



Learning by Teaching: A Meta-learning Program

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Prior to my teaching career at higher education in Japan, I had 8 years of TESOL experience at high school level in Taiwan. The students I was teaching had had at least four years of experience learning English at the elementary level. They would have had three to four 45-minute English classes every week at the junior high level, and four to five 50-minute classes at the senior high level. The average English class hours Taiwanese students have per week are similar to those in Japan. During these initial years of teaching I had been accustomed to preparing my students for high-stakes examinations by accumulating enough English vocabulary and grammar knowledge. However, I also became afraid that my students would not be flexible enough to face the challenges of the rapidly changing knowledge society, which resulted in my increasing interest in developing their cognitive skills and learning strategies.

My interest in “learning-to-learn” skills stemmed from my anecdotal observations of and experiences in Taiwan’s high school education system, as well as the emphasis of the latest education reform in Taiwan on developing students’ “learning-to-learn” abilities. I observed during my own learning and teaching experiences that, in a high school classroom setting, there was often a lack of learning about one’s own learning, such as learning goals, strategies, and strengths and weaknesses. Reflection on the course of my own study in school revealed that I had been learning primarily for the purpose of obtaining the higher possible score on the high-stakes, paper-and-pencil, and one-off Joint Entrance Exam, which determined not only the admission to university but also to a specific department. The learning environment was rather monotonous. My time in school was often filled with various types of tests and exams, with excessive time allotted for mechanical practice to memorize subject content. Teacher-directed instruction was the norm, and prescriptive, teacher-determined answers were viewed as the only “standard” answers.

Soon after I started my teaching career, I began to grow increasingly dissatisfied with my teaching. It was becoming a reproduction of my own school experience. Although the joint examination system had been replaced with multiple assessment methods and entrance schemes, students’ and teachers’ thinking about learning was limited because of the content-packed curriculum and large class sizes. My own students were used to being dependent on me for directions for learning. For example, they often asked me how to score higher on English tests, expecting that I knew the “single best correct” answer. Having been stimulated by the students’ questions, such as “Why do I constantly forget the vocabulary I have learned?” and “How do I find the meaning of a text?”, I began to think about how I myself learn. This was a question that I had never explicitly thought about when I was a student. I could not help but speculate how my students would be affected if they were in my place, i.e. being asked to solve learning problems or make learning decisions.

In addition, around the time I proposed my thesis plan, the Taiwan Ministry of Education updated the curriculum guidelines for high schools, with a new emphasis placed on logic and critical thinking, creativity, reflection, and learners’ self-management (Ministry of Education, 2009). Some researchers and practitioners in Taiwan (e.g., Chen, 2012; Cheng, Yeh, & Su, 2011; Dai, 2011) studied or addressed such an emphasis. Despite the acknowledgement of the emphasis on thinking skills and learning process as the feature of the guidelines, teachers experienced difficulties in putting it into practice (Chen, 2012; Cheng, Yeh, & Su,

2011). Furthermore, newspaper reports (e.g., Chen, 2015) indicated that, after the implementation of the curriculum guidelines, high school students in Taiwan remained weak in planning for, monitoring, and reflecting on their own practices.

Inspired by the foregoing, I decided to carry out my doctoral research project on facilitating the development of students' meta-learning capacity. Meta-learning centers around students being aware of themselves as learners and taking control over their learning strategy selection and deployment (Biggs, 1985). Doing this can contribute to their success in difficult and demanding learning situations and their development as independent learners (Norton, Owens, & Clark, 2004; Ward, Connolly, & Meyer, 2013). The concepts of meta-learning and reflection and the links between them served as the basis for developing and evaluating the meta-learning program in my study. Other researchers (e.g., Lizzio & Wilson 2004; Tarricone 2011) had suggested that meta-learning can be developed through reflection in problem-solving contexts. In my research, I drew an analogy between the meta-learning-reflection relationship and the science of sonar technology (see Figure 1): Learners who are more deeply and critically reflective can attain greater awareness and control over their own learning.

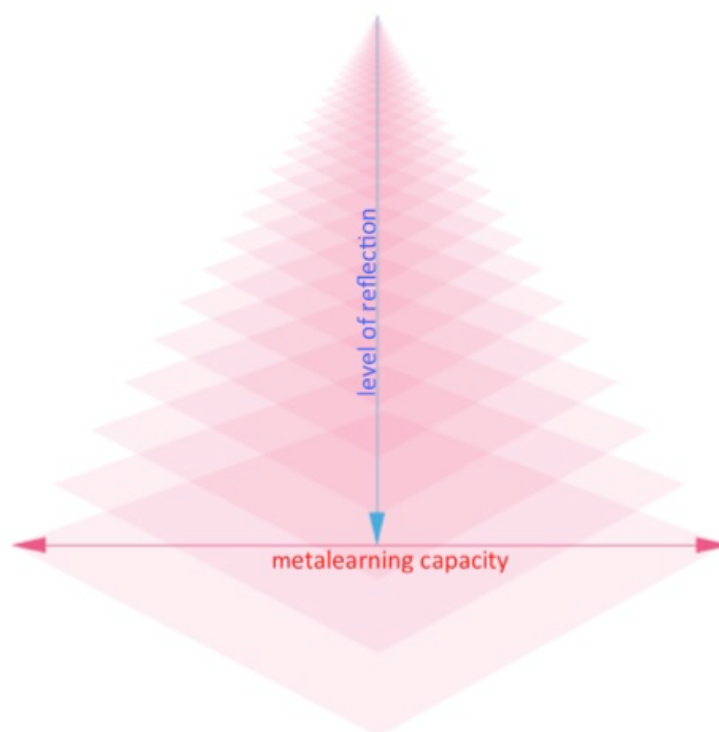


Figure 1. Relationship between meta-learning and reflection.

To enhance the development of students' reflection and meta-learning capacity, I adopted a coordinated sociocultural perspective of learning for the design and development of the meta-learning program. The pedagogical strategies I used were informed by social constructivist and emancipatory theories of learning and teaching as well as Dewey's philosophy of experience. These theories posit that students' unique experiences with the world serve as a catalyst for reflection, and suggest that relationships and interactions among students and between students and teachers lead to deeper, critical reflection. The meta-learning program included a service learning component. This involved the students assuming the role of a teacher and teaching English to younger children. It was a pedagogical strategy for promoting conceptual change in learning because it stimulated me and my students to step out of the customary hierarchy and engage in conversations on a more even footing, as reciprocal members of a shared community.

I designed the meta-learning program to be a yearlong EFL elective course. It was offered to grade 10 students, aged 15-16 years, in a private high school in Taipei, the capital city of Taiwan. The program comprised term-time activities including an orientation session, a film viewing, the observation of teacher demonstrations, group teaching practices in class and in local churches, as well as a one-week service-learning experience during summer vacation in a remote area in Taiwan. Throughout the program, reflection activities such as discussions and journaling were assigned to aid the students in developing a habit of learning by examining their own and others' experiences. The students responded to the questions prompts I gave related to the theme of each term-time activity and the service-learning experience. This meta-learning program was characterized by a rethinking of the roles of students and teachers, an interdependent and reciprocal partnership among the students and between the students and teacher, a contribution to community service, an emphasis on practical experiences in relation to learning, and a focus on reflection on practices.

My doctoral study suggested that drawing analogical or contrastive links between various learning experiences could stimulate students to become aware of perspectives on learning in addition to their own. For example, a comparison and contrast between my students' approaches to learning and those of film characters or their role models helped raise the students' awareness of their own strengths or weaknesses in learning and of effective learning strategies. The following excerpt illustrates this point:

There are some similarities between my sister and me. We both love to read English novels and watch English movies. When there are some good sayings or slang, we will pause the video and ask my mom about it. One difference is how good we can memorize the vocabulary or sayings. My sister can remember them all, but I will forget them easily. In addition, my sister speaks English with full confidence, and she can read English quickly. So she learns English better than I do. (2nd semester_S13)

Furthermore, some questions were used as prompts to unpack the students' perceptions of their prior experiences of learning, and then to compare and contrast these understandings with current tasks in class or field. The students found that tasks at different levels of English learning, such as elementary, junior high, and senior high, differ noticeably in complexity and in how they can be effectively completed. For example:

In elementary school, my English teacher always played games and sang songs with the class. Elementary school English was easy because I had learned what was taught in kindergarten.... My junior high school teacher used mnemonic phrases to help us remember vocabulary words. After teaching the class the words and their uses, the teacher would have us read the text in the textbook. Whenever we encountered a vocabulary word, we read the use of the word once again. We practiced the words many times, in the text and in the workbook, so I learned the words by heart. I didn't have to make special efforts in junior high school.... In senior high school I have to depend on myself to study English most of the time. Without the teacher's help of repeating the vocabulary words and their meanings, I can barely memorize the vocabulary. I almost always fail the English tests. (2nd semester_S03)

The above activities and question prompts imposed a structure that facilitated identifying connections between past and personal learning experiences and learning events in the present and the future, as well as the learning experiences of other students. This student, in particular, contrasted vocabulary teaching and its effects at different levels on her English development. Students at lower learning levels appeared to experience more lively teaching strategies and more learning support. Students at a higher learning level, on the other hand, might be expected to learn independently. However, as with the above learner, students

seem often to experience a lack of guidance in strategic learning, which might be one reason why they fail in English. If the student had realized the cause of her past achievements and connected this to her present needs, this might have encouraged her to actively devise learning strategies or seek assistance from others. The mechanisms of comparison and contrast of the meta-learning program helped the students to perceive their experience as coherent, connected instead of discrete, isolated occurrences.

Additionally, the students who assumed a teaching role transformed their perspectives and practices from those that they were conventionally socialized to identify with, and they became inclined to perceive greater responsibility for and commitment to learning and to exercise more control over learning activities. For example, a student (S18) became aware that the children she taught learned more effectively within a group. It could be inferred that she might be more likely to employ interdependent learning strategies in her own learning. Some other students explicitly stated, for example, “When I was teaching the children, I could finally empathize with my teachers and realize what their expectations were for us” (S01_2nd semester) and, “Returning to the role of student, I can identify with what my teachers emphasize.” (S19_2nd semester)

It is difficult for me to replicate the meta-learning program in my current context considering the curriculum structure and student characteristics. The institute where I teach now is an international learning center in a Japanese university. My duties include teaching English communication skills to the first-year students of undergraduate level and after-class speaking practice with the students. The English communication course I teach uses a relatively rigid curriculum in order for the students to “develop the ability to conduct conversations on everyday topics,” such as family, leisure, and education. The students’ English level is basic (A1–A2). It is necessary that I support their meta-learning processes, such as planning, monitoring, and evaluating, with their first language. The fact that I have limited Japanese-language proficiency adds to the challenges that I face in implementing the meta-learning program. However, I hope to adopt and adapt, in present circumstances, the pedagogical principles outlined in my thesis, namely (a) fostering a break with hierarchical student-teacher relationships, (b) developing a community that appreciates interdependence and connection, and (c) facilitating reflective practical experiences through written/oral activities, such as journaling and discussion. I am looking forward to collaborating with other practitioner-researchers in the Learner Development SIG and beyond to uncover alternative approaches to learning to learn.

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