LINKING THEORY TO PRACTICE – ACTIVE LEARNING IN MASS LECTURE AND TUTORIAL

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Abstract

This article introduces the professional inquiry of a practitioner in her attempt to put forward a new delivery mode of "mass lecture and tutorial." This mode is applied into practice through a core module entitled, "Approaches to Teaching and Learning," in a teacher education programme. As an action learner, the author theorized her action by linking active learning to teaching practice, which stresses connections and integration, engaging activities, contextualized experience, assessment-oriented learning, feedback, and recognition of student learning output. The incorporation of the theme of "active learning" into the new mode suggests a dynamic relationship among mass lecture, tutorial classes, and module assessment, which requires a conscious realization in curriculum organization of the module. The articles examine the curriculum design as well as the learning and teaching activities of the mass lecture and tutorial delivery mode introduced in the module on trial. This paper provides a reference case for current teachers of higher education in their attempt to embark on new teaching methods.

Launching the Mass Lecture Plus Tutorial Delivery Mode

Mass Lecture (ML) and Tutorial (T) are traditional delivery methods, which can be regarded as the time-honored features of higher education. In terms of curriculum organization, the combination of ML and T is an ideal practice to maximize resources. ML plays the role of delivering the main learning topics of a course, whereas provision of tutorial classes provides more focused and close supervision of students. Compared with the traditional curriculum and class delivery format of the Institute, in which students often learn in groups of 10 to 35, the combination of ML and T provides a more flexible timetabling and more diversified mode of learning. During the academic year 2006–2007, the Department of Curriculum and Instruction (C&I) volunteered to launch the Mass Lecture Plus Tutorial (ML+T) scheme as pilot application. The author was one of the tutors involved in this pilot study in a module entitled, "Approaches to Teaching and Learning," for the second year students of the B.Ed (Primary) program. The program had approximately 190 students (excluding the

English major students who were not included in this study) in this year group. Apart from attending mass lecture, students were divided into 11 tutorial groups with an average number of 17 for their tutorial class in another timeslot during the week. In this module, the author worked with three other colleagues and shared the load of tutorial. Each instructor handled two to four tutorial groups. The author was the one responsible for the ten-session mass lecture.

Apart from class size, the frequency of meetings is changed in this new teaching mode. The previous standard was 10 three-hour lessons spread through a usual cycle of 10 weeks. This change implies the change in curriculum and teaching methods. This change took place within the context of change of our Institute in its self-accrediting status as well as the presentation of the Institute Development Plan for Teaching and Learning for 2005–2009 (HKIEd, 2006). The rationale for "active, engaged learning" included in the document marked a transformative phase on learning and teaching as a new direction of development for the Institute. The pilot of this new mode serves as a milestone at a crucial time of change.

Lecturing techniques have figured in higher education in literature (Bligh, 1972; Hubbard, 1991; Gibbs, et al, 1992). In planning this new mode, the author began with the search for theories, instead of focusing on techniques; theories do not only refer to those found in books, but also include ideas generated from experience. Theories guide practice and act as an essentially important element for teachers that are useful in the classroom. Without theories, teachers would simply relegate teaching into skill performance, which is an important argument in this profession. While scholarship of teaching is promoted, faculties have greater concern for rationalizing their practice, especially when changes and new challenges are made in the course delivery.

Active Learning as the Guide to Practice

Framing the study within the Institute's development on learning and teaching, the author filtered the search on literature on active learning to seek directions for curriculum design and pedagogical practices for the new mode. Active learning is currently a buzz word in learning and teaching. Widespread recognition is present regarding the role of active engagement of students in their effective learning (Biggs, 1991; Ramsden, 1992). However, rather than a developed branch of theory, active learning has often remained only intuitively understood. Chickering and Gamson (1987) attempted to define active learning and identify the quality of active learning under the condition that students must do more than just listen. The students must read, write, discuss, or be engaged in solving problems. Additionally, to be actively

involved, students must engage in higher-order thinking tasks to perform a higher intellectual level of analysis, synthesis, and evaluation (Lowman, 1984, Ramsden, 1992). Upon these assumptions, the role of students should be actively engaged throughout and outside classes. Thus, the method on how teachers can design the curriculum to provide the anchor for engagement and strategies to engage learners are important aspects. “Active learning” is understood to also “engage” learners because as learners are expected to be continuously involved in learning activities. Mayer (2004) traced the origin of “active learning” and proposed discovery learning theories as its underpinnings; discovery learning stresses contextualized experiences, discussion, and learning by doing. Both discovery learning and active learning emphasize the learner’s active participation in an explicit form of engagement.

The claim that active learning often happens in small class teaching than mass lecture is reasonable. Marris (1964) described mass lecture as “the most universal and yet apparently the most impersonal” teaching method (p.45, quoted in Startup, 1997). Although lecture has proved to be effective in delivering information and facts, this method comes under increasing criticism for its one-way, highly transmissive method that fails to promote higher thinking skills and attitude development (Bligh, 1972; Lindsay & Paton-Saltzberg, 1987). On the one hand, promoting interaction in mass lecture is difficult because of the large class setting; on the other hand, methods such as breaking up the lecture and creating active participation periods to encourage interaction active learning are difficult to implement (Ward & Jenkins, 1992). Perceived psychological barriers on teachers themselves in promoting interaction in lecture have also been considered (Behr, 1988). However, Steinert and Snell (1999) advanced the idea of interactive lecturing based on the assumption of active learning. In their suggestions, student involvement in the content and materials is defined as active engagement and does not necessarily involve interaction through verbal means. The activities suggested by Steinert and Snell (1999) are investigative tasks and activities in segregated groups, which highly resemble the methods in the literature on active learning.

How about applying active learning in tutorial classes? By nature, tutorials are highly interactive. Tutorials are believed as effective means to promote higher order thinking and generic skill development (Bligh, 1972). Thus, tutorial classes can be reasonably believed to facilitate active learning. However, the size of a tutorial class has risen to 15 to 20 compared with the optimal size of 5 to 8. Consequently, strategies to handle a medium group to fulfill the expectation of close interaction among group members become an issue. Considering that ML and T were combined in delivering a module

in our project, active learning in tutorial should play a very significant role to support active learning. Thus, the tutor must monitor the progress of the entire module by providing immediate feedback and follow-up tasks extended beyond or continued from mass lecture and tutorials.

In addition to lesson design and pedagogies, Hyman (1980) mentioned that to achieve the goals of active learning, the faculty must be knowledgeable of alternative techniques and strategies in teaching large classes, such as the use of questioning skills and strategies in organizing discussion. To enable learners to feel comfortable in their involvement in the lessons, Lowman (1984) emphasized that a supportive intellectual and emotional environment that encourages students to take risks is crucial. These requirements concern the skill of effective delivery of a lesson. Moreover, these requirements are supposed to be the basic teaching skills teachers should acquire.

Generated from the above review on active learning, the conceptual relationship between active learning and engaged learning is realized. The following principles were adopted to guide the ML and T design in the pilot study:

- To provide the structure for engaging activities
- To engage learners continually
- To provide various activities for motivational reasons
- To develop continuity in the activities
- To identify forms of publicizing recognition of the activity outcomes
- To provide contextualized materials
- To design challenging tasks with novelty
- To improve connections and communications outside the classroom.

The above analysis was applied in the practice of active learning, both in ML and T in the module on trial in this teaching development project. Active learning acted as a thread to link the learning experience of students through the module study period under two connected formats of delivery. Therefore, accommodating this change in the curriculum design is important.

Integrated and Connected Curriculum Organization of ML+T

As discussed above, the ideal ML+T curriculum must be able to draw connections between each other. Moreover, it must be tightly integrative to create a desirable tempo and sequence for student learning. This rule is basic in any curriculum design.

In addition, this rule is critical to the planning of this new mode in the module. In the curriculum planning of the ML+T mode under the module on trial, “integration” and “connection” were the rules. The author also tied in the assignment to the planning because the module required students to work on a lesson plan. The assignment was then in a micro teaching context. The assignment relied on the accumulated and developed knowledge of the students, which they gathered via lessons in the module. Therefore, the final assignment became an element that served students’ inquiry of professional knowledge in teaching and learning. The following parameters in the curriculum design were noted in incorporating the module content into this mode:

- The 10 lectures are regarded as the “main organizer” of the module curriculum. Thus, a well-developed learning sequence on the topics within the module content is crucial in building all the tutorials to deepen and consolidate learning.
- The role of lecturing is to input and highlight concepts and theories on the main learning themes of the module.
- The lecture content should pitch toward the level of students.
- Tutorial plays the role of support, remedial, application, investigation, revision, and consolidation on learning the specific themes introduced in lectures.
- The curriculum plan is assessment oriented, which is an important element tied to all class activities and small tasks throughout the module period.

The spirit of active learning is injected into the entire curriculum, both in ML and T. Diagram 2 summarizes the curriculum design of ML+T. This diagram illustrates the dynamic relation of ML and T in the curriculum organization of the module on trial, which is a result of maintaining connection and integration between the two delivery methods and effort of taking the outcome of learning in the assessment of the module.

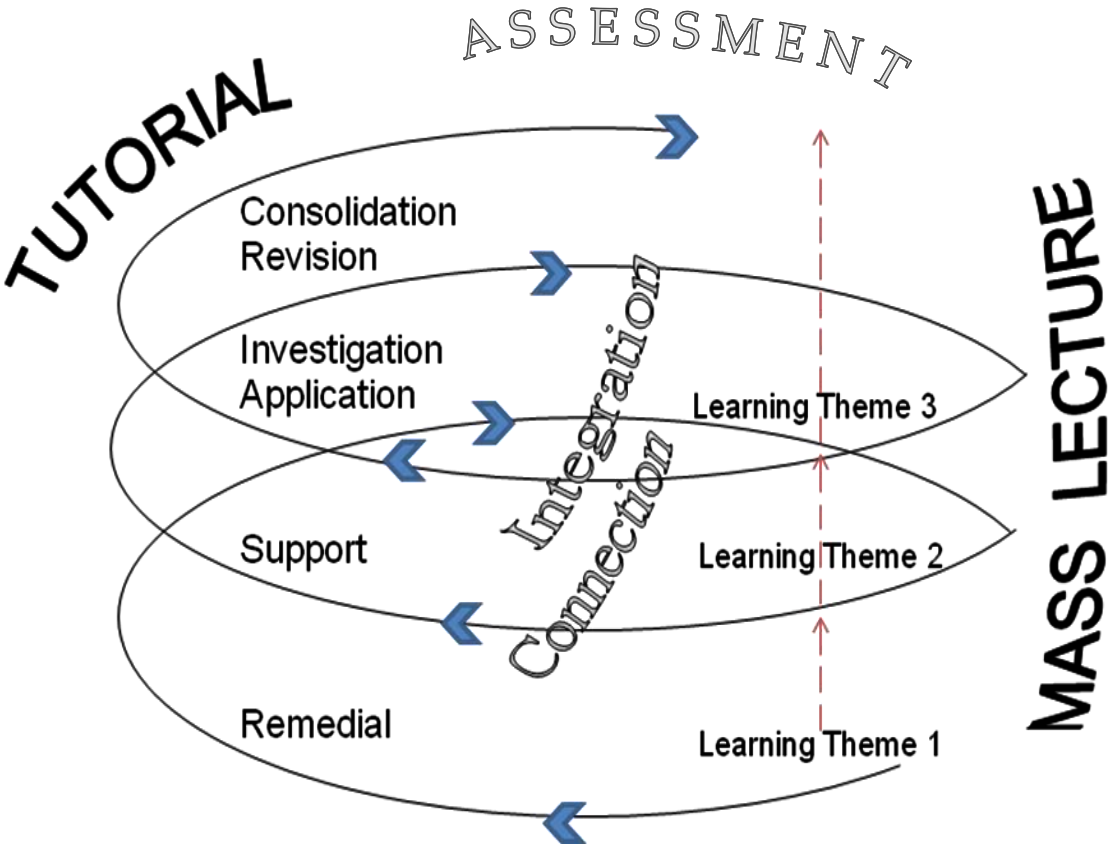

Diagram 2 Dynamic Relation in the Curriculum Organization of ML+T

Teaching Methods

Based on the curriculum design, the following methods were developed for the ML+T delivery mode in the trial of the said module. These methods were applied during the period of this teaching development project. Below is the description of the methods used in ML+T. However, these methods are not suitable when selecting the activities to use on specific occasions. Some of these methods may be better applied in both ML and T. The author attempts to list them all in this section. In addition, a summary of the functions of the methods are given in Table 2. In the description, examples of using these methods in the context of the module are included to illustrate how each worked in the module on trial. These methods were coded to specify the methods used in ML or T in the project. The context of this teaching development project was related to a Year 2 teacher training core module entitled, "Approaches to Teaching and Learning." The recommended methods are those currently and commonly used in higher education. However, to put into practice the spirit of active learning as well as a continuous and cohesive ML+ T curriculum, the effort of tracking the development of student learning throughout is required. This article aims to share how these activities were used with reference to the ideas of active and engaged learning as well

as the dynamic relationship among the specific learning themes, teaching method, and expected learning outcome. Therefore, the intention of using these methods was discussed in the examples.

Questioning:

In a lecture setting, the concentration span of normal students is approximately 20 minutes (Cryer & Elton, 1993). Questioning is found to be useful in engaging students to think actively in class. The teacher may provide close-ended questions to arouse the interest of students as well as open-ended ones to enhance student involvement and higher-order thinking in lecture and tutorial. However, a predefined sequence of asking questions can be occasionally ineffective for the purpose; teachers may only receive predetermined answers. Thus, the method can constrain the free expression and creative thinking of students. To university students, questioning based on predetermined answers seems to disengage, rather than engage. Teachers should ask questions for elaboration, clarification, and extension purposes as well as give chances for students to exercise creative and high-order thinking on the subjects.

> "During the first lecture, the teacher asked students the question, 'what are the New Approaches to Teaching?' The objective of the question is found in the module's name. The teacher then asked the students, 'what do you want your student to learn,' to probe on the teaching philosophy of students. This query was a *brainstorming* question. Then, the teacher tried to note down students' responses to gauge their consistency or evaluate whether they are going toward a different direction from that of the current learning and teaching methods in Hong Kong, which she further introduced (Lecture 1)."

> "Up to this lecture, the tutor has explained three different strategies of teaching. Then, she asked the following two *introspective* questions: 'which is the best strategy?' and 'what is the importance of teaching plans?' She asked the students to comment on 'E-learning' (Lecture 6)."

Promote Student Responses:

In using questioning in a large class, teachers do not always expect answers. However, teachers occasionally want sharing within the class. To encourage response or evaluation of the question, the teacher may need to project the question to the students to register it to their attention or count silently from 10 to 20 seconds to catch their attention after asking a question.

Dividing Students into Small Groups:

In a mass lecture or large tutorial class, dividing students into small groups is an effective method. In the current tutorial situation (with over 20 students), creating subgroups within the tutorial group is a necessary arrangement. In tutorials of over 10 students, every group will likely be divided into three to four subgroups. This division will facilitate discussion and provide consultation. In mass lecture, subgroups can be formed simultaneously. Students can also develop friendship during the lessons within their own tutorial subgroups. In this study, the formulation of ML+T delivery model on trial was beneficial in shaping study groups among students. The teacher's effort in tracking the progress of all subgroups was crucial in drawing connection on what the students learned from the mass lecture focus. This method can largely enhance "active learning" within this mode.

> "Before showing the video clip concerning a group of primary school pupils' presentation on their project work, the teacher divided the mass lecture students into two groups based on their seating arrangement (front and back section) in the lecture hall. She gave two different core-related questions in two differently colored papers. After viewing the video, students took notes and discussed the themes (approximately five minutes) with their neighbors. Students were asked to pass their paper to their left at the front section. Students in the back section were asked to pass their paper to their right. Students who gathered the paper of their row acted as presenters. The teacher concluded the presentation on 'Project Learning' as the topic of discussion after the investigations. All responses on paper were uploaded to the e-learn platform (Lecture 5)."

> "Students used to bring up questions related to their assignment. Their assignment was to develop a lesson plan in group. At the final stage, the students were then required to cooperate and perform the plan in a micro teaching format. The ideas they learned in ML were in fact the knowledge they could apply in refining the lesson plan along the way. Thus, in every tutorial class, after clarifying the concepts and handling any specific task extended from the ML, students had the chance to talk on specific questions on their group work. Additionally, students appeared to be very engaged when the activities and learning of every ML was connected with their assignment. This connection encouraged them to learn (Tutorial 3)."

Think-Pair-Share:

To encourage responses, the teacher may ask students to talk to their neighbor before pressing an answer right after a question is asked. In this manner, students are more willing to share the answers gathered from a thinking pair. This think-pair-share method is also effective at the beginning of a lesson. For instance, in tutorials, the teacher may assign learners to take a minute to ponder the previous mass lecture, then to discuss it with one or more of their peers. Finally, the ideas are shared with the class. In addition, queries are shared as part of a formal discussion. The tutor should clarify misconception during this formal discussion.

> "The tutor asked students to discuss with their neighbors what they believe to be the advantage (front rows) and drawback (back rows) of 'cooperative learning.' After the discussion, the tutor asked students to present a report (voluntarily or randomly assigned). Then, the film subsequently shown was discussed (Lecture 4)."

Short written exercises

Assigning short written exercises, especially when students are not confident to give an answer in public, is a useful method for teachers. Teachers can give students introspective questions that recall personal experience and require students' personal judgments as well as ask them to note down the answers on paper. The allocated time for this activity should not be too long. Teachers may encourage students to present their answers to the class or with their peers. This activity is encouraged if students find that their answers can be shared or if they can learn from others' answers, thereby making this method active and engaging learning in both large and small classes. The teacher's encouragement of the responses is most crucial to the success of this activity.

Role Play and Demonstration

Role play and demonstration are motivating activities. In role playing, students become less reserved to express their views. Students will also be motivated by live demonstration because it presents a very purposeful method in evaluating their learning, both in a contextualized and experiential way. Both role play and demonstration serve to enhance the atmosphere of learning. Through involvement, the rapport and relationship between students and teachers are enhanced. In mass lecture, appropriate activities on role play and demonstration will arouse interest in learners and lead to the investigative study on the subject matter. Even in tutorial, role play and demonstration succeed in engaging students' attention, thereby making them more willing to participate in dialogue and discussion.

"First, the tutor delivered a teaching evaluation form. This form is currently used in the Institute Field Experience. The tutor explained each section in the evaluation form, then asked students to role play the supervisor's role to evaluate and give comment to the teacher in the video. After class watching, the teacher gave students four minutes to assess the teacher's performance in the video. Students were then asked to discuss their views with their neighbors. The tutor initiated a follow-up discussion with the class to see whether the views of the students and tutor matched. In this manner, the students learned how to judge an effective teaching class (Lecture 8)."

"In a group project, students took turns to role play a lesson they designed. The others served as observers and played the role of pupils, while a group conducted the demonstration (micro-teaching). Afterward, students were led to a discussion on what they perceived as difficult. The students also discussed the areas of improvement based on their demonstration of teaching (Tutorial 6)."

Making Use of Students' Responses

Utilizing students' responses in mass lecture and tutorial is effective to support active learning. Students are highly motivated and enthusiastically involved if their responses are used as topic of discussion. Teachers can collect students' responses through their own tutorial class or other tutorial class teachers. Through mass email sent to all students, they can use the collected responses in the mass lecture to elicit discussion or further explanation or clarification. In this manner, students may receive ready feedback, which will greatly enhance their incentive to participate in activities and become engaged in their study.

"The teacher identified in her own group and other tutorial groups the lesson plans the students were willing to share. The teacher then checked the merit of the plan, especially those that used the teaching strategies she introduced in the previous ML. The teacher asked students to speak (at the stage in ML) or on their seats (in ML or T) to share their plans. The teacher further distilled the concepts and commented on the reported lesson plans. In doing so, the knowledge of developing a lesson plan in relation to student learning and subject matter was reinforced in this interaction. This also created an active interaction pattern in the ML (Lecture 5)."

"The teacher showed students in mass lecture some objectives written by the tutorial classes she handled. These objectives were extracted from students'

> group lesson plans. She asked students to correct them to come up with a better format or pointed out problems in the presentation of the objectives students. This method was very effective and useful. The students learned in a contextualized manner. Using students' own work carefully can enhance the motivation of learning of all the students (Lecture 6)."

Extended Exercise between ML and T across a period

To promote active learning, continuous projects or small tasks extended toward the tutorial session are very effective. The task must be contextualized. Responses of the students should be noted and commented to make them increasingly involved. Continuous assessment can be an incentive, but if the module cannot allow for this procedure, constructive support of students' project is very useful in enhancing their motivation to learn. However, teachers should inform the students that they need to spend outside-class time to study the topic further and arrive at satisfactory results in the final stage. Activities designed by teachers should pave the way to improve student understanding on the subject matter, such as lesson planning in the module on "teaching and learning." When students begin to appreciate the sequence of ML+T, they will be more engaged in the study of the module.

> "The teacher asked preparatory questions before a lecture and posted them on E-learn. The teacher also prepared summaries, questions, and case studies for students after the lecture for future study of the students. This method could consolidate student learning as well as provide them with more resources and information on the topic (within the lectures)."

Giving an Organizer/Conclusion

An organizer as a summary or conclusion can be provided for students through the following: when students reach a learning stage of several themes of the same category, such as several teaching strategies of the same family; or at the beginning of the lesson, they are asked to revise what they have learned so far after an appropriately defined period. This activity can be done by various means. The most effective method is to present diagrams and tables to draw relations and analogies on the topics learned.

Table 2 Teaching Methods and Strategies Used in the ML+T Mode

Methods/Strategies	***Functions***
Questioning:	Stimulate interest, arouse attention, ice-breaker, provide valuable feedback; comes in different types, such as straightforward questions, brainstorming, surveying questions, quizzes, and short answers.
Promote Student Responses:	Engage student thinking on the content and materials of the lesson, enhance lively atmosphere in lecture
Dividing Students into Small Groups	Promote discussion and in-depth investigation, encourage application of new concepts, develop problem-solving and communication skills
Think-Pair-Share:	Change to lively interaction pattern, encourage communication, presentation, and sharing
S*hort Written Exercise*	Develop note-taking habit, focus student's attention, publicize ideas, and promote whole class sharing
Role Play and Demonstration	Involve students actively, encourage participation and responses, highlight the critical aspect in the subject matter, develop solid rapport
Making Use of Student Responses	Recognize student achievement, revise concepts and theories, enhance motivation; feedback channel
Extended/Continuous Tasks and Exercises	Encourage continuous exploration and investigation, provide constructive feedback
Giving an Organizer/Conclusion	Clarify concepts, as revision and conclusion

Conclusion

This chapter shares an inquiry into a new mode of delivery on a combined model of mass lecture and tutorial in a module on "approaches to teaching and learning" in the Bed (P) program. The teaching inquiry process is demonstrated, particularly on finding a theory as well as developing working principles and appropriate teaching methods on trial. In an environment with ever-changing teaching methods, which are dependent on the needs of students and the global context, this method is an example of a professional inquiry that aims at quality enhancement. The focus of this chapter is to share the methods the author used in launching the pilot mass lecture and tutorial delivery mode based on the concept of active learning. The part that evaluated the effectiveness of this trial was not included. As a concluding remark, the outcome has proved to be effective. In this module, numerous students reflected on their attitude toward their academic learning. From the students' reflections, we observed the difference in their learning attitudes and expectations. The difficulties involved in teaching large classes, such as the limited concentration span of learners and

constrained interaction of the lecture setting, seemed to be reflected as old problems. As a whole, the author had a very pleasant and professionally challenging experience in this trial.

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