Taiwan Journal of TESOL
Vol. 15.1, 101-128, 2018 DOI: 10.30397/TJTESOL.201804_15(1).0004

TEACHER EFFICACY: A CASE STUDY OF FACULTY BELIEFS IN AN ENGLISH-MEDIUM INSTRUCTION TEACHER TRAINING PROGRAM

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ABSTRACT

English-medium instruction (EMI) has become a driving force behind the curriculum reform in higher education around the world. The current study, drawn from a larger project that involves an EMI teacher development program, explores subtle nuances of change in teachers' self-efficacy beliefs, employing Bandura's theory of self-efficacy (Bandura, 1977, 1986) as a framework, among university teachers who have completed the training program. A total of 11 faculty members from five universities in Northern Taiwan were individually interviewed, along with data from their EMI classroom observations. Results indicated that novice EMI teachers may experience a weakening of self-efficacy that could hurt their commitment to teaching. After completing the EMI teacher development program, participants reported gaining more confidence in using the teaching techniques taught in the program. Most importantly, the program helped them re-examine their role as an EMI instructor and sensitized them to the students' perspective that they had not been aware of before. The new insights humbled them, yet empowered them for their EMI undertaking. The transformation of teachers' self-efficacy allowed these EMI teachers, juniors or seniors alike, to continue to grow as they struggled through teaching in a foreign language. Implications of the findings and suggestions for future EMI teacher development programs are also provided.

Key Words: English-medium instruction, teacher development, self-efficacy

INTRODUCTION

As globalization of the world economies pushes for more communication and competition among nations, it also pushes for the

internationalization of higher education around the globe. Universities worldwide are vying to internationalize their academic programs as well as their faculty and student bodies, not only for their academic rankings but also for their enrollment rates. English, being the lingua franca, has naturally become the medium of instruction at higher education institutions. Instead of only being taught as a subject course per se, English is now utilized as the medium of instruction (EMI) for teaching content courses.

In an effort to attract more international students and scholars, many universities have begun to offer English-medium courses. Globally speaking, many European countries have undergone what is called Englishisation (Coleman, 2006; Phillipson & Skutnabb-Kangas, 1999) in their tertiary education. According to Doiz, Lasagabaster, and Sierra (2012), more than 800 EMI programs were offered in Europe alone as early as in 2002. In Italy, Politecnico di Milano (Polytechnic University of Milan), the oldest university in Milan, famous for its engineering, architecture, and design programs, began teaching all of its graduate courses in English in 2014 (Chapple, 2015). In Asia, universities in China, Indonesia, Japan, Korea, Taiwan, and Vietnam are increasingly implementing EMI programs to gain a cutting-edge advantage in innovation and knowledge production. These universities, much like their European counterparts, have all undertaken the mission of the EMI revolution to, on the one hand, enhance their university rankings, and on the other hand, to encourage faculty and student mobility (Byun et al., 2011; Chang, 2006; Evans & Morrison, 2011a; Huang, 2006).

Due to an increasing demand of the EMI curriculum worldwide, many Asian countries, especially those where English is not spoken as the official or second language, have responded to the demand by assigning untrained university faculty to teach EMI courses. These faculty members may have obtained their highest academic degrees from English-speaking countries, but many of them are not linguistically ready to teach their subject areas in English. Problems and limitations have been reported regarding ill-prepared EMI instructors in different cultural contexts (Chapple, 2015; Werther, Denver, Jensen, & Mees, 2014).

Part of the solution for ill-prepared EMI faculty is proper teacher education. There has been a limited number of EMI teacher training programs available in recent years (Dearden, 2015; Macaro, 2015; Yuan Ze Teaching Excellence Center, 2011). These teacher training programs, many still evolving along the way, were only sporadic efforts and have

yet to be validated with empirical data.

Due to a scarcity of available EMI teacher education programs and an even smaller cohort of EMI faculty who have completed training, no systematic attempt has been made to document the effect of EMI training. The current paper aims to provide empirical evidence of the effect of a specialized EMI teacher development program in hopes of revealing the possible changes and transformation, acknowledged by the program participants, as a result of the training. Moreover, this study aims to explore how the transformation detected from the participating teachers can be interpreted by their self-efficacy beliefs, a theory proposed by Bandura (1977) to explain teachers' perceived competence in teaching. Such documentation of the transformation will shed light on the planning of future EMI teacher education.

LITERATURE REVIEW

Graddol (1997) noted that "one of the most significant educational trends world-wide is the teaching of a growing number of courses in universities through the medium of English" (p. 45). The EMI approach has emerged as a powerful driving force responsible for the globalization of many academic programs in countries such as the Netherlands, Germany, Finland, and Sweden, where the national language is not English. Coleman (2006, pp. 4-6) stated reasons that explain the Englishization of higher education in Europe as follows: "(1) academic internationalization, (2) student exchanges, (3) teaching and research materials available (4) staff mobility, (5) graduate employability, and (6) the market in international students." These multiple reasons describe the interwoven complexity of globalization in higher education.

Given the expansion of the EMI curriculum in higher education, students, teachers, and administrators all face challenges in the process. In European contexts, according to Tatzl (2011), concerns were raised due to "reciprocal feelings of dissatisfaction among stakeholders, student workload, different levels of students' prior knowledge, and a reduction of the content knowledge delivered" (p. 252) in the EMI master's programs at an Austrian university. In Denmark, more than 25% of the master's degree programs were taught in an EMI format (Werther et al., 2014), but not all university teachers felt that they had acquired the language proficiency and the necessary training to teach through English.

In Asian contexts, Huang (2012, 2014a, 2014b) in a series of studies

conducted in Taiwan reported that, despite great satisfaction with the socio-cultural aspects of content learning via English, concerns over the compromised content knowledge and limited attention to language learning had rendered students with unsatisfactory feelings towards the design of the EMI curriculum. Another study by Chang (2010) found that, while the effects of EMI on learning the subject content remained unclear, students reported having improved their English listening comprehension skills. Chapple (2015) cautioned against the assumption that the EMI approach would lead to an automatic improvement in English with students in Japan. Research conducted in Korean higher education settings (Byun et al., 2011) confirmed the overall effectiveness in improving students' English ability. However, the mandate of the EMI policy, irrespective of students' and instructors' language readiness, could lead to teachers incapable of conducting classes in English and students lacking the adequate proficiency to understand, speak, and write English. Therefore, careful EMI-implementation preparation was called for.

Researchers in Hong Kong found that the alignment between EMI policy and classroom implementation had become closer in recent years (Evans & Morrison, 2011b). Classroom EMI practice became more prevalent as more academic programs in Hong Kong upheld the EMI policy. Evidence also showed, however, that EMI students had little need or desire to speak English once outside the classroom (Evans & Morrison, 2011b). In another study, Evans and Morrison (2011a) indicated that students in general experienced four major problems during the crucial first year of an EMI curriculum at university: "understanding technical vocabulary, comprehending lectures, achieving an appropriate academic style and meeting institutional and disciplinary requirements" (p. 206).

In Malaysia where teaching science in English remains in the forefront of its government-initiated education reform, pre-service science teachers indicated that improving their English vocabulary, grammar, and pronunciation was essential for teaching primary science concepts (Hudson, 2009). Other researchers also documented the challenges facing pre-service EMI teachers of science in Malaysia (Othman & Saat, 2009) such as a lack of competence in English, insufficient instructional materials and teaching skills, and students' low English proficiency. Similar results were reported by Ellili-Cherif (2014) in Qatar where EMI teachers voiced their concerns regarding ineffective organization for the announcement of the EMI policy, lack of teacher training, and parents' reluctance to comply with the policy.

Researchers in Vietnam (Anh, Nguyen, & Le, 2013) found that training non-native English speaking (NNES) language teachers using an EMI framework would enhance future teachers' practices, especially in producing an English speaking environment for their students. The study also emphasized the importance of a specially designed teacher education program in creating an EMI context so as to shape pre-service teachers' ways of thinking consistent with EMI practices.

Along the line of teacher education, a handful of EMI teacher development programs were put forward in recent years around the globe. Dearden (2015) reported a pilot EMI professional development program—Academic Teaching Excellence (ATE)—for university teachers in Europe. In-service teachers in the program were found to believe that EMI simply required nothing but the task of translating the content material from students' first language to English. They also had little knowledge of the potential impact of EMI on their teaching. Other EMI support courses, noted by Ball and Lindsay (2013), covering a wide range of topics from English language skills to pedagogical techniques in the classroom, were offered to EMI faculty at the University of the Basque Country (UBC) in Spain. Many of the teacher participants at UBC, prior to the support courses, were unaware of the need to enhance their teaching repertoire and improve their language deficiencies. In Asian contexts, a series of teacher education programs have been developed since 2010 for university EMI instructors in Taiwan (Tsui, 2017). These training programs ranged from one-week to three-weeks in length, many conducted in overseas settings outside of Taiwan. The overseas training locations attracted mixed feedback and criticisms (Tsui, 2017). As a result, a domestic EMI training program was called for and conducted in 2014. The effect of the program is being investigated by the current study.

The literature review above highlights the problems facing EMI practitioners in global contexts. It also pinpoints a pressing need for proper EMI teacher education. Little has been attempted to establish an EMI teacher education system that can empower teachers (Kling & Stæhr, 2011), let alone investigations into teachers' transformation during and after the EMI teacher training. This study intends to fill the missing gap by reporting a specialized EMI teacher development program, developed and conducted for EMI faculty in Taiwan.

More importantly, this study aims to examine how the training program may influence the self-efficacy beliefs of the participating teachers. The documentation of subtle or monumental transformations

that may occur to an EMI teacher, who may struggle in different ways during the process, will provide critical insights to potential EMI instructors as well as to administrators who can then provide timely support and guidance. The purpose of the study is not to find results transferrable to other research contexts, but to validate the existence of the transformation process that can very well occur to any teacher. It is hoped that such documentation will also inform the policy-making and the planning of future EMI teacher development programs.

THEORETICAL FRAMEWORK

This study adopts Bandura's theory to conceptualize our data. Bandura's theory of self-efficacy depicts teachers' judgments about their abilities to promote students' learning. According to Bandura (1977), self-efficacy is a belief based on one's perceived competence, instead of the *actual* level of competence. A teacher's self-efficacy is a belief about one's capability to impact his or her students' motivation and achievement. These efficacy beliefs are related to the amount of effort teachers are willing to invest, the expectations they hold, and their perseverance against setbacks.

Bandura (1986, 1997) also proposed four sources of teachers' self-efficacy beliefs: (1) mastery experiences, (2) vicarious experiences, (3) verbal persuasion, and (4) physiological arousal. Mastery experience refers to a perceived success of one's teaching, which then raises one's expectations that teaching will likely be successful in the future. For beginning teachers, in particular, mastery experience is a vital source of efficacy beliefs (Mulholland & Wallace, 2001). Vicarious experiences, the second source, are situations in which someone witnesses an experienced individual perform a skill. When a respected model performs well during the act, the observer experiences the success vicariously and thereby increases his or her sense of efficacy. A weakened level of efficacy is predicted when the model performs poorly. The more the observer looks up to the model, the bigger the influence is on the observer's self-efficacy (Hoy & Spero, 2005).

The third source of self-efficacy beliefs is verbal persuasion. Verbal persuasion is social support that a teacher receives from administrators, colleagues, parents, students, and the community of the teaching setting. For novice teachers, positive feedback or constructive criticisms from students or experienced colleagues often form a potent source of efficacy against potential setbacks or self-doubt. Finally, physiological arousal

refers to one's psychological and emotional status when performing a required teaching task. If a teacher experiences feelings of joy after delivering a successful lesson, his or her sense of efficacy rises. Self-efficacy beliefs may decline when a high level of stress or anxiety is experienced during an act of performance (Bandura, 1997).

Teachers' efficacy beliefs relate strongly to their behavior in the classroom. Efficacy influences how much effort a teacher is willing to invest before, during, and after a class. Teachers with healthy self-efficacy are more willing to experiment with new approaches and show more passion for teaching (Allinder, 1994; Coladarci, 1992). In addition, they are more resistant to setbacks, more patient with students who are struggling, and have greater commitment to teaching (Ashton & Webb, 1986; Burley, Hall, Villeme, & Brockmeier, 1991). Because EMI teachers in Taiwan often experience obstacles such as a lack of confidence, inadequate teacher development and administrative support, or a compromised level of difficulty in teaching materials, these setbacks can easily frustrate EMI teachers. As the current study investigates how an EMI teacher development program may affect its participants on their follow-up endeavors, a probe into the participants' efficacy beliefs would reveal traces of their perceptions during and after the training.

RESEARCH QUESTIONS

In order to examine how participants perform their EMI practice before and after receiving the EMI training, two research questions that tackle the two time points of their EMI careers and that guide the current study are framed as follows:

1. How do teachers perceive their role as an EMI instructor prior to receiving EMI training?
2. How does the EMI teacher education program affect teachers' EMI undertakings afterwards?

METHODOLOGY

A qualitative case study, defined by Yin (2003) as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context" (p. 13), is used in the current paper involving two sources of

data—semi-structured individual interviews and classroom observations. As the purpose of the study is to document any nuance of change and transformation in teachers' EMI practice before and after the teacher development program, the exploratory nature of a case study would not only unveil any subtle change but also offer an in-depth understanding of the phenomenon in question.

Context

This study is based on a larger project that involves a series of plenary speeches, workshops, and a teacher training program, funded by the Ministry of Education in Taiwan from 2013 to 2015. The current study employs only the data from the 5-day, 40-hour EMI teacher training program, informed by the results of a needs assessment survey distributed to over 700 EMI instructors across 17 universities in Taiwan. The survey data were collected on-line anonymously and have been published in another study (Tsui, 2017). Since the survey is geared towards a greater EMI population in Taiwan and its results may not address the current research questions, it was decided that the survey data would be excluded from the current study.

A total of 39 faculty members (23 male, 16 female), from 13 different universities in northern Taiwan, registered and completed the training in summer, 2014. Training courses included cross-cultural awareness, the role of English in CLIL, flipped classrooms, English presentation skills, class management, and case-study teaching techniques, etc. Attendees were engaged in coursework of both pedagogical skills and language skills throughout the camp. Most importantly, at the end of the program, they were required to conduct micro-teaching in which they designed a lesson of their own EMI courses and taught it to their fellow trainees as if they were their own students. The micro-teaching was evaluated by language trainers on how each participant had successfully delivered the lesson to the audience, who was also invited to give constructive feedback. Three months after completing the program, all teachers were invited to attend a Performance Presentation where they gave an oral presentation in English detailing how they had implemented the new ideas in their EMI classes.

Participants

Among the 39 attendees of the teacher education programs, 11 were

invited and agreed to participate in the follow-up interviews and class observations. They were chosen to reflect a range of disciplines and universities, a proportional gender-ratio, and different lengths of teaching years. Table 1 shows the demographic information of the interview participants. Most of the participants had only practiced EMI for less than five years, with the exception of Teacher 1 and Teacher 9 who had been teaching EMI for over five years due to their own personal interests and academic backgrounds.

Table 1

Demographic Information of Interview Participants

Teacher #	Gender	Length of Teaching (year)	University	Content Area
1	M	>15	University A (national)	Art History & Cultural Studies
2	M	>15	University B (private)	Management
3	M	>10	University C (private)	Chinese
4	M	>10	University D (private)	Japanese
5	M	>10	University C (private)	Computer Science
6	F	>10	University E (national)	Education
7	F	>5	University B (private)	Management
8	M	>5	University B (private)	Journalism
9	F	>5	University E (national)	Music
10	M	<5	University B (private)	Management
11	M	<5	University E (national)	Accounting

Data Collection

Each participant was interviewed once in Mandarin ranging from one hour to two hours. Interview protocols concerning their experience with EMI courses, motivation for the teacher development program, and their opinions regarding the program (see Appendix A) were sent to participants for review prior to each interview. All interviews were audio- or video-taped with the teacher's permission. Within the pre-determined structure of the interview protocols, the researcher was able to ask other questions to gain a fuller understanding of the issues at hand. As for the classroom observations, whenever mutual schedules allowed, interviews took place after, if not immediately after, classroom observations. This gave the researcher an opportunity to start the interview with a post-lesson discussion on the purpose and procedure of the observed classroom actions. Each participant was observed for one class session for two or three hours. All classroom observations were video-taped as well. The data collection period took place from November 2014 to May 2015. Three participants—Teacher 6, Teacher 8, and Teacher 10—did not teach any EMI courses during the semester of the data collection and therefore had no classroom observations data.

Data Analysis

All interviews were transcribed verbatim for data analysis. Since interviews were conducted in Mandarin Chinese, a bilingual peer debriefer was arranged to check the accuracy of the translations made by the researcher. Any disagreements in the English translations were resolved by reaching a consensus between the researcher and the debriefer. Then, directed by the research questions, the first stage of the data analysis involved reading and annotating the transcripts with comments and terms, following what Merriam (2009, p. 179) terms an "open coding" process. These open codes were later grouped into several categories and sub-categories that captured recurring themes in the data. Caution was taken to ensure the coding categories were data-driven, instead of being predetermined by existing research (Dörnyei, 2007). The next stage of data analysis involved coding the field notes taken in the classroom observations incident-by-incident. Salient codes occurring repeatedly were grouped to establish themes in order to cross-reference with the interview data. As shown by the interview protocols (see

Appendix A), participants were asked questions targeting an array of EMI issues beyond the scope of the current paper. Only the data relevant to the topic of teacher efficacy were extracted and are reported here.

RESULTS AND DISCUSSION

Two themes emerged from the data that were able to address the two research questions: (1) How did teachers perceive their role as an EMI instructor prior to receiving the EMI training? (2) How does the EMI teacher education program affect teachers' undertakings afterwards?

Theme 1: Weak self-efficacy

Many participants remembered how they had started their EMI career, mostly by chance. As many of them were affiliated with private universities that emphasized student enrollment and school internationalization, they were requested to teach EMI courses so as to attract international students. Their initial experiences were often negative:

> *"I have said "no" too many times (to the department chair)… Then finally in 2006 or 2007, I just couldn't say "no" anymore. So I planned to teach EMI. But I had no idea how to teach in English. I mean if you ask me to recite a poem or a word in English, I could manage to do the memorization myself, but teaching the poem or the word in English? Gosh, how would I even go about doing it? No one taught me before…"* (Teacher 3, Chinese)

> *"I was under the assignment of supporting the joint EMI faculty … simply because I got my Ph.D. from overseas… Frankly speaking, although I received my degree in the States, I was just a student sitting there taking notes, but now I am switching to the role of an instructor?…All I could do was to copy how I was taught in the States."* (Teacher 8, Journalism)

> *"When I first taught EMI, I kept telling myself "they are not any better than you are, so just keep talking even if you make a mistake. They won't even notice it"… Sometimes I would even try to speak faster just to show how fluent I am, of course not without mistakes…I guess I was trying very hard so that students wouldn't look down on me because of my language ability."* (Teacher 5, Computer Science)

> *"I remembered flying there. On the flight I was listening to a bunch of high school kids speaking English. And I said to myself "what is that English accent? How come I don't understand a word?" How will I teach a class if I can't understand their English? The class starts in a week, and I'm totally unprepared and freaking out!"* (Teacher 1, Art History & Cultural Studies)

These teachers one way or another expressed anxiety and insecurity when having to teach in a foreign language. According to Bandura (1977), one of the four sources of self-efficacy is **physiological arousal** where a teacher's sense of efficacy rises if he or she experiences feelings of joy when performing a required teaching task. Self-efficacy beliefs decline when a high level of stress or anxiety is experienced during an act of performance (Bandura, 1986). These interview participants all went through a setback of their self-efficacy early in their EMI career, some due to their pedagogical deficiency (Teacher 3, 8) while others due to their language constraints (Teacher 5, 1).

Teacher 3 and Teacher 8 both mentioned the lack of a role model to look up to. This coincides with another important source of self-efficacy (Bandura, 1977)—**vicarious experiences**. When a respected model performs well during an act, the observer experiences the success vicariously and thereby increases his or her sense of efficacy. A weakened level of efficacy is predicted when the model performs poorly. The more the observer looks up to the model, the bigger the influence is on the observer's self-efficacy (Hoy & Spero, 2005). Without a proper role model to learn from, both Teacher 3 and Teacher 8 perceived a weakened sense of self-efficacy and showed worries of their pedagogical deficiency.

Without proper role models and adequate training, another case of pedagogical deficiency can take place in cross-cultural contexts, as witnessed by Teacher 6:

> *"I was assigned to teach an EMI course... I remembered I was dead scared and didn't know what to do… Then I came across some cross-cultural conflicts with the international students in my class. So my first EMI class didn't work out very well."* (Teacher 6, Education)

Cross-cultural communication skills are part of one's pedagogical competence, especially when working with an intercultural student population. Teacher 6 was unprepared for the conflicts in class and had

not received proper training to handle the crisis. Her self-efficacy was therefore jeopardized.

Teacher 5 was self-conscious of his language capacity and felt insecure. This sense of insecurity was detected in his observed class—a graduate-level course on research paper writing. He gave a lecture in English using overhead slides while students listened and took notes. No activities or exercises were arranged to encourage discussion or interaction. No students raised any questions during the lecture even though he had invited students to do so and paused accordingly. His lecture-based teaching style may reflect his belief that, if an EMI teacher was thought not fluent in English, his content expertise might be questioned as well. Therefore, his non-interactive teaching style, on the one hand, provides a platform to showcase his well-rehearsed lectures, and on the other hand, serves as a safety shield behind which a vulnerable ego resides. Teacher 5 said he had first taught at a junior college for five years before joining a university. During the junior college years, his English verbal skills had fallen to a point that he could barely carry on a conversation with the attendees he met at an international conference. It was only after he began EMI teaching in the university that he regained his English proficiency.

The first source of teachers' self-efficacy, according to Bandura (1997), is **mastery experiences** in which a perceived success of one's teaching will raise one's expectations that teaching will likely be successful in the future. These inexperienced EMI teachers all showed a reduced sense of self-efficacy, due to pedagogical deficiency or language incompetence, both of which could prevent them from receiving mastery experiences. As pointed out by Teacher 10, a junior faculty member who had taught EMI for only two years:

> *"I usually double or triple the worktime for an EMI course than I do for a non-EMI course. For a junior-ranking professor like me, I also need to get promoted within a given timeframe…with me spread so thin between the EMI preparation and career promotion, and without much administrative support and incentives, shouldn't our extra efforts be better recognized, or even rewarded, so that we stay motivated on the EMI track?* (Teacher 10, Management)

Teacher 10's frustration, as a novice EMI instructor, could hurt his EMI performance. For beginning teachers, in particular, mastery experience is a vital source of efficacy beliefs (Mulholland & Wallace,

2001). Novice teachers especially need mastery experience to encourage their academic aspirations. Senior teachers, before leaping on the EMI bandwagon, could still rely on their prior teaching experience to alleviate the anxiety associated with the initial EMI try-out. Junior teachers do not have the luxury to fall back on their prior experience and can suffer greatly from a lack of self-efficacy. If junior teachers, like Teacher 10, are randomly assigned to teach EMI courses, regardless of their own preference, and are not having much-needed initial success, any little resentment during the process can lower their perceived self-efficacy and jeopardize their commitment to teaching.

As shown previously, even with experienced teachers such as Teachers 1, 3, and 6, who all had over 10 years of teaching experience before engaging in EMI, their sense of efficacy still suffered when they were forced to teach EMI and thereby experienced a high level of anxiety. The feelings of vulnerability affected their perceived role as a teacher.

Previous research (Klassen et al., 2013) noted that self-efficacy was decreased through low commitment and teaching-related stress. Across cultural contexts, efficacy beliefs were found to have lessened the impact of teaching-related stress on teachers' teaching commitment. Healthy efficacy beliefs were found to have protected teachers from quitting the profession (Gold, 1996; Harris & Associates, 1993). The current EMI teachers may be veteran teachers in their own fields but are still experiencing the stress and anxiety often felt by novice teachers. Instilling the necessary support in the beginning EMI instructors to build up their efficacy beliefs could help fend off the potential low commitment.

Theme 2: Empowerment

The second theme emerged from participants' feedback regarding their changes as a result of the EMI teacher development program—a 5-day intensive program during which all participants checked into a suburban hotel and checked out upon completing the program. Participants attended the training sessions during the day and had the chance to continue socializing with their EMI colleagues afterwards in the hotel facilities. Because participants were EMI teachers from different disciplines and universities, they were able to exchange ideas and share feelings about their EMI practices throughout the training program. It was during this process that they developed a bond that was

sustained beyond the training program. Several participants described how the EMI community, as a result of the training, was formed.

> *"It's like a religious retreat…When we were in the hotel, we ate together and hung out at the end of the day. We even went out for snacks at night… Although the program lasted only a week, the influence is profound, especially when we build our LINE platform to share our EMI experiences, so that we can continue the support."* (Teacher 2, Management)

> *"If we had all gone home at the end of each day, we wouldn't have developed such a bond with one another.*" (Teacher 7, Management)

> *"The training camp turned out to be a "boot camp. I really worked my butt off! But it was during the camp that we really bonded."* (Teacher 4, Japanese)

> *"I like the support we get from our LINE group, seriously, you get to know what others are doing in class, maybe not necessarily the details, but just the fact that others have done something similar or have experienced the same problem, the emotional support is phenomenal."* (Teacher 6, Education)

The support feedback shared on the platform fits the third source of self-efficacy beliefs in Bandura's theory (Bandura, 1986, 1997)—**social or verbal persuasion**—in that the social support a teacher receives from administrators, colleagues, parents, students, and the community of the teaching setting, can provide an efficacy boost for teachers to counter potential setbacks or self-doubt. For novice teachers in particular, moral support or constructive criticisms from experienced colleagues often form a potent source of efficacy.

The training program provided speeches and workshops on pedagogical skills. Training instructors would first teach the relevant concepts, such as the flipped classroom, class management techniques and presentation skills. Then they would demonstrate how to use the techniques in classroom settings. Teacher 5 commented on how watching an expert teacher demonstrate a teaching technique impressed him:

> *"I remember seeing Professor XXX show us how to do a case study, the non-stop interactions between a teacher and students… that was really amazing!"* (Teacher 5, Computer Science)

Teacher 5's comments echoed the second source of self-efficacy

beliefs in Bandura's theory—**vicarious experiences**. When someone witnesses an experienced individual perform a skill, the efficacy of the observer is enhanced. The more the observer looks up to the model, the stronger the enhancement on the observer's self-efficacy. Teacher 7 elaborated further by detailing how witnessing expert teachers teach helped her strengthen teaching skills as well as self-confidence.

> *"In the EMI training workshops, I see for myself how instructors can design their lessons, so much so that the whole class is completely engaged and energized… And they show you by actually modeling the teaching techniques to you…not just telling you, but modeling to you… After learning these techniques, I feel more confident because I know I can use the new techniques in my own class, and most importantly, I know how to use them, and that gives me the confidence to believe that "Yes, I can do this!"* (Teacher 7, Management)

Note that, according to Bandura (1977), self-efficacy is a belief based on one's *perceived* competence, instead of the *actual* level of competence. Teacher 6 was among the few to acknowledge the discrepancy between her perceived competence and actual competence:

> *"Sometimes when you are inspired by an idea, you feel enthusiastic about it. But it still takes a few more steps before you can actually do it yourself…You still need a lot of support, emotional support and technical support, before you can actually perform it yourself."* (Teacher 6, Education)

Teacher 6 realized that her actual level of competence could be lower than her perceived level of competence. Bandura (1997) suggested that it is beneficial for teachers to hold a slightly higher standard against their current level of competence. The standards teachers hold will guide their sense of self-efficacy. Once the efficacy beliefs are strengthened, they exert power on the effort a teacher is willing to invest, regardless of the actual competence the teacher begins with.

Towards the end of the program, participants were asked to conduct micro-teaching in which they developed a mini-lesson from their own content area and taught it to their fellow participants, who might be complete novice learners of the content knowledge. Expert trainers then offered their critiques and advice to each participant. Several participants mentioned that the training courses sensitized them to their own weaknesses.

> *"My biggest gain from the training program is the self-realization that listening to my lectures, in English, can be a torture (*chuckles*)... After the pronunciation workshop, I decided to record my own voice in class… Gosh, now I know what my students were going through, having to listen to my English for two hours!… that is when I became more empathetic to them."* (Teacher 9, Music)

> *"I used to lecture a lot, thinking students should naturally understand. I forgot to engage my students and allow them to have the hands-on practice… the training courses made me see the value of engagement. As a result, I've changed the way I do things in my class, some procedural changes, so to speak."* (Teacher 11, Accounting)

> *"In my field, we normally fill up our slides with words and charts. We are used to seeing slides like that. But now I know it's totally counter-productive…At our training camp, we were taught how to present simple points on each slide. Now I know how to simplify my old slides."* (Teacher 5, Computer Science)

Teacher 11 and Teacher 5, in addition to acknowledging their own weaknesses, were able to make the necessary changes in order to improve their teaching inadequacies. Teacher 5's transformation was evident in his observed class. Seven months after completing the training program, Teacher 5 was observed using simple bullet points on his overhead slides to introduce concepts. The layout of the slides was made highly reader-friendly without the overloading of words and charts. He said that changing the format of his overhead slides also helped him summarize the content more precisely.

While recognizing and confronting their deficiencies, participants were willing to make changes which eventually led to **mastery experiences**—a perceived success of one's teaching (Bandura, 1986). Research (Allinder, 1994; Coladarci, 1992) shows that teachers with healthy self-efficacy are more willing to experiment with new approaches, show more passion and have greater commitment to teaching. In addition, they are more resistant to setbacks and more patient with students who are struggling (Ashton & Webb, 1986; Burley et al., 1991). Teacher 9 commented on how the micro-teaching sensitized her to her students' struggles:

"*When I sat there as a student, ... I finally knew how my students*

> *would truly feel—learning something totally from scratch—and the teacher is speaking English? especially when none of us speak good English… it's a humbling experience that brings me closer to my students, to feel their struggles."* (Teacher 9, Music)

Teacher 9 was among the few interview participants who voluntarily taught EMI long before her university asked her to. She had been teaching EMI for almost ten years ever since she returned from graduate studies overseas. In her observed class, an elective class which had a mixed-ability group, she arranged to have all the beginning students sit in the first row and the most advanced students sitting in the very back of the room. This way, she could attend to the weaker ones more easily and also allow the more advanced ones to work more independently. She then moved around the room to trouble-shoot for any problems. She said she used to allow mixed-ability grouping in each small group where the strong ones could help the weaker ones. But after the EMI training on class management, she knew she had to arrange the classroom settings to allow maximum control and monitoring so as to provide timely support to her students, especially after knowing that the language barrier could cause great distress. Much like Teacher 9, Teacher 7 also detected a reverse of her role from teacher to student during the micro-teaching practice:

> *"Some conceptual change for me…This switch of roles from an instructor to a student completely changes my view towards my teaching. It's a huge shift!...In a way, it forces me to take the student's perspective. There I get to re-conceptualize my teaching from a student's perspective.* (Teacher 7, Management)

By reversing roles between a teacher and a student, the micro-teaching was purposely arranged to include participants from diverse backgrounds; this allowed participants to take on a different perspective. Both Teacher 9 and Teacher 7 realized that they needed to be more humble in their teaching as they experienced the **physiological arousal**, the fourth source of self-efficacy (Bandura, 1997). The feelings of incompetence or stress, from a student's perspective, felt by the participants during micro-teaching rendered a lower self-efficacy and thereby sensitized teachers to remedy their teaching in order to better fit students' needs.

Participants gained insights regarding their teaching competence and language ability. These insights, be they positive or negative, have all helped participants come to a better understanding of their situation. As

such, they were more prepared to admit their own shortcomings and repositioned themselves. Both Teacher 6 and Teacher 4 mentioned how they changed their view, as a result of the training, on their language deficiency:

> *"After I came to the EMI camp, I realized that English should just be a tool. Once I can operate this tool, I shouldn't have to worry so much… or even compromise the course material by reducing the level of difficulty…As soon as I was free from my language worries, I was able to bring the difficulty level up to speed the second time I offered the course."* (Teacher 6, Education)

> *One of the trainers… told me that I shouldn't care so much about my English... it's the content that I should care more about… I know better now where I should position myself: I'm using English to introduce XXX to my students… So now I ask my students not to get too picky on my pronunciation, my grammar… because that shouldn't be the primary focus."* (Teacher 4, Japanese)

Both Teacher 4 and Teacher 6, prior to the training program, were self-conscious about their language deficiencies and showed a lower self-efficacy, knowingly or unknowingly. During the training program, they were reassured that their content expertise should outweigh their language proficiency. This important insight helped them empower themselves and regain self-confidence about their professional expertise. This echoed the **mastery experiences** (Bandura, 1986) in that a perceived success of their teaching would raise their expectations about their future successes.

The effect of the current EMI teacher development program may not lie in its power to immediately change every participant's EMI practice, but in its power to allow self-reflections that allow participants to transcend familiar territory. Both Teacher 9 and Teacher 7 felt the urge, as a result of the training program, to re-examine their teaching from a whole new perspective. Both Teacher 4 and Teacher 6 felt empowered, having come to terms with their language inadequacies. These insights make a change of practice possible in their respective EMI classrooms. Therefore, to answer the two research questions that guided the current study, EMI instructors, before attending the specialized teacher development program, demonstrated more or less an insecure sense of self-efficacy. Having completed the program, many participants voiced a strengthened self-efficacy, and more importantly, felt empowered to take

on new positions as they continued their EMI undertaking.

Lampert (2010) reminds us that "teaching is a learning profession" (p. 21) that involves continuous growth. When teachers are experiencing self-doubt or cognitive dissonance in their teaching, they are bound to struggle. Nevertheless, it is the very presence of discomfort that makes changes possible. As more and more content teachers, juniors or seniors alike, are recruited to become EMI instructors, only those who are willing to adapt will develop sufficient efficacy beliefs that will help them sail over potential hurdles. Because EMI teachers in Taiwan often experience obstacles such as a lack of confidence, inadequate teacher development and administrative support, these setbacks can easily frustrate EMI teachers.

IMPLICATIONS AND CONCLUSION

The current study is based on a group of EMI practitioners in Taiwan, who voluntarily participated in an EMI teacher education program, sponsored by the Ministry of Education. These participants came from a variety of academic backgrounds with different lengths of teaching experience and language ability. One common thread among them was their enthusiasm and passion for teaching. This might explain why, despite all the initial setbacks, they were able to cope and continued on the EMI track. In a way, this study was based on a skewed sample and therefore may not explain much beyond the current context. However, the findings that suggested a shift of teacher efficacy from negative to positive, as well as a broadened frame of mind to incorporate the students' perspective, were proof that teachers can become well-oriented into the EMI undertaking as long as sufficient support is provided.

Along the same line, as pointed out by Teacher 11, one of the most junior faculty participants, there is a need to establish an EMI certification program in Taiwan that offers the necessary courses on English skills and pedagogical skills (Tsui, 2017). This program should run regularly for university teachers who are required or interested in teaching EMI courses. Only those who complete the training program can be certified to teach EMI courses. EMI trainers of the program can be language specialists for the English language skills or experienced content teachers for the pedagogical skills. The current group of EMI faculty members who have completed the training program can become the seed instructors for the certification program. They are experienced

EMI instructors who know the student body and the classroom culture in Taiwan and thus can serve as mentors for new EMI teachers. Future EMI teacher development programs could also consider inviting experienced EMI content teachers from other non-native English speaking countries to conduct content-specific training and modeling.

Another implication from the findings lies with the administrative employment of the EMI faculty. Junior faculty, despite their newly obtained academic degrees and the most up-to-date knowledge base, should not be assigned to teach EMI unless they are properly oriented into the EMI frame of mind. All university teachers who have obtained their doctoral degrees must possess the necessary professional content knowledge. Their pedagogical skills, on the other hand, are questionable as it is not a must to obtain a teacher training certificate in Taiwan prior to becoming a university teacher. As they learn how to develop their teaching materials and to manage their classes on a daily basis, which is already a great deal of work, it would be difficult to have to advance their English language skills so as to successfully deliver each lesson. As shown by the results of this study, new EMI teachers can experience weakened self-efficacy, especially in the beginning of their careers, due to a deficiency in their pedagogical and language skills. It is recommended, therefore, that administrators take this into account and encourage senior faculty members to take the lead first, given sufficient incentives, and model for the junior faculty (Dearden, 2015).

One major limitation to the current study is that three of the eleven interview participants did not have classroom observations to cross-reference with their interview data during the data collection period. Moreover, no data were collected measuring participants' perceived self-efficacy before and after the EMI teacher training. It was only after the participants had completed the training courses, interviews conducted and analyzed, did the theme of teacher efficacy emerge as a possible outcome of the training. Future research should remedy the current shortcomings in order to yield richer, more robust, results.

Finally, note that the current study is among the first attempts to follow up on EMI teacher trainees in Taiwan. More research using a longitudinal design is needed to examine the fluctuation of self-efficacy shown by content teachers who are at different career stages of their EMI practice. Researchers (Tschannen-Moran & Hoy, 2007) speculate that teachers' self-efficacy might be most susceptible to change early in a career and could fossilize once formed. If confirmed, future teacher

education programs should aim at providing pre-service EMI instructors with tailor-made support that will lead to healthy, sustainable efficacy beliefs.

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ACKNOWLEDGMENT

The author would like to thank the anonymous reviewers of the *Taiwan Journal of TESOL* for their constructive comments that help reshape the earlier versions of this paper. This study is funded by Ministry of Education, Taiwan. Sincere gratitude goes to Dr. Patricia Che for her leadership in the project. Utmost appreciation goes to the research participants in the study.

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PUBLISHING RECORD

Manuscript received: February 18, 2017; Revision received: January 16, 2018; Manuscript accepted: January 18, 2018.

APPENDIX

Appendix A. Interview Protocols

一、 當初加入系上 EMI 教學團隊的原因為何？至今已經多久了？
How did you become an EMI teacher in the first place? How long have you been practicing EMI?

二、 教授 EMI 課程至今，對自己最大的改變為何？
What are the greatest changes you've experienced so far by teaching EMI?

三、 在參加培訓營或工作坊之前，您常用的教學方式為何？曾經遭遇的困難？
How did you usually teach your EMI classes before you participated in the EMI Teacher Development Program? Have you encountered any difficulties before?

四、 在參加培訓營或工作坊之後，有那些教學技巧是適用於您的課堂裡？
Among all the training courses, which one(s) do you find most helpful to your EMI classes?

五、 在您的領域之中，有哪些培訓營教授的概念需要修正之後才適用？
Among all the training courses, what may not apply to your content area and will need adjustments?

六、 整體來說，研習營或工作坊對於您的 EMI 教學或一般教學有沒有幫助？
In general, do you find the EMI Teacher Development Program helpful to your teaching, EMI or otherwise?

七、 經過培訓營或工作坊的訓練，對於 EMI 有沒有觀念或作法上的改變？
How does the EMI Teacher Development Program change your beliefs or approaches to teaching?

八、 對於本培訓計劃，有哪些建議事項？
Are there any suggestions to the current training program?

教師自我效能：「英語授課大專教師培訓計畫」結訓教師信念的個案研究

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英語授課專業課程已然成為全世界高等教育，在課程改革方面的一股重要驅力。本研究為另一大型研究的部分資料，以Bandura（1977, 1986）的自我效能理論為依據，針對參與一個英語授課大專教師培訓計畫的大學教師們，探討其自我效能的潛在改變。樣本為來自北台灣五所大學的十一位教師，資料來源為個人訪談與課室觀察。資料分析顯示，初入門的英語授課教師，可能經歷低落的自我效能期，容易影響對教學的投入；經過培訓後，教師們展現較高的自信心，更重要的是，教師們得以重新檢視自己作為老師的角色，透過更多的同理心，了解學生端的需求與困難，這些體驗協助老師們更謙卑地自省，不論資深或資淺，參訓的老師在使用非母語進行教學可能遭遇的困頓中，因為保持自省，而能持續成長並蛻變。本文最後對未來的英語授課教師培訓規劃亦提出建言。

關鍵詞：英語授課教學、教師培訓、教師自我效能