

高等教育英語授課之內部衝突：以活動理論觀點探討

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中文摘要

英語授課在非以英語為母語的高等教育中早已蔚為風行，過去相關研究雖描述行政主管、教師、教師所遭遇的衝擊與挑戰，但卻常用個別行動 (individual action) 為主要分析單位，而忽視集體活動 (collective activities) 的重要性。本研究以 Engeström (1987, 1996, 2001) 活動理論 (Activity Theory) 的內部衝突 (inner contradiction) 概念為框架，假設對象導向 (object-oriented) 與工具中介 (tool-mediated) 的活動系統 (activity system) 改變是因內部衝突而致，試圖探討一所私立大學專業教師與學生的英語授課經驗，並著重指出活動系統內與跨系統間的衝突及影響。研究結果顯示：所有研究參與者都有活動系統內與跨系統間的衝突及改變。以個別活動系統分析而言，學生逐漸從使用取向變成分數取向，而專業教師則逐漸能重視學生需求。雖然兩者改變的動機不同，但在各自教學經驗影響下，卻從未挑戰英語授課的政策。以集體活動系統分析而言，研究並未發現教師與學生在英語授課中設定立即的共同期待，活動系統也沒有質的變化。本文證實活動理論在英語授課研究與教學的可行性，而透過活動系統分析描繪各重要關係人系統內與跨系統間的衝突，也將為未來英語授課的教學與改變奠定基礎。

關鍵詞：英語授課、活動理論、內部衝突

Inner Contradictions in English-Medium Instruction in Higher Education: From An Activity Theory Perspective

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Abstract

University settings in non-native English-speaking (NNES) contexts have witnessed the growth of English-medium instruction (EMI). Most prior research sheds light on the challenges and contradictions NNES stakeholders experience by using individual action as a unit of analysis without considering such experiences as collective activities. Drawing on Engeström's (1987, 1996, 2001) notion of inner contradiction in Activity Theory (AT) that presumes the derivation of change from tensions in the object-oriented and tool-mediated activity systems, this paper explores content instructors' and students' experiences engaging in English-taught programs in a private Taiwanese university. Specifically, the focus identified inner contradictions within and across activity systems and the corresponding consequences. Findings showed that all participants had tensions within and across collective activity systems that could affect the change of these systems. In the individual activity analysis, students tended to adopt a grade, rather than use orientation in object transformations, while content instructors shifted from concern about themselves to recognizing students' needs. Even though the motivation behind initiating change in the activity system may differ, the deep-seated rules about English-only instruction remained unchallenged, with stakeholders' history of learning and teaching being a significant mediator. The joint activity analysis showed no shared object between students and content instructors in adopting EMI and no qualitative change. Such results attest to the usefulness of the AT framework in future EMI research. The discussion of the effects of these contradictions within and among stakeholders through an AT perspective supports future pedagogy and interventionist research in which new practices can be derived from activity system analyses for EMI development.

Keywords: English-medium instruction; activity theory; inner contradictions

Inner Contradictions in English-Medium Instruction in Higher Education: From An Activity Theory Perspective*

I. INTRODUCTION

University settings in nonnative English-speaking (NNES) contexts have engaged in offering more courses, modules, and degrees using English as the medium of instruction. In response to this significant educational trend is a growing body of research on the learning, teaching, and curricular aspects of English-medium instruction (EMI). This research has shown that EMI popularity does not promise effective learning or teaching (Huang, 2012; Tatzl, 2011), nor does it guarantee a common view on curriculum design and implementation (Huang, 2012; Hüttner, Dalton-Puffer, Smit, 2013). Despite students' preference for EMI and a sense of growth in English, complaints about teachers' English proficiency, suffering due to this lack of proficiency, unfamiliarity with disciplinary cultures, and dissatisfaction with the amount of content learnt via English are widespread (Huang, 2012; Tatzl, 2011). Likewise, teachers' critique of students' lack of motivation and English proficiency, their struggles with expressing themselves fluently and comprehensibly in English, and worries about the amount of knowledge acquired via English prevail (Huang, 2012; Paseka, 2000; Sert, 2008; Tatzl, 2011). The limited support, incentive, or training for effective teaching from administrators is also widespread (Huang, 2012; Tatzl, 2011). However, the lack of top-down control in language management, surprisingly, has led to success in implementing Content and Language Integrated Learning in Europe (Hüttner et al., 2013). Indeed, exploring tensions and challenges brings to the forefront methods to better facilitate EMI.

Although previous literature has shed light on the challenges or contradictions NNES stakeholders may hold toward EMI, these analyses are often limited to the conceptualization of EMI experiences as *individual action* rather than as *a collective activity system*. A collective activity system is a theoretical lens of Engeström's (1987, 1996, 2001) Activity Theory (AT) in which it is assumed that the minimal context for understanding stakeholders' experiences in EMI is not action but rather an object-oriented and tool-mediated activity system which includes individuals (subjects), the acted on (objects), and the dynamics between the two. An activity system is characterized by its inner contradictions, which are "critical to understanding what motivates particular actions

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and in understanding the evolution of a system more generally” (Barab, Barnett, Yamagata-Lynch, Squire, & Keating, 2002, p. 80). These tensions are important forces for an activity system to develop. An activity system is thus evolving and changing from inner tensions or contradictions for the aim of transformation. In this respect, understanding stakeholders’ EMI experiences-in-the-making requires an exploration of the inner contradictions that change activity systems, as well as queries into the processes and consequences of these contradictions.

The value of using the core tenets of AT to understand and transform educational or work practices has long been recognized, but limited research has been done in relation to EMI. Most research on inner contradictions has been used to facilitate educational change in the future (Mosvold & Bjuland, 2011; Yamagata-Lynch & Haudenschild, 2009); to facilitate collaboration across stakeholders (Engeström, 2001; Yamazumi, 2009; Virkkunen, Mäkinen, & Lintula, 2010); and to illustrate the ways object transformations may enhance scientific understanding in astronomy (Barab et al., 2002) or may facilitate reflective practices via blogging in teacher education (Liu & Chang, 2011). Despite the primacy of the inner contradictions in the AT framework, only Madyarov and Faef (2012) have investigated the tensions in student engagement activity systems in a university distance EMI course. They discovered that such contradictions might lead to negative influences on the development of students’ activity systems, given that most participants shifted from adopting a use orientation to a grade orientation.

Although Madyarov and Faef’s research (2012) on EMI provides insight into the primacy of object transformations via the notion of inner tensions in individual activity systems, their research is limited to the development of online courses from *individual* activity systems rather than *joint* activity systems, a construct developed in the third generation of Engeström’s (2001) AT “to understand dialogue, multiple perspectives, and networks of interacting activity systems” (p. 135). In this sense, EMI experiences are co-constructed by students, teachers, and administrators; hence, the analysis should be expanded to include these multiple perspectives. The implications drawn without attention to EMI as joint activities among stakeholders risk being one-sided. Thus, to better understand how to facilitate EMI in higher education, this paper explores the experiences of content instructors and students in two English-taught programs (ETPs) in a private university in Taiwan by using the core tenets in Engeström’s AT (1987, 1996, 2001): inner contradictions in individual and joint activity systems. In so doing, this paper aims to identify inner contradictions within and across activity systems and the corresponding consequences. This lays the foundation for future pedagogy and interventionist research in which new practices can be developed from activity system analyses to better facilitate EMI.

II. CONCEPTUAL FRAMEWORK

The conceptual framework of this paper draws on Engeström's (1987, 1996, 2001) AT, a framework for describing, interpreting and transforming activity. In particular, his notion of "inner contradictions" is used to analyze data while activity systems are used as units of analysis. The important tenets in AT and related research are summarized below.

1. Three Generations of AT

Engeström (1996, 2001) summarizes the evolution of AT into three generations. He refers to the first generation of the Vygotskian notion of the mediation triangle where individuals (subjects) are motivated to achieve their goals (objects) through mediated resources (tools). This framework allows researchers to use instrumentally mediated action as a basic unit of analysis transcending the binary notions of stimulus-response and subject-object.

Influenced by Leont'ev's (1978) work that critiques Vygotsky's triadic representation of overlooking the collective nature of activities, Engeström (1987) adds macro-level elements to the original triangle, including "rules," "communities," and "division of labor." Characteristics of the second generation of AT include overcoming "individual action" and using the "activity system" as an elementary unit of analysis. The elements of activity systems are illustrated in Figure 1, including the upper level (subject, object, and tool), the lower level (rules, community, and division of labor), and "outcome"; that is, agents (subjects) use the material, cognitive, or socio-cultural resources (tools) to obtain goals or products (objects), resulting in the "Outcome." Such attempts are supported by the group or organization that agents belong to or participate in (community). Their participation is regulated by formal or informal parameters (rules), which further determine the assigned roles or shared responsibilities in an activity (division of labor).

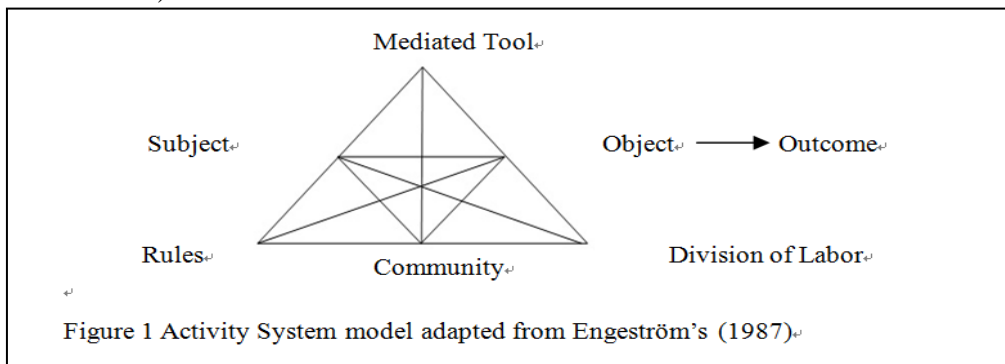


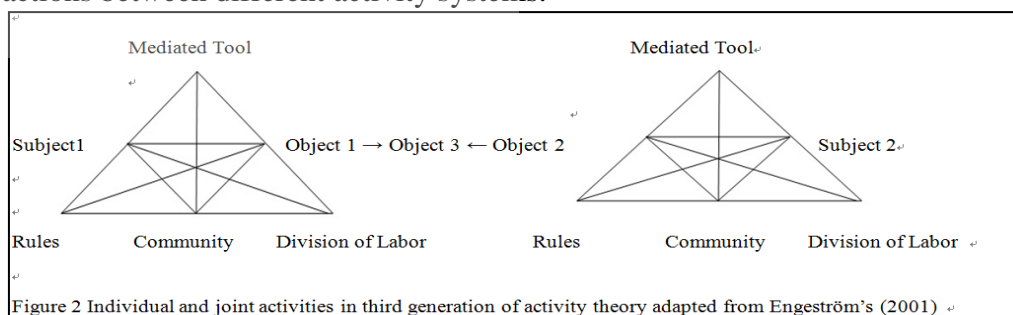
Figure 1 Activity System model adapted from Engeström's (1987)

The framework of the second generation allows researchers not only to shift from individual action to activities, but also to analyze tensions or contradictions. These can be best understood as the dynamics with and among the dualities (e.g., learning vs. grade orientations). Such tensions are “characterized by ambiguity, surprise, interpretation, sense-making, and potential for change” (Engeström, 2001, p. 134). A designer must not treat the duality as the opposite or attempt to eliminate any side, but instead to “leverage the dynamics of system dualities” (Barab et al., 2002, p. 80). The contradictions may be shaped by “history of the theoretical ideas and tools” (Engeström, 2001, pp. 136-137). Given that inner contradictions, which are features of second generation AT, function as a driving force for activity changes, it is essential to identify sources of inner contradictions within and among elements of activity systems to resolve tensions.

To date, educational research has attested to the usefulness of second-generation AT. For example, using individual activity systems, Raymond and Parks (2002) cautioned an indirect transition from English for Academic Purposes (EAP) courses to content courses and the restricting influences of historical practices on NNES learners’ abilities to mediate literacy resources. Kim (2011) used the AT framework to expand motivation theory and depicted the dynamics of L2 learners’ (de-)motivation, which was mediated by their learning history. Several studies have also underscored the primacy of object transformations through the AT framework. For instance, Liu and Chang (2011) discovered that in-service teachers’ objects were transformed to develop reflective understanding via blogging. Likewise, in Barab et al.’s (2002) study, objects were transformed through resolving the tensions between learning astronomy and building 3-D models to aid understanding in astronomy.

Although second generation AT has provided conceptual tools to identify sources of inner contradictions for desirable changes, it has been criticized for its “insensitivity ... toward cultural diversity” and as such “needs to develop conceptual tools to understand dialogue, multiple perspectives, and networks of interacting activity systems” (Engeström, 2001, p. 135). Engeström further develops joint activity or practice as a basic unit of analysis (see Figure 2). As he argues, “The basic model is expanded to include minimally two interacting activity systems” (p. 136). In Figure 2, two subjects initiate two interacting activity systems in joint practice. They are driven to achieve their own objects (Object 1 and Object 2), and more importantly shared or co-constructed objects (Object 3), through a series of mediated actions in their own communities. In the process of realization, tensions may arise from the interactions between two activity systems and hence trigger inner contradictions for each individual and joint activity. This

framework allows researchers to take participatory and even interventionist roles in order to better facilitate the development of joint activities by resolving tensions arising from interactions between different activity systems.



Third-generation AT using joint activity systems as units of analysis has received attention in educational research, with an aim to facilitate cooperation across subjects or develop better practices. For example, Yamazumi (2009) established an after-school learning activity as a joint practice to coordinate the family, universities, and elementary schools for children's learning. In this activity, research coordinators and university students discovered that the pre-designed scripts assigned by university students did not align with their original plans of cooperation across parties and hence they together sought a new way to engage children in the activity. Their facilitation of children to become group leaders resulted in children's embracement of such leadership roles and cooperation with their peers. Similarly, the tensions between university teaching and clinical workplace staff in physiotherapy training in Virkkunen et al.'s (2010) study became a turning point for transformation and collaboration. The participants began to question their current objects and cooperation methods and hence they changed from an instrument-focused to a patient-focused approach to physiotherapy training. In so doing, the cooperation between teachers and workplaces and the objects of teaching were transformed.

One common theme in the second and third generation of AT is the primacy of inner contradictions as driving forces within and across activity systems. Such contradictions can be further divided into four levels, which will be discussed in the following section.

2. Four Levels of Inner Contradictions

The emphasis on collective activities also suggests Engeström's (1987) transformation of the Vygotskian notion of the Zone of Proximal Development (ZPD) to highlight the mission of education as "developing historically new forms of activity, not just at letting the learners acquire the societally existing or dominant forms as something individually new"(THEORETICAL LESSONS, para. 3). The new forms of activity systems evolve from the use of qualitatively different models to resolve tensions at four levels: "primary," "secondary," "tertiary," and "quaternary."

Primary contradictions occur between the use and exchange value of the commodity at each element of an activity triangle; that is, subjects may assign conflicting value systems to an element of the target activity and hence create covert tensions. For example, in Madyarov and Faef's research (2012), the use and exchange value of student objects is learning and grade orientation respectively. Or when the NNES instructors emphasize spending time on learning content rather than studying TOEFL/IELTS to fulfill the minimum requirement for study abroad, primary contradictions arise within the object element between content teachers and students.

Secondary contradictions occur between the elements of the activity system; namely, subjects may encounter challenges while assimilating into the target community. For example, the NNES instructors and students may have increased workloads or study loads because they have adopted a foreign language as a medium of instruction, thereby indicating a conflict between the subject and division of labor.

Tertiary contradictions occur when a new method is used to resolve tensions; that is, subjects encounter challenges while adopting what is believed to be new and effective ways to solve problems. For example, because of the large number of students who cannot understand lectures in English, remedial courses delivered in Mandarin were offered (a new model); however, they may not necessarily attract all those in need of assistance (a conflict between object and outcome).

Quaternary contradictions occur between the target activity and its adjacent activities. Taking the history of each element into consideration, Engeström (2001) proposes four significant adjacent activities: "object-activities" (activities whose objects are directly related to the target activity's objects); "instrument-producing activities" (activities producing tools for the target activity); "subject-producing activities" (activities such as schooling or education that shape subjects); and "rule-producing activities" (activities such as administration and legislation that produce rules) (pp. 136-137). For example, offering remedial content courses in Mandarin requires extra labor. Because it will increase instructors' workloads, it may create a tension between the target activity and the administration (rule-producing activity).

When solving quaternary contradictions, the new form of activity will enter the first stage of the primary contradictions, and as such, it constitutes a cycle of development. Activity time is, therefore, cyclic rather than linear. Also, growth is not necessarily observed since the "new" is created as qualitatively different in relation to the target community, which usually occurs in the transformation of objects, tools, and/or rules. Although progression may not be discovered, the four levels of inner contradiction are still useful because they function as conceptual tools to identify the sources of conflict and provide ways to cope with tensions through future intervention/change.

Several studies have adopted the four levels of inner contradictions to transform educational or work practices. For example, Engeström (1991) identified primary contradictions between the patients' problems and demands in a health care center (object). Secondary contradictions were discovered between the patients' problems (object) and their arbitrary assignments to doctors (division of labor), the doctor's instruments (tool), or administrative rules that separate urgent and regular consultations (rules). To resolve these tensions, multidisciplinary teams with clear responsibilities were implemented. Engeström (2001) further analyzed the contradiction in all the care systems of the patients, including the family, the health care center, and the children's hospital. Primary contradictions were observed in the children's hospital between the multiple disease problems a patient has and the assumption of the care system that each patient has a single problem or that a physician is responsible for his/her own patients. A secondary tension emerged between the health center and the hospital in terms of the cost efficiency and care relationship, as well as between having multiple illnesses and having inadequate available tools to understand such problems in the family activity system. To resolve tensions for better medical service, a care agreement among different stakeholders was defined and implemented.

Instead of transforming practices, scholars have also used the four-level inner contradictions to analyze educational practices for future development. For instance, Madyarov and Faef (2012) examined the tensions and corresponding changes from students' perspectives in an Iranian distance EMI course. They discovered that most students shifted from adopting a use orientation to a grade orientation (primary contradiction). Such change was mediated by peers, their lack of English proficiency, the poor connection to the Internet, and the rules creating a low expectation of student performance (secondary contradiction), as well as the government requirements and extracurricular activities (quaternary contradiction). It is unsurprising that students, demotivated and frustrated, reduced their time on line and sought simply to obtain high scores. Using joint activity systems, Yamagata-Lynch and Haudenschild (2009) investigated teachers' perceptions of a teacher development program and identified tensions that shaped teacher development for future transformation. They discovered that individual teachers, school districts and universities did not concur with the benefits teachers obtained from the program (primary contradiction). Also, school districts and universities did not consider new burden added to teachers, rendering teachers to feel overwhelmed about participating in teacher development activities (secondary contradiction). As teachers implemented what they had learned from the program, the new teaching methods did not correspond to classroom practices (tertiary contradiction).

Interacting with other classroom activities required more change to accommodate the new teaching approach (quaternary contradiction).

3. Summary

Despite the attestation of the AT framework, such insights have not yet informed inquiries into the burgeoning EMI studies in higher education, except Madyarov and Faef's (2012) study, which is limited to the development of online courses from *individual* activity systems rather than *joint* activity systems. Informed by Engeström's (2001) third generation of AT, this paper aims to describe four levels of inner contradictions within and across activity systems and their consequences. First, this paper presumes both a joint activity, not individual action, as a basic analysis unit. As such, engaging in the ETPs is viewed as a joint practice shared by content instructors and students. Hence, it is imperative to identify the interacting systems initiated by the two subjects. Second, this paper assumes the constant change of any activity (system)—for progression or regression—driven by inner contradictions at four levels, and thus it is necessary to discern the tensions within and across activity systems. Although this study is not designed as interventionist research, I believe that the activity system analysis can provide a guiding role in planning and implementing EMI.

The following research questions guide the study:

1. What inner contradictions are encountered by content instructors and students in their individual and joint activity systems?
2. What changes, if any, arise from the inner contradictions within/across activity systems?

III. METHOD

This paper is a part of the researcher's project on NNES content instructors' professional development in two Taiwanese universities from 2010 to 2012. Data reported in this paper are drawn from one university representing one popular design (case) of ETPs and affording for more complete and illustrative examples.

1. Research Context and Participants

The research was set in a private university campus characteristic of the English-only policy and Junior Year Abroad (JYA) program in Taiwan; that is, almost all the courses are designed to be taught *only* in English to help undergraduate students adjust to their studies in worldwide partner schools during their junior years. These students should meet the minimum English language proficiency requirements of the host institutions to take content courses. There are four undergraduate programs on the target campus, and the majority of the enrolled students are Taiwanese. For student participants, both English

for General Purpose (EGP) and English for Specific Purpose (ESP) courses¹ were required subject, with the former taught by language instructors, while the latter by content instructors from the department.

Participants included two content instructors and seven students. EGP or ESP instructors were not recruited for they were not the original focus of the research project. Prof. Su and Prof. Chen are instructor participants who had taught courses conducted in English for five and four years in Politics and Tourism respectively before the 2012 academic year. They were recruited because their courses were well received by students, and they were recommended by colleagues. Prof. Su, who earned his doctorate in the U.K., identified as a novice instructor when the researcher first met him in 2008—the second year of his EMI practices. Prof. Chen, who earned her doctorate in the US, was new faculty member in 2008. Both had minimal teaching or language training backgrounds, with no (Prof. Chen) or limited (Prof. Su) teaching experiences. As faculty, they were primarily responsible for content courses rather than Politics or Tourism English.

The student participants were three freshmen from Prof. Su's Introduction to Statistics class (i.e., Sam, Sibyl, and Sherry) and four freshmen from Prof. Chen's Introduction to Tourism class (i.e., Thea, Tabitha, Tina, and Tracy²) when the first interviews were conducted. They were chosen because of their willingness to participate in the study and their abilities to articulate their viewpoints about their learning experiences in the program, as determined by the first interview. Although they all had learned English for more than ten years, their English proficiency differed: Sibyl received an elementary level score on the General English Proficiency Test, while Sherry, Thea, and Tabitha obtained intermediate level³ scores. Their self-perceptions of English proficiency were not the same either, with Sherry, Thea, Tina, and Tracy identifying as better at listening and speaking, and Sam, Sibyl, and Tabitha better at reading. Note that pseudonyms are used for all the participants.

2. Data Collection and Analysis

Data were gathered from the 2010-2011 and 2011-2012 academic years. Two approximately two-hour pre-observation interviews were conducted with each instructor, one approximately 1.5-hour pre-observation interview with each student, and four class observations with each instructor. All the interviews were conducted in Mandarin. Questions for instructor interviews explored their teaching philosophies, the use of

¹ In this study, the EGP courses referred to English Reading, English Writing, English Communication, and TEOEFL/IELTS. The ESP courses referred to Politics English and Tourism English.

² Students in the Introduction to Statistics course have pseudonyms beginning with "S," while those in the Introduction to Tourism course begin with "T." Also, the names of those with higher English scores will include an "h," lower ones will include "l," and intermediate will not include "h" or "l."

³ Sam, Tina, and Tracy did not have any official English certificate.

educational support, teaching difficulties and solutions, perceived effectiveness, and opinions about the ETP. Questions for student interviews focused on students' previous and current English-learning experiences, learning difficulties, coping strategies, teachers' instructional approaches, perceptions of instructors' use of educational support, and effects and effectiveness of the ETP. In addition to interviews, four class observations of each instructor's courses were conducted. Prof. Su's Introduction to Statistics and Prof. Chen's Introduction to Tourism were chosen because of availability. Both are required courses. Observations were scheduled between the two instructor interviews and conducted once a month for two hours. The post-observation interviews were held to understand students' and instructors' experiences about their learning and teaching as well as their changes across years. Except for Sherry and Tracy, each student was interviewed twice, and each interview was between one and three hours⁴.

Initially, data collected were analyzed based on Charmaz's (2006) grounded theory and Carspecken's (1996) levels of inference; that is, the researcher coded interviews and observations line by line and incident by incident, with specific attention given to low-level interpretations. Then, the initial codes were rearranged to derive salient codes and establish categories, with a focus on high level inference. Themes and patterns were extracted for cross-case comparison. The significant theme this paper explores is the notion of contradiction. Thus, data were re-analyzed based on the AT framework, using engagement in ETPs (teaching and learning experiences) as the basic scope and "activity system," and "four levels of inner contradictions" as theoretical codes. For each type of subject, an activity system was depicted, and the four levels of inner contradictions were specified. After determining the individual activity system, the four levels of contradictions in the joint activity system were identified. Changes in each system, related themes, and implications were also sought.

IV. INNER CONTRADICTIONS IN STAKEHOLDERS' INDIVIDUAL ACTIVITY SYSTEMS

This section presents the sources of inner contradictions from content instructors' and students' experiences in ETPs. Designing, teaching, and learning themes are discussed with close reference to stakeholders' motivation, goals, methods, difficulties, solutions, and changes. Stakeholders' individual activity systems, inner contradictions, and change of activity systems will then be explored.

⁴ Sherry and Tracy were interviewed only once because they were recruited after class observations to substitute for the original two participants who were unavailable to participate in the study.

1. Content Instructors as Subjects

1.1 Content instructors' approaches to designing courses taught in English

Although neither described their English abilities as excellent, Prof. Su and Prof. Chen still had great confidence in teaching via English. Identified as subject-matter teachers, both instructors aimed to increase students' understanding of discipline-specific content and sharpen their thinking/application skills rather than enhance their English abilities. As Prof. Su said, "For me, they [students]⁵ must learn subject matter. I can't teach English" (S-I1-022611⁶), and Prof. Chen elaborated, "Content courses still focus on content knowledge and the application of such knowledge" (C-I2-032311). In order to meet the objectives of acquiring discipline-specific knowledge, both instructors lectured all in English from the beginning of their teaching. Prof. Su and Prof. Chen expressed that teaching content in English was purported to scaffold students to study abroad in junior years and thus prepare them for future careers.

Both instructors scaffolded their students based upon beliefs rooted in their previous English-learning and disciplinary learning experiences in Taiwan and/or abroad. For example, influenced by his English-learning experiences, Prof. Su believed that one's English abilities can be improved only when one "wants to survive [in an English-as-a native-speaking country]" (S-I1-022611). In this respect, he was not obligated or able to teach English; instead, he focused on discipline-specific knowledge. The influence of past experiences enabled both teachers to assume their current students were similar to them as they learned content in English abroad (Prof. Su and Prof. Chen) or Mandarin in Taiwan (Prof. Su). As Prof. Chen reasoned, "I think if according to my learning experiences, this is the easiest way for me to understand and to apply the concepts, I'll try to teach in this way" (C-I2-032311). With limited teaching experiences, Prof. Su "copied" what he had been taught in Taiwan and Britain. As he expressed, "To be honest, without real teaching experiences- and my previous learning experiences were in U.K or in Taiwan- teachers taught in that way I just copied what was taught and translated it into English" (S-I1-022611). Unlike Prof. Su, disfavoring the popular student-led discussion in seminars in her disciplinary learning in the U.S., Prof. Chen emphasized the importance of teacher guidance, and thus, she adopted lectures when teaching in Taiwan. As she expressed,

Until now, I still believe a teacher's basic responsibility is to provide guidance. So in my class we can have some discussion, but I still have to

⁵ Brackets are used for explanations of quotes to enhance understanding.

⁶ "S-I1-022611" stands for "the abbreviation of the participant's name—the interview—and interview data (M/D/Y)."

lecture because . . . for those instructors' teaching methods, I still think they were not well-prepared. (C-I2-032311)

Another significant influence regulating the instruction of Prof. Su and Prof. Chen was the English-only policy mandated by the university; namely, instructors who were identified as using Mandarin in the classroom risked being dismissed from the university and hence only English was used at the beginning of teaching. In contrast, another important university policy, the JYA policy, did not have influence on these instructors' course design.

Figure 3 presents content instructors' activity system in the beginning of their EMI. Their initial course designs were shaped by previous learning experiences (subject-producing system) and the teaching requirements—especially the English-only policy (rules)—and guided by the object, that is, to assist students in acquiring academic understanding and sharpen their thinking/application skills rather than increasing English abilities. In the long run, they aimed to enable students to study abroad and prepare for future careers. With limited teaching experiences, Prof. Su and Prof. Chen imagined student communities resembling themselves (community), and hence they played both roles as a learning facilitator and a policy implementer (division of labor). Their major teaching responsibilities included transmission and application of discipline-specific knowledge rather than learning of English.

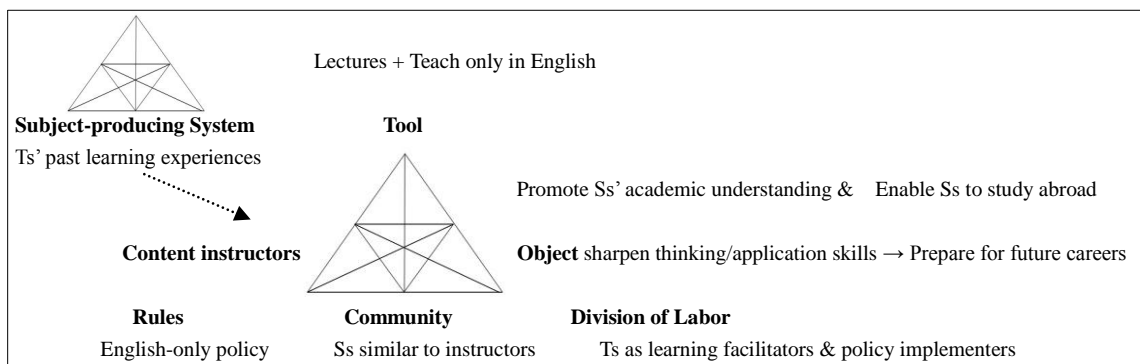


Figure 3. Content instructors' individual activity system at the beginning of their adoption of EMI

1.2 Content instructors' change in teaching

As neophytes in EMI, both instructors faced many unexpected challenges. In reflecting on his early teaching experiences, Prof. Su commented, "I never had this teaching experience So I just copied how the instructors taught me and what they taught me. But I encountered some difficulties when teaching content in English"

(S-I1-022611), and Prof. Chen sighed when recalling her failure in EMI, “It was lecture, no activities, and I lectured for two hours and found all the students slept” (C-I2-032311). The first problem occurred when these instructors insisted on teaching students only in English from the beginning, which demanded laborious planning not simply because of their novice status as teachers but also because of their unfamiliarity with expressing ideas in English as quickly, accurately, and fluently as in their L1. As Prof. Su confessed, “If it’s in Mandarin, I don’t need the PPT [Power Point slides] The PPT [in the first year of teaching] was [prepared] for myself, not for others. I’m being honest” (S-I1-022611). Unsurprisingly, both instructors typically prepared more material than they could cover in class. “In the first semester, I focused on lecture. I was really tired because I spent much time to prepare a lot [for teaching] But I found that students couldn’t acquire that much because they didn’t understand” (C-I2-032311), Prof. Chen commented.

Second, Prof. Su and Prof. Chen acknowledged that most of their students did not resemble them as language learners; instead, different mediating factors prevailed. Prof. Chen underscored the primacy of English proficiency, attention spans, and reliance on Mandarin, while Prof. Su highlighted student effort in schoolwork. As Prof. Chen explained,

I didn’t have background knowledge and I didn’t know it in Mandarin when I studied abroad. But I still had no problem [learning subject matter] I observe it’s more problematic for those with poor English proficiency to rely on direct Mandarin translation. (C-I3-052412)

Since Prof. Chen did not resort to Mandarin, she was sometimes unable to provide Mandarin-equivalent translations as her students requested. Unlike Prof. Chen, Prof. Su emphasized students’ English-language proficiency and the effort they put into schoolwork. As Prof. Su explained,

[Compared with me,] students are different in academic abilities, and students’ abilities to comprehend lecture in English also differ. I also taught at a slower pace. So the direct transfer from the Mandarin-medium teaching is not possible.

So I rely on trial and error. (S-I1-022611)

Prof. Su reasoned that he had also encountered language difficulties while studying abroad, but he worked hard to resolve these problems by previewing and discussing the material with his peers and instructors. As such, students’ limited English proficiency and academic knowledge or abilities, though acknowledged, were not considered by Prof. Su as the most important mediator in student comprehension; the most significant one is still students’ lack of motivation and accompanying effort. As Prof. Su explained, “I bet English, listening would be. But like me, when my English was poor [when studying in

U.K.), I would preview And when reading, you knew technical vocabulary. I think they [students] didn't do these" (S-II-022611).

The above challenges resulted in students' limited understanding of content and instructors' decreased coverage of the expected material. Such difficulties discouraged Prof. Su and Prof. Chen, and hence they struggled to solve these problems. As they began to recognize students' language needs, Prof. Su and Prof. Chen adopted a new student-oriented approach to instruction, with Prof. Su even challenging the English-only policy. For example, because of students' lack of English proficiency and/or background knowledge, Prof. Su did not insist on lecturing only in English; instead, he explained the material first in English and then in Mandarin. Explanations in Mandarin, however, made some students simply stop trying to understand the English-mediated lecture. As he explained, "[Lecture with] half Mandarin and half English, then students became lazy They don't study. I've to compel them to study" (S-II-022611). As such, Prof. Su decided to lecture first in English and only when students could not understand, he would paraphrase again in English and then code-switch to Mandarin.

In addition, Prof. Su expressed that he required student presentations in his Politics courses, which was a "disaster" (S-II-022611) because students simply read aloud the assigned materials. In order to prevent students from doing so, Prof. Su required students to summarize and translate the assigned texts in Mandarin. As he explained, "I need them [students] to go through the process of transforming . . . by translating it in Mandarin or to summarize . . . to compel them to read [in English]" (S-II-022611). When asked if he taught the same way in all the courses, Prof. Su said, "For Statistics, it was just in reverse. Read the textbook in Mandarin first. Be sure they [students] had basic ideas in Mandarin" (S-II-022611); that is, in Introduction to Statistics, he used a textbook in English at first, but found that local students' poor command in both logics and English made English-medium textbooks inaccessible. As such, he required local students to read in Mandarin. Indeed, for Prof. Su, Mandarin became significant scaffolding.

Unlike Prof. Su's major changes in curriculum design and adoption of Mandarin, Prof. Chen had minor changes in course design and insisted on EMI because she believed students could "learn from English" as she once did (C-I2-032311). Given that "students' attention span was short [in English-medium lectures]," she would "throw out questions when observing they [students] almost felt sleep" (C-I2-032311). In addition, Prof. Chen also allocated more time for students to apply concepts in group discussions. As she explained, "I tried to incorporate more group discussions I should not have tried to instill all the ideas in students but rather to inspire them to think. In this way, even I don't cover much, they learn more" (C-I2-032311).

In group discussions, as we observed, students would discuss in Mandarin, and Prof. Chen would respond mostly in English. Likewise, Prof. Chen required students to present, not discuss, in English. As she said, “I cannot control them [students] And it’s discouraging [when requiring students to discuss in English]” (C-I2-032311). Prof. Chen also incorporated student presentations, which she deemed as “a disaster” (C-I2-032311) since students did not know how to organize PPTs. In order to help them do so, she required students to discuss their PPTs with her before their presentations. During the process, she could better understand student confusion, and students could clarify concepts in Mandarin. As she said, “I think they could better understand the concepts after I explain it [in pre-group-presentation discussions]” (C-I2-032311). In particular, for Introduction to Tourism, Prof. Chen decided not to provide PPTs because students became absent-minded in lectures from her observations of her previous teaching. Indeed, Prof. Chen tended to use interactive lectures, group discussions, and group presentations as course design, with the use of Mandarin only in private or group discussions.

In our last interview, Prof. Su and Prof. Chen expressed that it took them one to two years to stabilize and gain satisfaction about their teaching practices. As Prof. Chen reported, “For now, I’ll review all the PPTs . . . and add some examples, not major change but minor modification” (C-I3-052412), and as Prof. Su said, “The pressure isn’t that high now.... I’m used to teaching in English” (S-I3-052712). When asked if they attended any teacher development workshops to scaffold their EMI, both expressed that these workshops were required by the school, but they reported little usefulness in such workshops. Despite these frustrations, Prof. Su and Prof. Chen reported satisfactory outcomes arising from being more able to “use different teaching methods” (C-I3-052412), “use other ways to explain the same concepts” (S-I3-052712), “incorporate examples used in teaching in research writing,” (C-I3-052412) and/or “not be afraid of using English to make a presentation” (S-I3-052712)(C-I3-052412).

Although the instructors believed that students learnt better when taught less, Prof. Su especially concerned that students may not acquire sufficient professional knowledge via English. As he explained, “Their [students’] performance [in English] may be better, but if it’s about their competence, it’s not necessarily the case” (S-I3-052712). This unsatisfactory academic outcome, however, did not worry Prof. Chen since she believed that the professional skills could be sharpened through work experience, and thus the abilities to express academic content in English were less important than general English abilities. As Prof. Chen expressed, “Tourism is a service industry. So their [students’] professional capabilities can be enhanced when they start to work. But English abilities can be developed earlier” (C-I3-052412).

Indeed, the enhanced English abilities through the JYA program and EMI practices advantaged students seeking employment, graduate studies, and licenses as Tour Managers and Tour Guides. As Prof. Chen explained, “The major reason that they [senior students] could have job offers so quickly... may be related to their English abilities. Because the job interviews are conducted in English- such English scores as the TOEFL/TOEIC are also highly emphasized” (C-I2-032311). These benefits were positively correlated with the EMI practices by Prof. Su who used statistics regression to examine the relationship between the scores students had in content courses before studying abroad and the types of courses they took while studying abroad. The instructors believed that the ETPs benefited students’ English listening and speaking abilities and thus enabled students to more easily adjust to the EMI courses abroad. As Prof. Chen expressed, “I think they [students] are more confident Writing not that much Presentation skills- they improve in general, but academics I’m not so sure” (C-I3-052412).

1.3 Inner contradictions in content instructors’ activity systems

From the above data, we can identify four levels of tensions for Prof. Su, but no tertiary tension for Prof. Chen since the former employed major modifications in practices (see Table 1). The invisible primary dualities were obtained using English for academic understanding and academic exchange or future careers (object); the use of PPTs for teachers or students (tool); instructors’ roles as learning facilitators and policy implementers (division of labor); and the role of the English-only policy as a pedagogical strategy or incentive/punishment (rules).

Table 1. Content instructors’ four levels of observed inner contradictions

| Contradiction level | Observations |
|--|---|
| Level 1 Primary contradiction | Object: Using English for academic understanding vs. academic exchange/future careers Tool: Using PPTs for teachers vs. students Division of labor: Instructors’ roles as learning facilitators and policy implementers Rules: The role of English-only policy as a pedagogical strategy and incentive or punishment |
| Level 2 Secondary contradiction | Tool & subject: Limited teaching experiences in English made preparation laborious Tool/rules & community: Students were unable to understand content via EMI, which challenged the English-only policy. Object & outcome: Students were unable to understand content covered in English, and instructors were unable to cover as much content as they had expected. |
| Level 3 Tertiary contradiction | No tension [For Prof. Chen] Tool & outcome: When the approaches Prof. Su adopted could not solve his challenges, he kept experimenting. |
| Level 4 Quaternary contradiction | Current activity system & outside activity system: Balancing tensions between university teaching and in-service teacher-training programs Current activity system & subject-producing system: Balancing tensions between their current teaching and previous learning experiences |

When the instructors enacted what they believed to be effective design, three secondary tensions manifested. First, with limited teaching experiences in English, both teachers engaged in laborious preparation for EMI, suggesting a tension between tool (EMI) and subject. Second, they recognized that the target students were not as inquisitive and/or English-proficient as they had imagined, rendering it difficult for students to understand the content via English and implying a conflict between tool (EMI) or rules (English-only policy) and community (students). Due to their priority in enhancing student understandings instructors tended to slow down when covering material and consequently, they did not cover as much as they had expected, suggesting a conflict between object and outcome, that is, the extent of coverage and students' limited academic understanding.

The misalignments between object and outcome compelled the content instructors to initiate new objects and tools to solve secondary tensions. The initiation of the new object—a more student-oriented approach—resulted in the change of activity systems. Figure 4 is a graphical representation of the change of activity systems. Instructors' insistence in responsive teaching; the influence of their previous learning experiences; and the limitations of students' proficiency, diligence, and background knowledge all compelled them to use new techniques or methods. Prof. Su and Prof. Chen changed in different ways to achieve the same object. Prof. Su's first experiment to resolve such tensions was to use Mandarin in lectures, which unfortunately made students rely more on these Mandarin lectures—a tertiary tension between tool and outcome. When Prof. Su did not obtain the desired object, he modified again until a satisfactory outcome was observed. Unlike Prof. Su, Prof. Chen implemented only minor changes in her course design when she included more in-class discussions, had individual conferences before group presentations, and offered no PPTs. As no tertiary tension was observed, Prof. Wu stabilized her own teaching. Likewise, since Prof. Su succeeded in the first experiment in using students' translation of summary in Mandarin and Mandarin Statistics textbooks, no tertiary tensions were observed when he initiated these changes. As such, both instructors expressed that students, despite taught with less coverage, could better grasp the content in English. The EMI practices also empowered instructors to adopt new teaching methods and use English in their own research careers.

Regarding quaternary tensions, of primary concern is the limited useful support provided by in-service teacher development on another campus, which, according to Prof. Su and Prof. Chen, might result from teacher trainers' use of examples unsuitable for some disciplines (e.g., the jigsaw puzzles were not useful for teaching technology majors)(quaternary tensions). In this respect, the missing link suggests the quaternary tension between the current teaching activity system and the in-service teacher education

system. In addition, since both instructors had difficulties transferring their previous learning experiences to their current teaching, a quaternary contradiction between the subject-producing system and the current activity system occurred, underscoring the importance of past experiences (Engeström 1987, 1996, 2001).

Two insights can be drawn from the above results: First, instructors' confidence using English through the teaching of content in English advantaged them not only in teaching but also in researching, with English as a lingua franca being a significant mediator between the current teaching activity system and the outside research activity system (quaternary interaction not tensions). Second, their senses of expansion were often related to the dyadic relation between students and instructors and the implementation of new approaches, but not the transformation of policies.

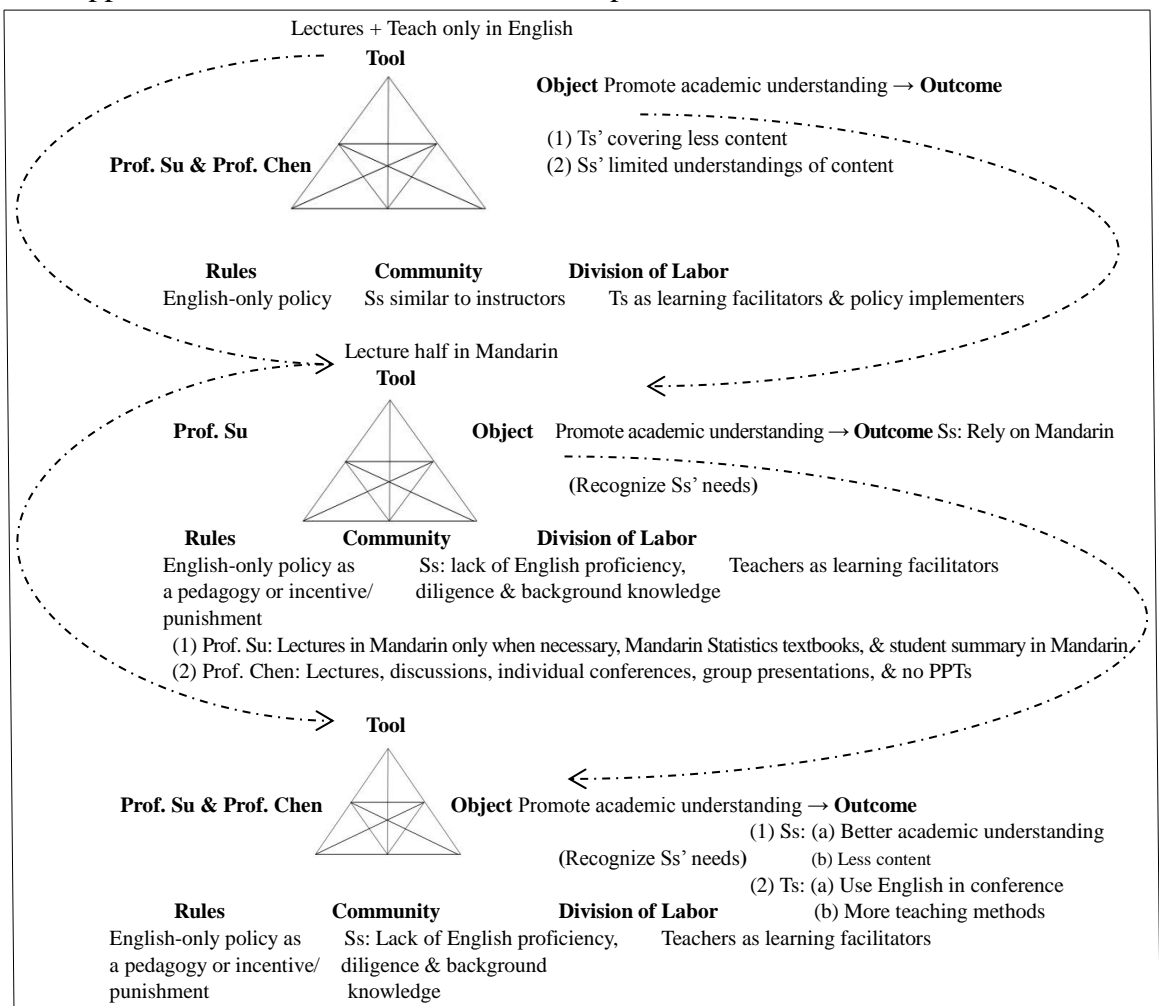


Figure 4. Content instructors' change in the activity

2. Students as Subjects

All the students are required to take content courses in English while studying on the target campus and in the study abroad programs during their junior years. The preparation for study abroad includes meeting the minimum English language requirements for taking content courses abroad and completing their applications during their sophomore years. If students cannot meet the minimum English language requirements, they are advised to take language courses in the Fall semester of their junior year and possibly take content courses in the Spring semester if they successfully meet the minimum English language requirements; otherwise, they continue to take language courses in the Spring. The EGP and ESP courses are offered to freshmen, with the former offered by language teachers and the latter by content teachers. In the 2010/2011 academic year, Politics English was taught by a local instructor, while Tourism English was taught by a NNES international instructor. All the content courses are taught by content instructors, including local and international faculty (e.g., France, Germany, and Singapore).

2.1 Students' motivation to study abroad

In our first interviews, all students expressed that they were attracted to the JYA policy rather than the ETPs. As Sam summarized, “Were it not for study abroad, I would not be on this campus, even courses were taught in English” (Sa-I2-111311). The students, albeit with different levels of English proficiency, emphasized the primacy of English as a significant mediator for future academic, social, and economic lives. In particular, Sam used “communication tool” (Sa-I1-042211), Sherry, “bridge” (Sh-I1-050811), and Tabitha, “weapon” (Ta-I1-042911) to metaphorically underscore the usefulness of English. As such, the ETP was viewed as a way to scaffold students to prepare for JYA, through which to increase their work competitiveness and, more specifically, to prepare for future career or graduate study (Thea, Tabitha, Tina, Sam, and Sherry) (ultimate object). As Sibyl explained, “For me, JYA is an experiment and training because I want to study in North Ireland in the future . . . to broaden my horizon . . . to meet international students So for me it’s a springboard for my future” (Si-I1-112711). Tourism students in particular linked ETP and JYA to future careers in tourism in which language abilities are valued. As Thea explained,

I think in Tourism you’ll meet a lot of foreigner customers. You won’t be that nervous interacting with them if you are trained in English Also, after four-year study [in English], our English may become better, which will be easier for us to get a certificate. And to become tour guides, we usually want an international certificate. This way we get more job opportunities. (The-I1-042211)

Both examples illustrate that learning content in English functioned as a springboard for an imagined better future. The “English fever” may spring from family (Sam and Tabitha), as well as learning (Sherry) and travelling experiences (Tina). As Tina explained, “I have planned to go abroad since senior high And when I first went abroad to Sydney in my eighteen, . . . communicating with foreigners in English, I’ve had a sense of achievement So I feel happier [to learn content in English]”(Ti-I1-043011) and as Sam expressed, “Because my parents want to send their kids out to study. Then here comes the opportunity to study abroad in junior years. So, give it a try” (Sa-I1-042211). Indeed, students’ past experiences motivated them to study abroad with their parents acting as facilitators.

Figure 5 illustrates students’ activity system before taking courses. The object of studying abroad reflects students’ dream to fulfill, supported by their parents (community), shaped by their personal history (family, learning, and traveling) (subject-producing system), and operated on the rules of English as a lingua franca or a “weapon” for future graduate study or career (ultimate object). As such, students can be portrayed as aspiring learners (division of labor).

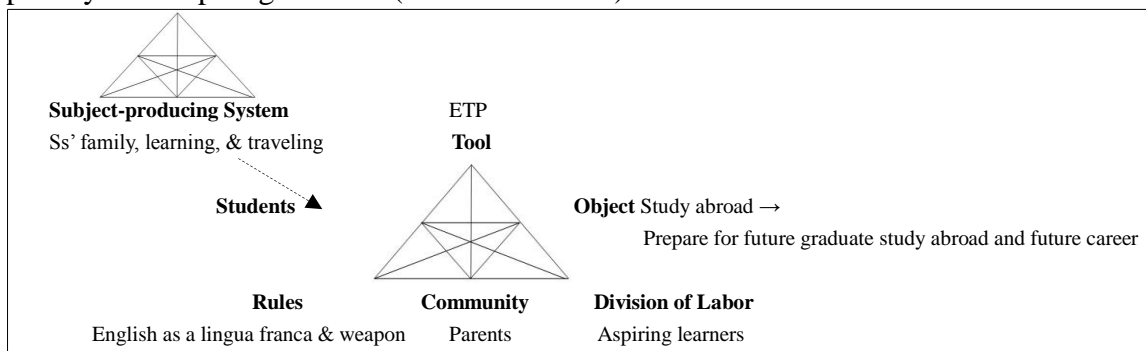


Figure 5 . Students’ individual activity system: Studying abroad

2.2 Early challenges in the EMI practices

Students’ ideal of studying abroad was soon crushed by the reality of learning content in English. With English as a foreign language and limited experiences learning content in English, it is unsurprising that almost all the students expressed great difficulty learning content in English, except Tabitha who had been taught in English in high school. As Sam explained, “You need to concentrate [to understand the lecture.] But if you have courses from eight in the morning to four in the afternoon, it’s impossible to concentrate in every course. Then, you become selective” (Sa-I1-042211). Yet the previous learning experiences in English made a smoother transfer for Tabitha. As Tabitha explained, “In my high school . . . teachers taught us in English so I’m fine [with EMI] [Many students] cannot adjust to using so much English” (Ta-I1-042911).

A variety of English accents and pronunciation on the part of both international and local instructors presented challenges for students in the beginning of the learning journey. With the exception of Thea, all the students viewed it difficult to understand international instructors for they had unfamiliar accents. In reflecting on an Economic course taught by a French instructor, Tabitha commented, “He has strong accent. I just can’t understand” (Ta-I1-042911), but Thea expressed, “I think international instructors ... probably influenced by their native languages, their pronunciation and accent are more accurate” (The-I1-042211). Furthermore, students hoped that local instructors would have better English pronunciation. As Tabitha complained, “Some instructors have serious- [speak] like Taiwanese-Mandarin, like [Taiwanese] English, right, the pronunciation is inaccurate. It’s more difficult [for me to understand it] than the French accent” (Ta-I1-042911). Thea further explained, “Fluency or pronunciation would influence if a student wants to concentrate or not” (The-I1-042211), but students like Sam and Sherry thought that accent was not the major problem. As Sam expressed, “I think we cannot blame for teachers’ accents because everyone’s is different” (Sa-I1-042211), and Sherry further elaborated,

I think it’s inevitable, like when I went abroad ... I need to figure a way to adjust. It’s not necessarily their accent is wrong, but the point is to learn their ideas. For accents, you can listen and practice, and get used to it, or write an email to ask after classes Not just confined to accent. (Sh-I1-050811)

In particular, Sam and Thea thought that international instructors’ speech reflected the influence of their native languages, and hence it was difficult for students to understand their lectures. In reflecting on her French instructor’s lecture, Sam explained, “He can express it directly, but he thinks in a French way. So you need to think Economics problems in a French way” (Sa-I1-042211). International instructors’ rapid speech rate and teaching styles also added to students’ learning difficulties, which, according to students, was because some international instructors were unfamiliar with Chinese culture⁷. As Sibyl commented on international instructors’ teaching,

Around 50% of content lectured by international instructors, I can’t understand ... I feel it’s so difficult, instructors talk too fast, with a lot of words on PPT, not with everyday words but technical words that we usually won’t use in our daily lives. So we can’t understand. (Si-I1-112711)

⁷ Note that this paper did not conclude that all international faculty had cultural barriers in recognizing students’ needs since all the students also mentioned that other international teachers might not have these problems.

Students attributed such a teaching style, especially of international instructors, to their lack of understanding local students' language and academic needs. This quote can be contrasted with Tracy's summary of effective EMI instructors,

[Good instructors] should express fluently and use English to answer questions or guide [students] And they should use their own words to explain the textbook . . . with English that we can understand, not those too technical or too difficult words. (Tr-I1-121611)

The above quotations reflect that students viewed it necessary for EMI instructors to clearly express ideas in English, interact with students, provide relevant examples, use Power Point slides, adopt Mandarin, and use simple but not colloquial or technical words for explanations. In this respect, students appreciated courses like Prof. Su's and Prof. Chen's because they adopted interactive lectures, group presentations/discussions, and individual guidance; used PPTs; provided relevant examples; and switched to Mandarin. Indeed, for students, the emphasis was placed on instructors' abilities to explain the course content and provide guidance in English but not instructors' nationality or accents.

Students' emphasis on English as a foreign language; the difference between academic and general English; and instructors' accents, speed, and styles of teaching were not the only factors in play. Students recognized that they were demotivated by difficult, uninteresting, and/or irrelevant subject matter. For example, among the politics students, Sam and Sibyl excelled in mathematics, and hence they expressed little difficulty in Statistics. As Sibyl expressed, "I'm fine [with understanding the lecture] Actually statistics was taught in high school" (Si-I1-112711). Yet with little interest and command in mathematics, Sherry sighed, "My mathematics had not been good. . . . I'm not good at any courses related to mathematics. . . . That course [Statistics] was difficult to me and I had no interest at all. . . . So, as long as I passed, I'm fine. I wasn't that hard-working in that course" (Sh-I2-111911). Background knowledge became a significant mediator in learning content in English. All tourism students expressed that the more relevant a subject was, the more efforts they would put in that course. For example, Tina expressed, "If the title of the subject is related to my major, I will be more motivated and concentrate more in class, but if courses are not related to my future careers, I'm of course not that motivated" (Ti-I2-111111). As such, all the students in Tourism liked Tourism English for it was perceived as career relevant. As Tina explained, "Since Tourism English is more related to my major so . . . I would be more motivated and concentrated in class than other subject matters which are unrelated to my future career" (Ti-I2-111111). Indeed, affective factors became significant mediators in learning content via English.

2.3 Adjustment to the EMI practices

Despite the overwhelming feelings in the beginning of the learning journey, all students became accustomed to different accents after just a few weeks. When asked what helped them adjust to the environment, they indicated that they relied on visual aids. As Sibyl explained,

As long as listening to English I feel nervous. At first, ... The French teacher's Economics, with strong French accent At that time teachers' voice was like background music- I was spaced out and could only rely on PPT. . . . For the French teacher, it took me almost a month to understand him.
(Si-I1-112711)

Gradually, the use of PPTs became a popular coping strategy. As Tabitha explained, "I think textbooks have so many pages, but if PPTs can provide highlights, then you know what to study and will not need to read every page when preparing for the exam" (Ta-I2-121111). In addition, students also mentioned that some instructors' use of Mandarin for explanations in lectures, though against the school policy, helped alleviate their anxiety and facilitate their understanding. As Sam expressed, "Another international instructor... married a Taiwanese man so she understands Taiwanese culture. Sometimes she would use Mandarin when students could not understand Students could better understand what she wanted to convey" (Sa-I2-111311). As such, Mandarin became a popular strategy as shown in the literature (Yeh, 2013).

When focusing on Introduction to Statistics and Introduction to Tourism courses, the student participants could better articulate their coping strategies. In the former course, Prof. Su, the instructor, used a textbook in Mandarin, lectured in both English and Mandarin with relevant examples and visual aids, and held individual conferences in Mandarin. In this respect, all the students relied on Mandarin and PPTs and sought assistance from self, peers, and the instructor. For example, Sam and Sibyl, who self-identified as good at mathematics and valued previewing, thought that they had learnt statistics in high school and did not encounter many difficulties. "I think on this campus you just need to read through PPTs for each instructor's [exam] It's all on PPT. Sometimes when you didn't listen to his lecture, you would still understand it" said Sam (Sa-I1-042211). She would read textbooks and ask peers before approaching the instructor when she had problems completing statistics exercises. As Sam explained, "Because when the classmates taught me, I couldn't understand. . . . So I'd consult the instructors" (Sa-I2-1121311). Sibyl relied on self-study, and asked the instructor for help when encountering problems in the exercises and peers when she had questions about the PPTs. Sherry, who self-identified as weak at mathematics, would "spend more time before and after class" (Sh-I2-111911). She previewed, reviewed, searched for academic

concepts in Mandarin as references, and turned to peers for assistance. As she explained, “I would collaborate with my friend. She’s responsible for the calculation part, and I’m in charge of the theory part. . . . But still I can’t understand the formulas” and hence she “simply memorize[d] them” (Sh-I2-111911).

Unlike the above course, Prof. Chen, the instructor of Introduction in Tourism, offered no textbook or PPTs before classes because she wanted her students to concentrate on lectures. In classes, she lectured with PPTs and relevant examples and provided questions for students to discuss in groups. Toward the end of the semester, students were required to give a group presentation. The students in this course (Thea, Tabitha, Tina, and Tracy) expressed that no textbook or PPTs made previewing impossible. Tabitha and Tina, who valued taking notes and could do so in the time given, did not conclude that the provision of PPTs or textbooks would be better. As Tina justified, “I trained my own speed of taking notes for studying abroad probably those professors abroad would write faster and you cannot read it. So for me no textbook is better . . . because it’s expensive And we didn’t read much” (Ti-I1-043011). Tabitha and Tina differed in their ways to cope with difficulties. When Tabitha had difficulties in understanding the technical terms on the PPTs, she would “consult the electronic dictionary or raise hands asking questions” (Ta-I2-121111). Tina would turn to classmates for help or take a picture of the PPTs if she failed to keep up with the instructor, but for technical terms, she still needed to consult the instructor. Thea and Tracy, who could not take notes in the time provided, complained that students had insufficient time to take notes if they were to simultaneously listen to and try to understand the lectures. As Thea argued, “We had to take notes of all the content on PPTs, but . . . while the instructor was lecturing, we could simply focus on taking note rather than sparing energy to listen to her lecture or her explanations. In the end, we needed to consult the instructor or search information on line... the priority seemed reversed” (The-I2-112011). Thea and Tracy coped with these difficulties differently, with the former trying to seek instructor assistance or find on-line information and the latter, who displayed limited interest in this subject, simply relying on the instructor.

Tourism students valued group discussion as a means to help “think critically” (The-I2-112011) or “think deep” (Ta-I2-121111). With Mandarin allowed in group discussions and Prof. Chen’s explanations in both English and Mandarin, the students did not express many difficulties participating in these discussions. While Tabitha had some difficulties applying unfamiliar academic concepts and Tina as well as Tracy did not always know the answers, these students would consult the teacher for guidance. Likewise, all of the students valued group presentations for they functioned as course reviews and platforms for diverse opinions. Students did not encounter many problems in

these presentations. Thea had no difficulties, Tabitha and Tracy mentioned the difficulty in finding information and time for integration and expressions, and Tina voiced concern about choosing appropriate group mates. When information could not be found, they would try videos or consult the instructor's PPTs, and when such information was in Mandarin, they would translate it in Mandarin.

2.4 Moving toward a grade orientation

The above discussions about students' difficulties and coping strategies reflect that different approaches were adopted to alleviate the problems encountered, though not necessarily in the same sequence. During the assimilation process, survival needs for students emerged, that is, gaining good grades or passing courses. Such concerns as passing courses, not being flunk, and reading PPTs reoccurred in our interviews. As Thea confessed,

When getting admitted into college, I was more motivated but after knowing the instructors' teaching styles ... like some instructors included only the content of PPTs in exams, we might not concentrate on lectures but before the exams, we'd read their PPTs. (The-I2-112011)

Although students might pass courses, they were not always sure of what they were learning. As Sam explained, "I think on this campus what you need to do is to read through the PPTs because the exams aren't that difficult and the test questions come from the PPTs I think people use grades as a standard. If you want to ask what they've learned, they might have no ideas" (Sa-I1-042211). Many students also worried about their study abroad, especially when the date of submitting the application form for JYA was approaching. As Tina described,

Because you're afraid of being flunk and couldn't get enough credits ... or worry if we cannot get good grades [to meet school requirements], then we need to take language courses for a year. . . . So, you'll force yourself to learn... even if the learning process is not that happy. (Ti-I2-111111)

Sibyl even argued, "The admission in foreign countries consider only the TOEFL and IELTS scores as long as you get good scores [in TOEFL/IELTS], you can choose content courses while studying abroad. So, having good grades appears more useful" (Si-I1-112711). These comments showed that students' attention switched to passing or getting good grades in courses and in TOEFL/IELTS rather than cultivating interests or enhancing their understanding of the subject matter.

Such a grade orientation should also consider students' learning of EGP and ESP courses. All the students concurred that the EGP courses attempted to enable students to score high on the TOEFL/IELTS exams rather than scaffold their understanding of content in English. As Sam expressed, "These [EGP] courses are not helpful for academic

learning but [rather] for taking TOEFL/IELTS” (Sa-I1-042211). Unlike the EGP courses, all the students valued the ESP courses because they recognized the technical words learnt would be used in other content courses or in their careers. Tourism majors believed that Tourism English was more related to “everyday situations” (The-I2-112011), “practical application” (Tr-I1-121611; Ta-I2-121111), “tour guide exams” (Tr-I1-121611), and “future workplaces” (The-I2-112011) and hence more “motivating” and “interesting” (Ti-I2-111111), while Politics English provided some background knowledge and basic technical words for content courses. As Sibyl explained, “I think I can learn technical terms in my major because this course will cover vocabulary used in politics or international relations so when I took the course of International Relations, we’d think, ‘Wasn’t it the word taught yesterday?’” (Si-I1-112711).

2.5 Self-evaluation of learning in the ETP

When students were asked about the effectiveness of their learning in the ETPs, their answers varied. For instance, Tabitha and Tina perceived enhancement in their academic abilities. Yet Sam and Thea believed what was improved was academic English not general English or academic abilities. Sibyl was concerned that her content learning too “superficial” or “not deep” (Si-I1-112711), and Sherry felt “lost,” as she said, “I felt I don’t know what I’m learning. I’m lost in my favorite courses but don’t know if I really understand it or the meaning of attending this course” (Sh-I2-111911). Worst, Tracy learned more in EGP courses and Tourism English than content courses.

Regarding language learning, all the students perceived maintenance or improvement in English. Thea and Sam perceived their improvement in academic English. More specifically, four of the students (Thea, Tabitha, Tina, and Sibyl) indicated that they had improved in speaking/listening as a result of these classes, while Sherry said she had improved in reading and Tabitha and May said they had improved in writing. However, the students did not necessarily attribute their improvement to the EGP courses but to the number of requirements in English. Among all the EGP courses, only the Writing course that provided clear teacher guidance and instruction in writing structure was perceived as useful (Tabitha, Sam, Sibyl, and Sherry); otherwise, most courses were considered too general. Regardless of course designs, all the students believed that the most important factor mediating English-learning outcomes was student effort. As Sam argued, “The basic English skills may not be increased. It still depends on your own efforts” (Sa-I2-111311).

If the students encountered difficulties in EMI practices, did they think the English-only policy should be changed? Interestingly, they kept mentioning they were “lazy” (Sa-I1-042211) or “passive” (Si-I1-112711; The-I1-042211) and needed “to be put

under appropriate pressure” (Ti-I2-11111) or even “to be forced to learn” (Sh-I1-050811; Si-I1-112711). As such, they could understand the rationale behind the English-only policy and knew it was difficult to change, but they also confessed that it presented challenges for students with low English proficiency levels to become accustomed to EMI practices.

The grade orientations, mediated by student beliefs in learning as students’ responsibility, student doubts about the effectiveness of EGP courses, and sociocultural norms of the value of cramming, primed most students to spend extra time and even attend private language centers to obtain good TOEFL/IELTS scores. “English should be improved, so I want to go to the cram school After all, I still hope to study abroad in the future” Tabitha said (Ta-I2-121111). With limited time and language proficiency, they needed to strike a balance between preparation for schoolwork and study abroad, and between learning content and language.

2.6 Inner contradictions in students’ activity systems

The above data show students’ four-level tensions as illustrated in Table 2. The invisible primary tensions lay in English for academic understanding/enhanced language abilities vs. for grades, degrees, and future jobs (object); an English-only or a bilingual policy (rules); international vs. local teacher communities (community); and students’ investment in schoolwork vs. TOEFL/IELTS and in content vs. language (division of labor).

Table 2. Students’ four levels of observed inner contradictions

| Contradiction level | Observations |
|--|---|
| Level 1 Primary contradiction | Object: English for academic understanding/language abilities vs. for grades, degrees, and future jobs Rules: An English-only or a bilingual policy Community: International vs. local teacher communities Division of labor: Students’ investment in schoolwork vs. TOEFL/IELTS or in content vs. language |
| Level 2 Secondary contradiction | Subject & tool: Students (except Tabitha) were not used to English as a foreign tool. Community (teacher) & tool: Instructors’ native languages and backgrounds mediated their teaching accents, speed, and styles. Subject & object: Ss’ interests and background knowledge influenced the objects achieved. Tool & object: Tourism students took notes as a means or an end; the extent to which students could gain general English abilities through EMI (Sam and Thea). Object & outcome: Students were unable to understand lectures in English; students did not perceive improvement in academics (Sam, Sibyl, Sherry, Thea, and Tracy); students perceived limited effect of the EGP courses. |
| Level 3 Tertiary contradiction | Division of labor: Students struggled between learning content or language, learning academic or general English, and English learning or getting good TOEFL/IELTS scores. |
| Level 4 Quaternary contradiction | Current activity system & outside activity system: Tensions between English-learning or learning-content-through-English activity system and the cramming activity system Current activity system & subject-producing activity system: Tensions between EMI in university and previous Mandarin-medium instruction in high school |

These tensions did not emerge until the secondary level when students learned almost all courses in English. These secondary tensions included tensions between (1) subject and tool, (2) teacher community and tool, (3) subject and object, (4) tool and object, and (5) object and outcome. First, most students were not accustomed to English as a medium of instruction because English is a foreign tool. Such reasons imply a secondary tension between subjects and tools. Second, instructors' native languages and backgrounds mediating their accents, speed, and teaching styles sometimes created additional challenges, suggesting a tension between teacher communities and EMI as a tool. Third, students' interests and background knowledge also mediated the objects students intended to achieve, and as such, students like Sherry who displayed limited command of mathematics felt demotivated to learn statistics via English and only hoped to pass courses. Such results reflect a tension between subject and object. Fourth, two tensions existed between tools and objects. One concerned Tourism students' struggles to take notes as a means or an end, and the other concerned the extent to which students could gain general English abilities through EMI practices (Sam and Thea). With the above challenges, it was not surprising to discover the last tensions between objects and outcomes. These included (1) student inability to understand lectures in English, especially at the beginning of the learning journey; (2) student failure to perceive their improvement in academics (Sam, Sibyl, Sherry, Thea, and Tracy) or in general English (Sam and Thea); and (3) student failure to recognize that the EGP courses alone could improve their general English or enable them to score high on the TOEFL/IELTS exams.

The above difficulties and solutions were like the inevitable disturbance before a hero(ine)'s triumph. Facing the above challenges, students experimented with solutions (self-study, peer support, instructor assistance, and use of Mandarin and PPTs) with different sequences until they solved their difficulties (or resolved the secondary tensions). During this process, students' survival needs emerged, and hence a new, immediate object, like getting good grades and passing courses, was initiated. Figure 6 illustrates the change of the activity systems. Students' survival needs included passing EMI courses and then gaining high enough TOEFL/IELTS grades to take content courses while studying abroad. When students attempted to survive, they needed to balance spending time on schoolwork and preparing tests for JYA, as well as on learning content and language within limited time frames. Such a grade-orientated object thus generated a tertiary tension in students' learning responsibilities (division of labor).

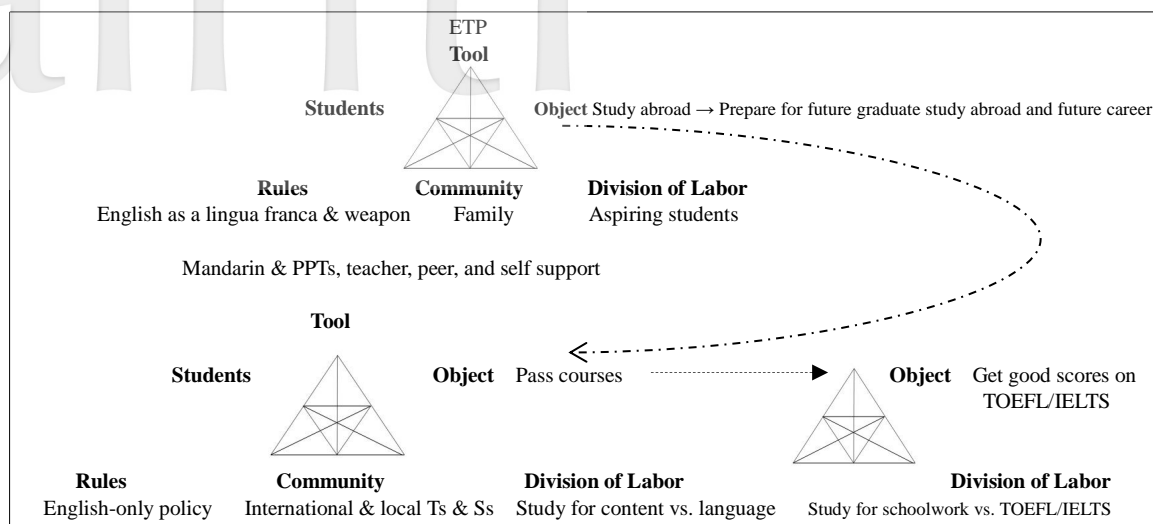


Figure 6. Students' change of the activity

The reduction of studying in the ETPs to the exchange value of grade seeking in both content and language courses demonstrated another qualitative yet narrowed change in the activity system. This grade-orientation in obtaining good TOEFL /IELTS grades also encouraged students to spend extra time in general English and even in private language centers. In this respect, the potential quaternary contradictions are observed between the current English-learning or learning-content-through-English activity system and the cramming activity system. In addition, students, except Tabitha, had difficulties transferring their previous Mandarin-mediated learning experiences to their current English-mediated one. Such results imply a quaternary contradiction between the subject-producing system and the current activity system, underscoring the importance of past experiences (Engeström 1987, 1996, 2001).

Although the above results suggest students' excitement, frustration, growth, and confusion in ETPs, these students' senses of expansion were often limited to an exchange-oriented value without the transformation of policies, reinforcing the notion of students as passive and unmotivated.

V. JOINT ACTIVITY SYSTEM ANALYSIS AND INNER CONTRADICTIONS

Unlike the qualitative change found in the individual activity systems analysis, this section presents the sources of tensions in the four levels without qualitative development yielded from the joint activity systems analysis.

1.1 Joint activity system analysis

Regulated by the English-only policy, Prof. Su and Prof. Chen were obligated to teach content in English. They, however, self-identified as subject-matter instructors responsible for the transmission of disciplinary knowledge and acculturation of professionals rather than experts in language instruction. As Prof. Chen explained, “I would not correct them [students while speaking in English] because I’m not an English teacher”(C-I2-032311). As such, their primary aim was to enhance students’ academic understandings and sharpen their thinking/application skills with long-term goals of preparing students for their study abroad experiences and subsequent careers.

After four to five years of EMI practices, these instructors stabilized their teaching styles in the 2010/2011 academic year and expressed satisfaction about their instruction. The lack of English proficiency, diligence, and background knowledge in the students compelled these instructors to provide various kinds of scaffolding in the classroom. Such support included interactive lectures and individual conferences; namely, the instructors lectured with questions to elicit student responses and had office hours for individual questions. As Prof. Su explained, “I think Introduction to Statistics is the most engaging course. . . . Student and teacher interaction is frequent. They [students] will also have real examples for practices” (S-I1-022611). The adoption of other activities may depend on the nature of the subject matter. For example, group presentations/discussions were held in Introduction to Tourism and practice using SPSS, software for statistical analysis, in Introduction to Statistics.

In both courses, the use of Mandarin, relevant examples, and visual aids (e.g., PPTs) were all popular strategies for improving student comprehension. However, how the instructors used Mandarin and PPTs differed. For example, Prof. Chen did not give PPTs to students in advance, with the hope that students could concentrate in class, but the PPTs could be accessed in Prof. Su’s course. Moreover, Prof. Chen insisted on lecturing and responding entirely in English in classroom settings yet allowed students’ use of Mandarin in group discussions and in individual conferences. In contrast, Prof. Su underscored the primacy of using Mandarin as scaffolding in both lectures and assigned materials.

In contrast to the instructors’ emphasis on academic work, students focused more on the benefits of studying abroad (advancement in English and careers), but they did not necessarily make effort to realize their dreams until it was required. As Sam put it, “I don’t think I am the kind of person who would continue learning English. I’m lazy. So if I can handle, that’s fine,” and “I’m looking forward to living abroad, but I admit that I am not that hard working in English” (Sa-I1-042211). As indicated in the previous section,

such keywords as “lazy” (Sa-I1-042211) and “passive” (Si-I1-112711; The-I1-042211) reoccurred to justify the English-only policy but ran counter to students’ beliefs about their own responsibility in learning. It seems the JYA policy did not necessarily motivate students to study hard in their two-year preparation.

Many students revealed their difficulties especially in the beginning of their freshman year—with a primary aim being simply to survive in the ETP and to comprehend content via English. In reflecting on her first year in the ETP, Sam explained, “In freshman year, I was anxious if I could understand [lectures]” (Sa-I2-1121311). The instructors’ accent, pace, word choice or grammatical mistakes were not communication hurdles. Rather, the major difficulties included the students’ unfamiliarity with technical terms in English/Mandarin; demotivation caused by difficult, uninteresting, and/or irrelevant concepts, examples, subject matter; overwhelming feelings resulting from exposure to English all day, and/or having no PPTs to use for assistance in previewing or note-taking in English. As Thea emphasized, “Previewing is important. Otherwise, you cannot understand the lecture with a lot of technical terms” (The-I2-112011).

The sequence of seeking help from peers, self or instructors might differ across students. Yet, reliance on Mandarin and PPTs became common coping strategies. Such dependence reflects two important notions: First, the students gravitated toward a grade orientation of learning due to time pressure, subject-related issues, language-related factors, and affective influence; that is, students felt it was stressful to take all courses in English, and hence students gradually invested less in those subjects that disinterested or discouraged them. Meeting the instructors’ minimum requirements through reading PPTs became a recurring theme. With the time for going abroad approaching, earning good scores on TOEFL/IELTS via self-study or attending private language institutes preoccupied students (Tabitha, Sam, Sibyl, and Sherry). Second, students’ reliance on Mandarin seemed to defy the English-only policy. Such a policy, however, was still appreciated by students for they perceived themselves as “passive” (Si-I1-112711; The-I1-042211) in improving English and hence the English-only policy maximized their exposure to English and provided opportunities, albeit not necessarily realized to increase their English abilities.

Figure 7 shows individual and joint activities. All subjects shared such long-term objects as preparing for future careers or studying abroad (object 3) but not the immediate objects. Yet it is the immediate objects that regulated their activities. The instructors, as facilitators of learning (division of labor), aimed to promote academic understandings and sharpen thinking/application skills (object 1) through the use of

interactive lectures, individual conferences, Mandarin, relevant examples and visual aids (tool⁸). Such scaffolding was provided because they assumed their students lacked adequate English proficiency, diligence, and/or background knowledge (community). Both instructors were regulated by the English-only policy (rules), with Prof. Su using Mandarin when students were lost in the English lectures. On the other hand, with the pressures derived from the English-only policy (regulation), students turned to Mandarin and PPTs (tool) to pass courses (object 1). They also desired to earn good scores on TOEFL/IELTS so they could take content courses in their junior year study abroad, and hence they needed to balance learning the content and language they needed for their schoolwork with preparing for the TOEFL/IELTS. The community supporting student learning included faculty and peers.

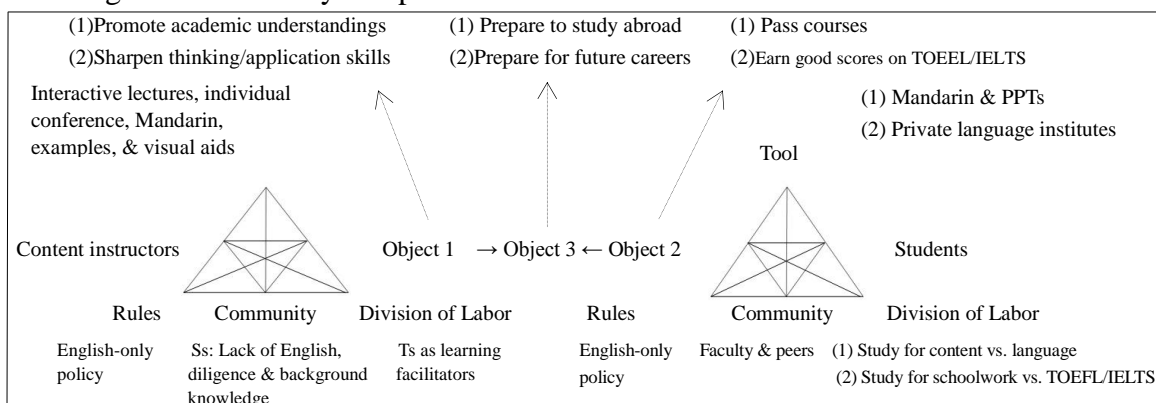


Figure 7. Joint activity systems

1.2 Inner contradictions in the joint activity systems

Table 3 shows four levels of inner contradictions observed in the joint activity systems. Primary contradictions occurred when the content instructors and students did not share the same values about the object or tool. First, although both hoped for a smooth transition to students’ study abroad experiences and future careers, instructors and students had different, immediate focuses: the content instructors were concerned with promoting academic understandings and thinking, while the students were preoccupied with earning good grades (passing content courses and gaining high scores on language exams). Another primary contradiction occurred when Prof. Chen conceptualized the use of PPTs as a management tool for student concentration, while

⁸ Presented here are the common scaffolding used by both instructors. Prof. Chen also adopted group discussions and presentations that were well-received by the students.

students valued it as a pedagogical way for learning content or practicing note-taking. Such discrepancy reflected tensions between exchange and use values in the tool.

Table 3. Four levels of observed inner contradictions

| Contradiction level | Observations |
|--|---|
| Level 1 Primary contradiction | Object: Promoting academic understanding/thinking vs. passing courses/gaining high scores on language exams Tool: Use of PPTs as a management vs. pedagogical strategy |
| Level 2 Secondary contradiction | Object & tool: More effort in academic studies vs. gaining high scores on language exams Tool & rule: Reliance on Mandarin vs. the English-only policy |
| Level 3 Tertiary contradiction | No tension |
| Level 4 Quaternary contradiction | Current activity system & outside activity system: Balancing tensions between content and language courses |

No immediate common object poses questions concerning what is considered to be a valuable investment and/or what really brings desirable yields. This can be best understood as a secondary tension between the tool and the object, namely, what kind of tool can best help to obtain the intended object. Although both the instructors and students believed that the two-year immersion program would scaffold studying abroad, they differed in the values attached to the two-year preparation. As subject-matter teachers, the instructors emphasized the primacy of understanding and application of content knowledge rather than language learning, and hence students' efforts in the academic study were valued. For students, such investment was not as urgent as earning good TOELF/IELTS scores unless relevancy between the career and subject matter was perceived by the students (e.g., Tourism English). Students' academic demotivation and blind commitment to studying abroad worried the instructors, especially Prof. Su. Indeed, the objects and tools of both parties are not well coordinated.

Instructors' and students' reliance on Mandarin may suggest another secondary contradiction between the tool and the rule. In other words, while the English-only policy stipulated by the university viewed Mandarin as interference for language development, students and instructors valued it as scaffolding, a coping strategy, or the foundation for academic study (especially for Prof. Su). However, viewing Mandarin as an asset, a source of identity or funds of knowledge never occurred in any instructor or student interviews⁹.

With these different objects and views about what tool could better produce the

⁹ Only Prof. Su mentioned in an interview that international faculty must have basic Chinese literacy to establish an internationalized campus for facilitation of mutual communication.

desired outcome, it is unsurprising that stakeholders sought to alleviate tensions by changing the tools rather than the rules. In this respect, no tension was found. For example, when having difficulties taking notes while listening to Prof. Chen's lectures, Thea and Tracy would consult their instructor or seek on-line information. Prof. Chen realized this difficulty and eventually provided PPTs to relieve the tension. Even though other-mediated assistance was mentioned when difficulties were encountered in EMI practices, content instructors and students did not challenge the sociocultural norms and/or English-only policy; namely, the concept of laziness reoccurred to justify the English-only policy, painting a portrait of all stakeholders as active agents welcoming challenges, which simultaneously perpetuated the status quo of the English-only policy. As such, critically reexamining the regulations becomes a significant engine for future change.

Quaternary contradictions occurred between EMI practices and language learning. In other words, most instructors and students did not think EGP courses would enable students to earn high scores on the TOELF/IELTS. Instead, EGP courses, such as Writing, that provided clear teacher guidance and instruction, and ESP courses, such as Politics English and Tourism English that covered useful academic vocabulary, were deemed useful and transferable to content courses or future careers; otherwise, the students were dissatisfied with such courses. When students were unsatisfied with language courses in the university, they often sought help from private language institutes. The increase in their time spent in additional language courses compelled students to invest less in their academic studies, which frustrated their content instructors, especially Prof. Su. Such results created tensions between the current activity system and the outside activity systems.

VI. IMPLICATIONS AND CONCLUSION

Most previous research has explored the challenges and contradictions NNES stakeholders may experience with EMI by using individual action as a unit of analysis without considering such experiences as collective activities in dynamics. This paper examines the content instructors' and students' individual activity and joint activity systems to demonstrate that the AT perspective provides an alternative approach to understanding the ETPs from a cyclic, collective activity perspective. It argues that identifying inner contradictions contributes to an understanding of what specific elements or tensions need to be addressed and what factors need to be considered in order to relieve tensions and facilitate EMI practices. This study underscores the usefulness of object transformations and coordination, as well as the double-edged nature of stakeholders' history in future

development of EMI practices. As such, the individual and joint activity systems can be adopted in future interventionist studies or teacher development.

Consistent with the previous research by Evans and Morrison (2011), stakeholders in this study attempted to solve difficulties they encountered in the ETPs and even experienced a sense of growth (explicit in Paseka, 2000; implicit in Hudson, 2009). From the AT perspective, the individual activity analysis indicates qualitative changes in the activity systems due to object transformations, with stakeholders' history of learning and teaching being a significant mediator. Such findings concur with the previous literature that object transformations can be used to initiate qualitative change (Barab et al., 2002; Engeström, 1987, 1996, 2001; Lin & Chang, 2011; Madyarov & Faef, 2012) and mediated by learning history (Engeström, 1987, 1996, 2001; Kim, 2011). Qualitative change, however, does not presume *progression*. This study cautions that as instructors gravitate toward a student-oriented approach to teaching, students change in support of an exchange value of learning. Such results are similar to Madyarov and Faef's (2012) findings that students shifted from a use to a grade orientation in on-line EMI practices. The dualities between learning for grades and learning for its own sake, however, are not an either-or choice, but they show a direction for balancing these dual tensions. Thus, for future EMI practices to succeed, the sources of tensions must be mapped out and understood within the frame of stakeholders' histories and the direction of change must be critically examined. Individual activity system analysis can help specify the sources of stakeholders' struggles and increase the possibilities of positive qualitative change.

Unlike the individual activity system analysis, the joint activity system analysis helps in understanding "networks of interacting activity systems" (Engeström, 2001, p. 135). The findings of the current joint activity system analysis suggest that content instructors' and students' immediate objects are not well coordinated for change to take place, and hence future cooperation across subjects to develop better practice must be addressed (cf. Virkkunen et al., 2010; Yamagata-Lynch & Haudenschild, 2009; Yamazumi, 2009). Although the shared objects of helping students study abroad via the ETPs successfully guides the subjects' actions, the misalignments between content instructors' and students' individual, immediate objects—investment in academic studies—presents further challenges for them to agree on an investable tool, to challenge the English-only policy, and/or to initiate new practices. In order to better coordinate seemingly related but unlinked objects and to release tensions, communication across subjects about the role of academic (de-)motivation or being a professional is essential. This requires all the subjects to engage in a discussion to acknowledge EMI practices as academic communities of practices with joint efforts; to identify the joint activity with a

common, immediate object; and to monitor the progress of both the joint and individual activities. The joint activity system analysis can play a guiding role in this discussion and negotiation. For example, it can also be used with Coyle, Hood, and Marsh's (2010) Learning-Oriented Critical Incident Technique (LOCIT) approach that encourages participatory research by both teachers and students to develop their own practices. In so doing, the joint activity system can help select and analyze significant learning or teaching experiences from the AT perspective; that is, adopting the activity system triangle can aid in identifying and coordinating the individual and shared objects and specifying inner contradictions for better learning or teaching.

The joint activity system analysis shows no qualitative changes, given that no transformations were found in tools, objects, or rules. Most changes happened in support of an exchange value of learning, the reproduction of the English-only policy and the current sociocultural norms/rules. According to Engeström (1987, 1996, 2001), a qualitatively new approach to the EMI practice could have been created if all the stakeholders had questioned the suitability of objects, tools, or rules. In this respect, an alternative possibility of new EMI practices transforms objects through re-imagining the culture of the ETPs. In this study, all the instructors and students assume the target program to be an English-as-a-Foreign-Language (EFL) context, and thus the related frames of the English-only policy, the interference of the L1, and the missing voice of international students prevail. In this respect, Baker (2009) urges us to envision English learning not as one of EFL culture but as English as a lingua franca (ELF) culture where learners' abilities "to negotiate, mediate, and adapt to emerging communicative practices" are emphasized (p. 588). From the AT perspective, if the object of learning EFL can be transformed to learning ELF, then a new activity system will be established, with using English as a medium of *communication* not simply a medium of instruction, the L1 being one of the resources for academic and cultural understanding, and community being multicultural and multilingual. Interaction between international and local students must be orchestrated and encouraged, as such contact will not happen without students' recognition of its worth (Dunne, 2009). Such a new activity system also necessitates the coordination between the new EMI practices and the subject-producing system and/or the in-service teacher-training program to ensure the instructors are equipped to provide culturally responsive teaching.

The missing links or misalignments between the current and adjacent activity systems shown from both individual and joint activity system analyses deserve stakeholders' attention. First, the tensions between content and language learning yielded from the joint activity system analysis underscores the primacy of coordinating and

transforming the objects of language and content courses. Content and ESP learning, according to some students, runs the risk of being reduced to the learning of vocabulary, which runs counter to the object of promoting a deeper academic understanding. Also, the role of EGP courses in the ETPs is still ambiguous. As such, cooperation across disciplinary faculty is pedagogically significant (e.g., Huang, 2012; Stewart, Sagliano, & Sagliano, 2002). What the AT perspective can contribute to such cooperation is to help specify a new, shared object of the joint activity—increasing students’ language abilities—on the part of content and language instructors, with an individual, coordinated object of each individual activity; namely, content instructors must acknowledge that content learning cannot be facilitated without the consideration of the *language* of content (Lemke, 1990) and that language objects can include not only the themes or content to be acquired (“*language of learning*”) but also language aspects required to complete planned academic activities (“*language for learning*”) and language demands emerging from learning contexts (recycling or accessing unknown words)(“*language through learning*”) (Coyle et al., 2010). Language instructors can be responsible for teaching students how to study abroad, including preparation for the TOELF/IELTS. EAP courses can be offered to teach students how to adjust to this new academic culture (e.g., academic presentations, discussions, and writing). Such changes also demand support from the in-service teacher-training program (e.g., establishing language objectives and recognizing language needs). Language instructors can play significant roles as brokers negotiating across stakeholders and genres when language objects are considered in the joint activity systems.

Second, the tensions between the current activity system and subject-producing systems suggest that for future ETPs to succeed, the double-edged nature of stakeholders’ history (or “historicity” in Engeström, 1996) must be addressed. On a positive note, past experiences have become springboards for instructors and students to generate an informed new model of instruction and learning. On the negative side, prior successful experiences or outcomes have become significant evaluation criteria for current practices. As such, the subjects may insist on their original objects, rules, or tools, hindering opportunities for transformative change. The double-edged nature of past experiences suggests that what matters is not the requirement of past EMI learning or teaching experiences to facilitate better transition, but more importantly a critical and reflective view from instructors and students to allow the qualitative transformations possible. In this regard, future ETPs must monitor the restricting influence of historicity of the subject-producing systems on EMI practices through reflection—“active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the

grounds that support it, and the further conclusions to which it tends” (*italics* in the original, Dewey, 1910, p. 6). As Dewey (1910) expresses, reflection begins with “a state of perplexity, hesitation, doubt” (p. 9), so the activity systems whose change is derived from inner tensions can guide future reflection.

This paper attempts to propose an alternative analysis and pedagogical framework for developing EMI research, pedagogy, and teacher support through a case study of content instructors’ and students’ experiences in an immersion context. However, this paper does not intend to generalize the current findings to all contexts. Instead, it functions as a springboard for further research on EMI practices via the AT perspective, with specific attention given to tensions driving change in activity systems, object transformations and coordination, and the restricting influence of historicity. As this study focused only on content instructors and students in a specific curricular design, future research can explore the joint practices in other types of EMI practices (e.g., shelter or bilingual programs) and/or include other stakeholders (e.g., language instructors and faculty from the in-service teacher development program). The individual or joint activity system analysis can also be used to identify tensions, reassess practices, and enhance change in order to create new EMI practices or guide future teacher development. A study in these directions would not only enrich our understanding of EMI practices from a more dynamic and holistic perspective, but also benefit the coordination of language and content courses as well as teacher development services.

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