

The Implementation of Associate-teaching in the Whole-class Teaching Environment to Enhance Classroom Interaction

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Preamble

It is generally considered that teaching and learning, in practice, is the works of two different parties even though one may maintain that teaching and learning are reciprocal in nature. What would happen when we blur the boundary between teaching and learning in the actual implementation of classroom instruction? This redefinition of teaching and learning may provide practical insights into the instructional approaches. Drawing from this direction, a different kind of group-based learning initiative – associate-teaching – was implemented in a whole-class manner.

Abstract

The usual practice of group presentation is aimed at enhancing students' participation. Group learning culminating in a presentation of group endeavors has its own educational values. Yet in a whole-class teaching and learning environment, how the group presentation is incorporated in the flow of the course with limited lesson time is a challenge many instructors have to tackle. In this vein, a possible solution is to redefine the relationship between teaching and learning. The value of group learning is not limited to individual members of each group. Student groups work with the instructor to form a co-teaching group for a quality presentation to the whole class. Every student has the opportunity to teach in this associate manner. Group learning and mass teaching is thus integrated. Classroom interaction is enhanced.

Keywords

Associate teaching, social constructivism, scaffolding, group learning, teacher education

Introduction

Curriculum Studies, as an overarching study of various courses and curriculum perspectives, is known for its abstract concepts and models. As the course *EDUC 4060 Curriculum Studies* is a core course for all those pre-service teachers taking Post-graduate diploma of education (PGDE), implementing Associate-teaching may help in this strand of development. The project aimed at studying the effectiveness of the implementation of Associate-teaching in a usual whole-class situation.

Associate-teaching (AT) means the teaching of a mini-lesson of around 30 minutes coordinated by the instructor together with a student group. The class was divided into teaching groups of four. Each group was assigned an article from the reading list to present and the articles were prepared in advance for the students.

AT is different from the usual group presentation in the way the groups participate. (Holt & Kysilka, 2006) First, each AT group met the instructor to discuss the flow of the coming mini-lesson, making the AT presentation and the lesson prepared by the instructor a coherent whole. Second, the quality of the AT group presentation was judged based on two criteria, namely the involvement of the whole class and the new perspective discovered about the reading article assigned, putting the AT group in a facilitator role just as the instructor was in charge. Each AT group was rated by the instructor and the other groups in the class. Third, as planning is

learning and teaching is learning too, the pre-lesson meeting was as important as the mini-lesson. The group, the instructor and the class were benefited from the process.

Each mini-lesson and the pre-lesson discussion were taped. Questionnaires on classroom interaction were sent to each student. Interviews were conducted in group basis. Through a systematic analysis of the video clips and the data collected, this project:

1. provided evidences for the effectiveness of the implementation of AT.
2. built up a set of interaction models of AT (e.g. metaphorical learning, graphical learning, personalized learning, etc.) to fuel the implementation.

The interaction models together with the video clips were discussed in the last lesson of the course for students to reflect on promoting classroom interaction in their teaching career.

Aims and Objectives

The primary aim of the project was to study the implementation of AT in whole-class learning environment to enhance classroom and thus teaching effectiveness. While the presentation of the student groups were incorporated in the lessons of the course to promote learning through interaction, different interaction models of AT were developed. This experience was expected to be of great value to the graduate pre-service school teachers as it is transferable to their teaching job. The

initiative together with the teaching models may also be valuable to other University instructors in their whole-class teaching environment.

The objectives included:

1. To provide a rich resource for design of teaching
2. To enrich the repertoire of teaching and to increase teaching ability
3. To share the project which may promote classroom interaction research
4. To nurture a positive classroom environment which in turn can build up a positive learning culture for students
5. To make the teaching and learning enjoyable to both parties

Methodology

Three sessions of *EDUC 4060 Curriculum Studies* taught by the investigator were selected. For each of the student cohorts, materials needed for AT approach were prepared. In the first lesson of the course, students were briefed about the initiative and group arrangements were made.

Starting from the second lesson, a pre-lesson discussion chaired by the instructor (about 30-45 minutes) with each of the AT group for each lesson was conducted to discuss the content coverage and the teaching strategies for enhancing interaction. AT group then prepared and conducted the coming mini-lesson while

other participating groups were responsible for evaluating the AT group. At the end of each lesson, the instructor debriefed the AT group using the feedback forms from the instructor and the participating groups.

During the process, videos were taken for the AT mini-lessons together with the pre-lesson discussion. The prominent interaction features were extracted and analysed. On the whole, features were categorised and classroom interaction models were built up in a digital version of the video clips produced.

In the project, both qualitative and quantitative methods were adopted in monitoring the qualities of AT initiative. The well-established SEEQ (Student's Evaluation of Educational Quality) questionnaires from the Centre for Educational Development were adopted to gather data about classroom effectiveness. Group interviews were conducted to investigate further perspectives in the implementation. It was intended that the results of the project would fuel further investigation on classroom interactions promoting constructive learning. (Johnson, Johnson & Holubec, 1994)

Results/Findings

Based on the implementation of the AT mini-lesson in the 10 lessons of the course *EDUC 4060 Curriculum Studies*, the following topics were covered:

Lesson 1 : Definitions of curriculum

Lesson 2 : Conceptions of curriculum

Lesson 3 : Aim, goal & objective

Lesson 4 : Content & content organization

Lesson 5 : Methods and evaluation

Lesson 6 : Workshop on curriculum integration

Lesson 7 : Curriculum development

Lesson 8 : Curriculum planning

Lesson 9 : Curriculum implementation

Lesson 10 : Curriculum evaluation

And the following is a brief description of the electronic version of the interaction models as depicted in the lessons together with the AT mini-lesson presentations. ('▶' represents a link to the video clip for the interaction model)

Lesson 1: Definitions of curriculum

A collection of courses, a plan with targets, total experience, a process of transformation



1. Class management	Attendance Course outline Course material and reference Class working schedule Grouping and focus of AT	60mins
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2. Activity 1	Classification of 16 definitions of curriculum ▶	30mins
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3. Activity 2	Visualisation of the relationship between curriculum and instruction ▶	25mins
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4. Round-up	Position of teachers in the context of curriculum.	5mins
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Lesson 2: Conceptions of curriculum

Social, Experience, Academic, Technology



1. Class management	Term paper; attendance	10mins
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2. Review	Curriculum perspectives and Instruction	15mins
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3. Lecture	Curriculum concepts	15mins
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4. Discussion	Newspaper article discussion: Null curriculum ▶	10mins
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5. AT	Conceptions of curriculum ▶	30mins
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6. In-class survey	Curriculum conception questionnaires	15mins
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7. Round-up	Curriculum: present and the direction ▶	10mins
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Lesson 3: Aims

Different levels of specificity (aims, goals, objectives)



1. AT	Aim, Goal and Objective	30mins
2. Video	The Wall	30mins
3. Discussion	Factors to growth and the impressive shot	10mins
4. Activity	Metaphor of education: "Education is..."	10mins
5. Lecture	Objectives: cognitive, affective, psychomotor	10mins
6. Activity	Make your own aim statement	25mins

Lesson 4: Content & content organisation

Nine criteria for content selection and two-dimensional curriculum organisation



1. Class management	Term paper, attendance	10mins
2. Lecture	Overview of curriculum components	10mins
3. AT	Content selection	30mins

4. Lecture	Curriculum organisation	30mins
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5. In-class exercise	Metaphor of education: "Education is..."	30mins
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Lesson 5: Methods and evaluation

Role of evaluation in curriculum



1. Class management	Review in-class exercise	10mins
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2. Classroom survey	Interaction and mismatch of teaching method	30mins
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3. AT	Assessment	30mins
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4. Round-up	Assessment	10mins
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5. In-class exercise	Educational aims	30mins
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Lesson 6: Workshop on curriculum integration

Different approaches, pros and cons, Hong Kong's current situation



1. Classroom research	QEF Integration Project (1998 – 2002) with various focus: Project length, grant, school sectors, levels involved, student orientation, subject orientation, social orientation ▶	60mins
2. AT	Integration ▶	30mins
3. Round-up	SEEQ	10mins

Lesson 7: Curriculum development
School-based vs. centrally-based



1. Activity	HK Curriculum History ▶	20mins
2. Activity	HK Curriculum Organisation ▶	20mins
3. AT	School-based vs. centrally based ▶	30mins
4. Discussion	Pros and cons of integration	40mins

Lesson 8: Curriculum planning

Tyler vs. Walker and an overview of different models



1. Lecture	Brief introduction	20mins
2. AT	Tyler model vs. Walker model ▶	30mins
3. Activity	Game on curriculum models: puzzle of 4 ▶	50mins
4. Round-up	Consideration on curriculum planning	10mins

Lesson 9: Curriculum implementation

Factors affecting success of implementation (change, strategy of implementation, context of change)



1. AT	Curriculum implementation ▶	30mins
2. Lecture	Fullan's ideas	20mins
3. Round up	Various stakeholders	20mins
4. Revision	Curriculum framework	30mins

Lesson 10: Curriculum evaluation

Models of curriculum evaluation



1. Lecture	Curriculum Evaluation	30mins
2. Evaluation	Course questionnaires	15mins
3. Course round up	Activity: teachers' stand point	20mins
4. Term paper	Tips on writing term paper	15mins
5. In-Class Exercise	General curriculum questions	30mins

All these classroom interactive presentations and activities were collaborative products of each individual AT group and the instructor. Through the pre-lesson discussion with each group, the mini-lesson of AT presentation fitted well with the flow of each lesson, making the course a coherent work. Each student shared the course design by participating in the AT mini-lesson presentation.

In the 5th and 10th lessons of the course, identical SEEQ questionnaires about teaching effectiveness were dispatched to students from different sessions of the course. The questions closely related to the AT initiative included the group interaction and overall class rating. The overall class

rating was the overall weighted mean of different factors and the group interaction factor comprised four question stems:

- Students were encouraged to participate in class.
- Students were invited to share ideas and knowledge.
- Students were asked questions and given answers.
- Students were encouraged to express their own ideas.

The following tables summarise the results of two questionnaires using a 9-point scale, with 1 as the lowest and 9 as the highest score, among three cohorts of students in the course.

Survey in the 5th lesson

	Cohort 1 (n = 22)		Cohort 2 (n = 26)		Cohort 3 (n = 31)	
	Mean	SE	Mean	SE	Mean	SE
Group interaction	7.81	0.86	7.68	0.84	7.25	0.77
Overall class rating	7.50	0.25	8.28	0.18	7.33	0.23

10th lesson

	Cohort 1 (n = 20)		Cohort 2 (n = 25)		Cohort 4 (n = 31)	
	Mean	SE	Mean	SE	Mean	SE
Group interaction	7.91	0.73	7.77	0.75	7.22	0.64
Overall class rating	7.8	0.21	7.84	0.18	7.37	0.25

It could be readily seen that there was no significant difference between the results of the surveys administered in the 5th lesson and the 10th lesson. For the survey conducted in the 5th lesson, the mean rating for group interaction and overall

class rating were 7.55 and 7.69 respectively. While in the survey conducted in the 10th lesson, the mean rating for group interaction and overall class rating were 7.58 and 7.64 respectively. These results showed that the group interaction and the overall class rating were highly rated by the students and they were well maintained throughout the course.

In the interview conducted with student groups, emphasis was placed on the opinions about pre-lesson discussion and the classroom interaction. Below were some typical responses.

1. About pre-lesson discussion

Student A : It's good to support our group through analysing with us the presentation topic.

Student B : In preparing for the presentation, we learn more and we engage in self-learning.

Student C : We have a better and deeper understanding of the topic through pre-lesson discussion.

Student D : Different activities and strategies are designed to help us understand the difficult concepts.

2. About classroom interaction

Student E : Presentations can supplement the theme of the lesson.

Student F : The presentation is not graded. It is a good practice because the absence of pressure enables better performance.

Student G : The activities are motivating and promote effective learning.

Student H : The presentations are meaningful and help us to understand the topic.

The interviews with student groups showed that the pre-lesson discussion played an important part in students' learning both in grasping the content and generating ideas for designing the interactive activities for the presentation. This in turn helped maintain the interaction in the classroom.

Discussion

Through the AT initiative, students were provided with valuable experiences of learning actively. The presentation served as a substantiated learning outcome that students put efforts to prepare for. It was through teaching that students learnt and learnt better. The interaction was rich in the sense that students were interacting within groups and inter-groups in addition to the interaction in and outside classroom. Putting the learners at the centre of the design was a kind of constructivist approach. This redefinition of the relationship between teaching and learning helped to liberate the enthusiasm of learning. (Larochelle, Bednarz & Garrison, 1998)

Classroom interaction and participation served as a presentation benchmark for the AT groups. The flow was therefore well considered together with a preparation of teaching materials needed. Different approaches were used, giving another

form of practical training in an authentic classroom which is valuable for pre-service teachers. Assuming that teaching skills are transferable, the AT initiative actually provided sensible and meaningful opportunities for pre-service teachers.

Some students insisted that presentation without grading was more enjoyable. That was true in implementing the AT initiative. Nevertheless, the performance of the students group should be recognised. This could be conducted in the after-lesson group debriefing based on the feedback forms from the instructor and the participating groups. In addition, instructor may also design the assignment in relation to the presentation. Therefore, the learning is completed with consolidation on one hand, and the students' workload may be relieved when comparing with doing some other assignments on the other. The mini-lesson may then be good preparatory work for the assignment.

Enhancement on Teaching and Learning

The benefit of implementing AT in the courses for Post-graduate Diploma of Education was two-fold. First, through the mini-lesson presentation and pre-lesson discussion, students' interests and motivation were enhanced. This was shown from the previous findings. Students had a better understanding of the abstract ideas about education through carefully designed activities. This is especially important to those pre-service teachers who were completely new to the teaching career. The

pre-lesson discussion actually served as an important scaffolding instructional design to students' group learning.

The presentations were implemented in a well-managed and thoughtful manner. In other words, the instructor and AT groups worked together for a quality lesson design. This apprenticeship of cooperative lesson design with an experienced instructor helped the pre-service teachers to get through the process of implementing effective lessons. The second benefit of adopting the AT initiative in teachers' training courses was that while students of the Post-graduate Diploma of Education Programme prepare themselves for the role as a teacher, students of the AT groups had already taken up part of the teaching role.

Limitations/Difficulties

Providing scaffolding supports to student groups was vital to the successful implementation of AT. (Vygotsky, 1978) Apart from ordinary lesson planning, the instructor had to make extra efforts in conducting the pre-lesson discussion. Each AT group was unique and the presentation groups might have their very individual problems in understanding the content to be presented in the mini-lesson and also the adoption of different strategies to enhance the participation of the whole class. The instructor, acting as a consultant mentor for the student group, had to take up this burden. This implied a definite workload.

As the instructor was too experienced and the students were too inexperienced, the views of the instructor might dominate in the pre-lesson discussion, suppressing the students' ideas. This was a subtle balance. The instructor had to be very sensitive in determining the guidance for the presentation group. It was suggested that the instructor might take a more active role in dealing with the content of presentation, leaving more flexibility to the form of presentation of the group. Collaboration was important to the implementation. The instructor had to be experienced in making arrangements to ensure a smooth lesson and incorporate the mini-lesson by student groups. This further required the instructor to be flexible and creative.

Conclusion

Active learning will not come easily without paying the cost on the part of the instructor and the students. The AT initiative actually requires more effort from the instructor. It is a partnership between the instructor and the presentation groups. Therefore, it engenders ownership by the students of the lesson design. This participatory approach has been tested with promising results in terms of classroom interaction, learning atmosphere and learning effectiveness. The give-and-take emphasis in the implementation of mini-lesson helped build a collaborative culture.

Under the framework of AT, students are required to make their contribution to the learning experiences. They are responsible

for their learning and also for the learning of other students through careful design of presentation with interaction. This goal is practically achievable. It is thus motivating to them with this responsibility in creating the learning culture.

Students are empowered with a significant role of instructor guiding them in the academic journey. Such an empowerment comes from the sense of ownership on the part of the students. (Senge, 1990) This is what makes the AT so powerful as a means to promote active learning.

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