from various funding sources. Through the Quality Education Fund supported Secondary Teaching, Evaluation and Mentoring Project (STEM) of the Hong Kong Institute of Education, Learning Studies have been carried out in five Key Learning Areas at secondary level: mathematics, science, technology, physical education, arts. An ongoing government-supported research project “Variation for the Improvement of Teaching and Learning” (2004-07), of the Hong Kong Institute of Education will support 120 Learning Studies at both primary and secondary levels in total. (Lo et al, 2005 ). Lesson Study is a kind of Action Research. Lo, Pong and Ko (2005) stated that the idea of “Learning Study” originates from and is inspired by the tradition of Chinese and Japanese teachers in conducting systematic and in-depth investigations into their own lessons. However, they also pointed out that Learning Study is not the same as Lesson Study as described by Stingler and Hiebert (1999). In fact, it is grounded on the theory of variations (Marton & Booth, 1997).

Conceptual Framework of Learning Study

By examining the theoretical underpinnings of Learning Study, we will understand why it should be differentiated from the Japanese Lesson Study. Lo, Pong and Ko (2005) argued that the primary focus of Learning Study is on an object of learning, the Theory of Variation is used as a guide to achieve the object of learning, employing appropriate teaching methods. In fact, Lo (2004) also pointed out that a number of concepts are pertinent to the framework conceptual framework of Learning Study:

- Focusing on the ‘object of learning’
- Adopting the view that learning is a way of seeing
- Building on three types of variation.
Lo, Pong and Ko (2005) further argue:

...our goal is to try to help students learn by enriching their ways of seeing and experiencing specific subject matters. Teachers can gain insights about students’ different ways of experiencing these subject matters through listening carefully to children. Teachers’ own ways of experiencing, understanding, and handling these objects of learning can be enriched by mutual sharing of their insights with colleagues, so that conscious efforts can be made in structuring relevant learning experiences for the students, guided by the Theory of Variation.

And there are three types of Variation:

V1. Variation in terms of students’ understanding of what is taught
V2. Variation in teachers’ ways of dealing with particular topics
V3. Using variation as a guiding principle of pedagogical design

Main steps in a Learning Study cycle

Under this conceptual framework, Ko (2004) stated that the teacher should be actively constructing learning experiences for the students so that they can experience appropriate variations in the object of learning to bring about the intended discernment and learning. Wong and Lai (2005) pointed out that Learning Study is a cycle of professional development, each cycle has four main steps: plan act, observe and reflect. Figure 1 shows the main steps they adopted for a Learning Study project in Primary mathematics.

In each typical Learning Study case conducted by the Hong Kong Institute of Education, the team usually comprises school teachers of the same subject in the same school, an academic consultant and a teacher development consultant. Each member can contribute his/her own expertise and everyone has equal status though they have their own expertise. Normally the group meets for about an hour to work on a research lesson each week and it may take about 10 to 12 weeks to complete a cycle. However, the steps are sometimes not in a fixed sequence. Some steps may occur simultaneously and there may be iteration cycles when certain steps are revisited.
Can this working model apply to all subjects in secondary schools?

As mentioned above, through the STEM project, Learning Studies have been carried out in five Key Learning Areas at secondary level: mathematics, science, technology, physical education, arts. However, as each school can only conduct one government-supported Learning Studies, most schools have given higher priority to core subjects like languages and mathematics. As a result, most minor subjects like business, computer literacy, and visual art have few learning study cases. There is a need to find adequate references for subjects involving fewer teachers in a school so that we can demonstrate the benefits for conducting Learning Study for minor subjects in schools. In the following sections, we will use a case study on junior form computer literacy to show how we use a cluster model for conducting “Learning Study” for minor subjects with teachers. We will also explore and highlight the problems encountered in the research.
A cluster model for conducting learning studying – a trial case on junior form computer literacy

A cluster model has been proposed for conducting a Learning Study case between two schools in Hong Kong. The heads of computer subjects of both schools have attended a mentoring training course offered by the Hong Kong Institute of Education. They have some ideas about Learning Study but no real experience on conducting a Learning Study in school. As the travel time between two schools is about 1 hour, no other colleagues teaching computer literacy from both schools can join the Learning Study group. The Learning Study case has undergone the following stages:

Stage I: Incubation of ideas
The Learning Study group met together to choose a topic and identify object(s) of learning and aspects that are critical for student learning. In our case, we all agreed to seek a topic that are taught in all cluster schools at the same time and did not consider the level of the students. It was because most schools in Hong Kong have their own school-based curriculum for junior forms computer literacy. The topics in the curriculum may be sequenced in different orders. Nevertheless, the group finally decided to choose the topic “Frame structure of web pages” for the research lessons. The topic was taught in Form 1 at both cluster schools.

Stage II: Lesson Planning
The group designed a pre-test and the draft circulated among the group members through emails. Teachers in the group piloted the pre-test and interviewed a sample of students in their own schools. Form 2 students in School A were selected as they have learnt this topic last year. However, Form 3 Students in School B were selected instead as the topic was taught in Form 2 last year. Then the group met together again to revise the pre-test based on results of the pilot tests and interviews. The group met several times again to analyze data collected from the finalized pre-test and plan for the research lesson.
Stage III: Lesson Implementation

The research lesson was implemented by the two teachers in the group for two classes in each cluster school. The academic consultant and the teacher development officer interviewed a sample of students after each cycle and then the group modified the lesson plan of the research lesson. All lessons in the Learning Study are videotaped and the videos were uploaded to a FTP server for sharing.

Stage IV: Evaluation

The group administered and analyzed data collected from the post-test. The student performances in both the pre-test and post-test, and in class were used for evaluating the actual enactments of the lessons and their effectiveness.

Stage V: Reporting and Dissemination

The group reported and disseminated their research experiences within their own school and to the public.

Conducting Learning Studies in a school and schools in a cluster: What are the differences?

When conducting Learning Study for two or more schools in a cluster, we need to pay extra time and efforts as the group members are working at different locations. Figures 2a and 2b show how we form the Learning Study groups for cases in a school and in the cluster model respectively. Drawing experience of conducting Learning Studies in Hong Kong, we summarize their differences in several aspects in Table 1.
Fig.2a  Forming a Learning Study group for case in a school

Fig.2b  Forming a Learning Study group for case in cluster model
Table 1  Comparing learning study in a single school and in cluster model

<table>
<thead>
<tr>
<th>Learning study group</th>
<th>Learning Study in a school</th>
<th>Learning Study in cluster model</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>● Teachers teaching the same subject at the same level of a school</td>
<td>● Teachers teaching the same subject from two or more schools. They may teach the subject at different levels. It depends on the Subject curriculum</td>
</tr>
<tr>
<td></td>
<td>● An academic consultant</td>
<td>● An academic consultant</td>
</tr>
<tr>
<td></td>
<td>● A teacher development consultant</td>
<td>● A teacher development consultant</td>
</tr>
<tr>
<td></td>
<td>● Teachers of other subjects can be observers</td>
<td></td>
</tr>
<tr>
<td>Size of the Learning study group</td>
<td>● Bigger</td>
<td>● Smaller</td>
</tr>
<tr>
<td></td>
<td>● Flexible</td>
<td>● One or two teachers from each school</td>
</tr>
<tr>
<td>Meeting venue</td>
<td>In the same school</td>
<td>At the most convenient place</td>
</tr>
<tr>
<td>Meeting time</td>
<td>Common free timeslots</td>
<td>Usually after school</td>
</tr>
<tr>
<td>Classes involved</td>
<td>At the same level</td>
<td>Not necessary at the same but the students are studying the same topic.</td>
</tr>
<tr>
<td>Communications</td>
<td>● Formal group meetings</td>
<td>● Formal group meetings</td>
</tr>
<tr>
<td></td>
<td>● Face to face discussion</td>
<td>● By phone and email</td>
</tr>
<tr>
<td>Lesson observation</td>
<td>Observing the classes in person.</td>
<td>Through videos or in person.</td>
</tr>
<tr>
<td>Subjects suitable for</td>
<td>Core subjects such as languages, mathematics, science etc.</td>
<td>Minor subjects such as information technology, visual arts, physical education etc.</td>
</tr>
</tbody>
</table>
Conclusion

As each school can only apply one Learning Study in most government-supported projects, most schools tend to give higher priority to core subjects like languages and mathematics. As a result, most minor subjects in secondary school such as business, computer literacy, and visual art etc., have few learning study cases. The cluster model provides a feasible way for conducting learning study for minor subjects. However, we need to overcome a lot of problems in the process. It is possible to group teachers of the same subject from several schools together. However, most teachers in Hong Kong are very busy. It is difficult to ask them to squeeze time during normal school hours and the group meetings must be held after the lessons. Moreover, time on transportation is also a major concern for the teachers involved. To make it more practical, it is desirable to join schools of same district to form a cluster. Besides, wise use of information technology for communications and resource sharing is also vital for the success in the cluster model.

REFERENCES


For each and everyone: Catering for individual differences through Learning Studies. Hong Kong: HKU Press, pp. 27-40.

