Integrating MOOCs in Formal Education: To Unveil EFL University Students' Self-Learning in Terms of English Proficiency and Intercultural Communicative Competence

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Abstract

This study employed a blended learning approach to investigate 98 medical university EFL students' perceptions and analyzed the learning trajectory of their LMOOCs in formal education. Meanwhile, Byram's (1997) intercultural communicative competence (ICC) model was adopted to explore if students' English proficiency and ICC abilities could enhance or hinder their LMOOCs. Participants of this elective two-credit course, "English Presentation Skills," were all required to complete one LMOOCs course to earn official certificates for the credits. Questionnaires about self-learning background and intercultural communicative competence, weekly reflections on self-learning, assistant-student interviews, and personal presentations at the final stage are conducted to test the consistency between student self-evaluation and class performance. The rubric of the TOEFL iBT Test was adopted to evaluate students' oral expression. Video clips collected in class were analyzed to track the differences in students' target skills. Findings revealed that before integrating LMOOCs in formal education, it is essential for instructors to equip students with enough self-learning skills through orientations and stress time management in MOOCs learning strategies, and scaffold sufficient English communication skills before students are thrown to sink or swim on their won. A revised version of the ICC model was proposed at the end (the context may vary) in the hope of drawing more attention and voice to this research area. The integration of LMOOCs in formal education, be it for language teaching or self-learning, should be directed toward the level of "precision instruction" in the future.

Keywords: blended learning, intercultural communicative competence, LMOOCs, MOOCs

1. Introduction

1.1 MOOCs into Formal Education

iOnline education resources are easily accessible to students at the age of digitization, and the impact of MOOCs on higher education is increasingly displayed in its modes of teaching (Yuan & Powell, 2013). Educational institutions are remodeling traditional lecture courses and turning course designs into a collection of learning resources. Teachers become facilitators of learning, and students are trained as learners in active learning (Burd, Smith, & Reisman, 2015). Introducing MOOCs is a good way to boost innovation in higher education learning arenas (Ossiannilsson, Altinay, & Altinay, 2016). However, little attention has been paid to students' perceptions of the integration of LMOOCs in formal education and their self-learning experience with LMOOCs, particularly their English proficiency and intercultural communicative competence (ICC) (Byram, 1997).

Personal Learning Environments (PLEs) attract increasing interest in the e-learning domain. PLEs may be characterized as a multidimensional space that integrates lifelong learning, learning styles, new approaches to assessment, and cognitive tools, a single user's e-learning system providing access to various learning resources (Harmelen, 2006; Attwell, 2007). Gradually, more researchers are seeking to apply PLEs to formal learning. Taking part in collaborative activities proposed in the PLE and being aware of others' actions help learners enhance their consciousness of the learning path and thus provide scaffolding for the learning activities (Yvan, Eloy, Villasclaras, & Dimitriadis, 2013). Proposed activities also provide learning objectives to help sustain learners' motivation (de-la-Fuente-Valentín, Pardo, & Delgado Kloos, 2013). Using PLEs, students can effectively customize their learning environment to provide useful learning support systems and experience

(Yvan et al., 2013).

FEM (Federating Environment of MOOCs) was first presented at the European Conference on e-Learning in 2017. To provide differentiated teaching in a federating environment, we can collect students' learning history via the online learning platform of MOOCs (such as Open EdX and Canvas) and set up their learning profiles. The learner profile can be enriched by non-formal learning and offer personalized learning to meet formal learning needs. By achieving the bridge between non-formal and formal learning, FEM can improve the quality of learning (Mrhar, Zary, & Abik, 2017).
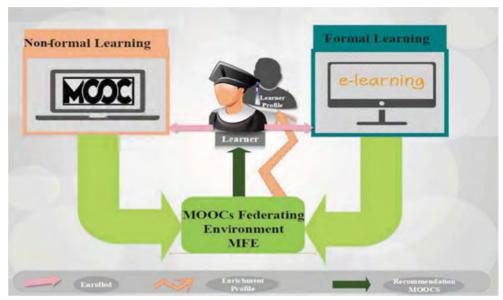

Figure 1. The relation between FEM and formal & non-formal learning platforms

Both FEM and PLE attempt to make the learning process more precise and personal while infusing differentiated teaching into formal learning. With students' learning history on MOOCs, FEM collects the data of their learning tracks, scores, and interaction modes with others to set up their personal learning profiles for personalized learning (Mrhar et al., 2017). With more focus on students' active learning, PLE integrates more learning resources to provide learners with more suitable learning materials (Attwell, 2007). Taking a look at the learning history of others on the learning community platform may inspire students to adjust their learning paces and thus make the mode of learning more personalized (Yvan et al., 2013; de-la-Fuente-Valentín et al., 2013).

1.2 Rationale of This Study

Researches in the past indicated that the learning quality of ESL speakers is affected by language barriers; hence, it is not sufficient to broaden MOOC accessibility by using one-size-fits-all approaches such as translating all MOOC contents to the learners' local languages. During the learning process on MOOCs, students interact with teachers and peers on the community platform for discussions and assignments. As a result, students have to communicate via the platform with students from different countries and learn to process their different cultural dimensions of communication. Regarding the attitudes on learning feedback, students' involvement in knowledge sharing, self-directedness, and preference for learning sources may differ by the degree of sensitivity in the relationship with people from different cultures (Kim & McLean, 2014).

Hence, to better apply LOOMCs to formal education, it is vital to investigate how students' English proficiency and ICC background impact their MOOCs learning. In this study, we try the mode of blended learning and apply MOOCs to formal English teaching, which is covered in the final grading of the course. Thirty courses related to oral expression are picked up in Coursera for students to preview independently to enhance their knowledge and understanding of oral presentation before each weekly meeting. As a result, students are given additional opportunities to apply what they have learned from MOOCs to practice in the classroom.

Medical schooling has been aggressively pushing online learning in Taiwan, with scholarships offered and credits granted and recognized as requirements for graduation to encourage students to pursue personalized learning via MOOCs. In the process of online learning, we have to consider some crucial factors regarding

students' capability of effective self-learning. Suppose their learning is liable to be affected by language proficiency and intercultural communicative competence, how can we establish a personalized learning mechanism regarding students' proficiency and needs to strengthen their willingness to participate and raise their learning quality? The study strives to achieve this objective.

2. Literature Review and Background Research

2.1 Blended Learning

By integrating face-to-face (offline) instruction with online materials, blended learning produces a more flexible and effective model for instruction (Aycock, Garnham, & Kaleta, 2002; Bowen, Chingos, Lack, & Nygren, 2012; Hill, 2012). With online modes of background content knowledge delivered outside class time, blended courses could amplify the use of face-to-face class sessions for instructor feedback, applications, and interactions (Aycock et al., 2002; Hill, 2012). A 2010 meta-analysis prepared by the United States Department of Education claims that in recent experimental and quasi-experimental studies, blended instruction is more effective than either fully face-to-face or fully online instruction (Means, Toyama, Murphy, Bakia, & Jones, 2010); however, that meta-analysis did state that "it was the combination of elements in the treatment conditions (which was likely to have included additional learning time and material as well as additional opportunities for collaboration) that produced the observed learning advantages" (Means et al., 2010, p. xviii). Therefore, the arguments for and against blended instruction should be further investigated through students' extracurricular self-learning progress/experience for instructors to design better and concrete guidelines to scaffold students' LMOOCs self-learning.

Regarding the practice of blended approaches, the distribution of face-to-face and online time, course design, and evaluation vary considerably depending on the instructors' personal attributes, teaching styles, course content, cultural differences, or regional context. It is clear that there is no "standard" approach to blended courses. They often involve a rigorous, time-intensive redesign of traditional face-to-face courses to fully integrate face-to-face and online learning (Aycock et al., 2002; Stone & Perumean-Chaney, 2011). Students' work online must be made clearly relevant to their work in the classroom, just as the face-to-face sessions must draw on and apply the online materials (Babb, Stewart, & Johnson, 2010; Gilbert & Flores-Zambada, 2011; Toth, Amrein-Beardsley, & Foulger, 2010). According to the above, how instructors design and redesign their teaching between online and face-to-face sessions can impact students' learning. Students' perceptions of blended courses and their learning outcomes might change depending on the design of blended courses. This inquiry of different designs of blended courses and students' learning development in higher education remains unexplored in research.

2.2 Byram's Framework of Intercultural Communication Competence

This study adopted Byram's (1997) model of intercultural communicative competence (ICC), which has been well-known and extensively applied in Language research, especially in EFL teaching (Byram, 2009). IC is defined as "the ability to interact effectively with people with different cultures other than one's own" (Byram, 2000, p. 297).

The five main components of ICC are: (a) knowledge of social groups and their products and practices in both one's own and others' cultures; (b) intercultural attitudes, such as curiosity, openness, and readiness to suspend disbelief about other cultures and beliefs about one's own culture; (c) skills of interpreting and relating, which enable one to interpret a document and events from other cultures and relate those interpretations to one's own culture and experiences; (d) skills of discovery and interaction, which enables new cultural knowledge acquisition and the procedural application of knowledge in real-time communication and interactions; and (e) critical cultural awareness, which is defined as "an ability to evaluate critically and based on explicit criteria perspectives, practices, and products in one's own and other cultures and countries" (Byram, Nichols, & Stevens, 2001, p. 7).

This model mainly elaborates on the primary attributes of IC, what should be investigated when exploring students' intercultural abilities knowledge, skills, attitudes, and perspectives – in addition to the linguistic competence required for successful intercultural communication (Byram, 2009). According to Byram (1997), it provides a framework for specifying objectives when designing curriculum, teaching activities, and evaluation in that each component of IC serves as representative teaching goals in intercultural learning. Accordingly, this ICC model can serve as a good guideline and framework for effective instruction for developing learners' ICC.
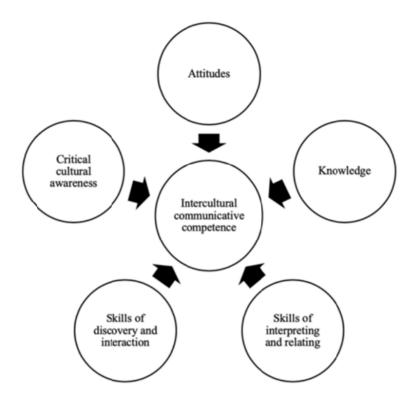
Figure 2. Byram's (1997) framework for intercultural communicative competence

3. Methodology

3.1 Research Questions

Our objective was achieved by answering the following research questions:

1) What perceptions and expectations of formal education related to LMOOCs do university students hold?

2) What relationship exists between students' self-learning (in terms of LMOOCs) and their English proficiency?

3) What relationship exists between students' self-learning (in terms of LMOOCs) and their awareness of cross-culture communication?

3.2 Participants and the Context

The study was carried out from Spring 2018 to Fall 2019 at a Medical University in Taiwan. Participants were both undergraduate and graduate EFL students who took the "English Presentation Skills" course offered semesterly and taught in English only. A total of 98 students participated (their English proficiency in CEFR were 48 students at B2, 30 students at B1, 6 students at A2 and 4 students at A1). The course was considered comparably advanced with heavy loading (since LMOOCs were embedded in their partial semester score), so students who took this course usually had a higher English proficiency and stronger learning motivations.

The course is intended to develop students' communication and expression skills in English presentations. With the assistance of online self-learning via MOOCs (Coursera), students are expected to learn and display the proposed skills through a three-minute classroom presentation, which gives the teacher instant feedback on how much of the course each student has assimilated. Based on the real-time practice in the classroom and aimed at specific scenarios, students can learn the methods and tactics of effective expression. In order to achieve the convincing and concrete objective, which is specifically tailored for students' English communication competence at the workplace in the future, the course workload consists of data collecting in advance, English scriptwriting before presentation, and employing professional language skills. The final course mark is composed of MOOCs online learning (30% out of 100%) and a ten-minute presentation reporting their LMOOCs learning progress; meanwhile, students also need to upload an official certificate to prove their LMOOCs course completion.

3.3 Data Collection and Analysis

Data collection included students' questionnaires about their self-learning background and intercultural communicative variables before and after this course, collected on the first week and the 14th (LMOOCS learning evaluation week). Every two weeks, the correlation between self-learning experience and their English proficiency variables were checked by teaching assistants after class through short discussions; part of the data was served as the questions for the assistant-student interview at the final stage, in order to test the consistency between student self-evaluation and class performance. The result was then further analyzed and compared with student feedback of Coursera self-learning at the end of the semester. Both at the start and end of the semester, the rubric of the TOEFL iBT Test was adopted to evaluate the progress and effectiveness of students' oral expression. The in-class video clips collected during the research period will be analyzed with qualitative coding to compare and track the differences between students' various target skills in learning history. Grounded theory was employed to analyze all the qualitative data.

4. Results

4.1 Students' Positive Perceptions of LMOOCs in Formal Education

Overall, students expressed positive attitudes toward LMOOCS, which offer time flexibility, a personalized learning path, and innovative ways to acquire knowledge (compared to traditional formal education). Students' final reflections often used "excited, interested, and fresh" about their LMOOCs learning; it is quite evident that students have never learned through LMOOCs (or even any MOOCs at all) before university. This online self-learning learning method is not limited to time and place and does not occupy their weekly fixed time allocation like traditional classes. With the advantages of online self-study, students also expressed their motivations to keep using the platforms to take more courses in various fields from foreign universities.

> *Student Lin:* Thanks to the teacher, I learned about this online website which provides a variety of courses from different universities around the world. In the future, I would like to make the best use of this online education resource and take lessons that I'm interested in. (from fall, 2018)

> *Student Tsao:* After taking this elective course, I've known and come into contact with the more diverse educational resources provided by the well-known foreign universities—I love "my digital self-study." (from spring 2019)

> *Student Tong*: Although the online self-study course is not like traditionally sitting in the classroom and listening to the teacher learn, this remote way of teaching can actually teach us many things. This is also the first time I have tried this kind of learning method. I think this way of learning is great, and it can be adjusted flexibly with my own time or ability. (from fall, 2019)

> *Student Kao*: I think Coursera is a convenient online course for students to use. For example, this course needs me to watch TED talks for homework. Then, I can watch TED talks when I am taking the bus or having lunch; and I can arrange my time wisely. Thus, I can finish this class without being limited by time and space, and I can choose the time to take the class on my own. (from fall, 2019)

Meanwhile, students changed their perceptions of learning in terms of conveniences in reviewing and relearning materials at their own pace, and they claimed that they learned better because they can "pause" and "replay" their learning based on their own preferences. Another advantage is that students were aware that they learned better because they gradually accumulated self-learning habits and became more motivated on active learning.

> *Student Kao*: In fact, this is my first exposure to online self-study. Unlike physical classrooms, I feel that it has many advantages: 1. You can do it anytime, anywhere, without restrictions. 2. We can replay and listen to the parts where we do not understand so that we can absorb better and understand the course knowledge more. (from spring, 2019)

> *Student Huang*: From my point of view, since I took the digital self-study course, I found that my learning conditions in other areas also increased. This is not to say that my grades have improved; but, the frequency of my active learning is slowly rising. It may be that after completing the Coursera, I have achieved the goal of enrollment step by step, or it may be that during the completion of the course. In order to pass the test, I constantly try to find various resources and repeat the review of the previous learning materials. All in all, I have become more and more mobile, and I will not just think but act like I was before. (from fall, 2019)

Surprisingly, certain students compared LMOOCS to traditional formal education, and they noticed the differences in instruction and homework/evaluation. It is found that this phenomenon happened more among

first-year students when they described how they encountered this kind of teaching/learning culture shock before and after university life. Before university, students in Taiwan worked hard and received lecture-based courses; evaluation is almost all exam-oriented for students to achieve higher scores in their annual national college entrance exam.

> *Student Wu:* Most of my previous studies in high school were delivered by written texts, with regular textbooks and handouts, but when I went to university, the teachers' teaching methods were mostly communicated verbally or in presentations, and the same was true for school seminars. It is difficult to digest and absorb a large amount of information I hear. In order to solve this problem, I usually ask and learn how students take notes, so I finally chose the course Academic Listening and Note-Taking from Coursera. (from fall, 2018)

In terms of evaluation, some students said 'mini' online weekly homework that came with a clear format (compared to traditional courses' midterm & final exam) allowed them to organize their learned skills/knowledge better. Teachers recorded videos of weekly speeches step-by-step so their learning was not limited to theory but weekly practice/tasks or forum discussions.

> *Student Li*: One of the advantages of this course is that there are assignments every week. After watching course videos and taking tests, I have to record my own presentation and use my learned skills. (from fall, 2018)

> *Student Chang*: As for the assignment, I did it seriously and revised it many times. Overall, I think I did pretty well in self-learning. It's the type of learning that suits my preference. I can do better by posting my thoughts on the discussion forum. Though it's not a part of the grade, sharing our ideas with everyone is great. Also, we can think deeper. (from fall, 2019)

4.2 Students' Negative Perceptions of LMOOCs in Formal Education

In general, students expressed pressure toward LMOOCS due to the lack of self-learning or MOOCs learning experiences, which involves a great deal of self-exploration on Coursera and self-disciplines to complete the course with the official certificate.

> *Student Lee:* I have never had classes on this platform, so I didn't know how to start at first. I began to struggle a while with this platform from the beginning of this semester. (from spring, 2019)

> *Student Chen:* Because I didn't understand the use of platform resources and precautions in advance, I was in a hurry to register. I did not arrange my time afterward, resulting in missed or late assignments to finish the first course. (from spring, 2019)

> *Student Liu:* If you do not actively urge yourself to complete this online course, it will be easy to drag on more and more, and it will be too late in the end. (from fall, 2019)

Another certain level of worry came from students' unfamiliarity with using MOOCs platform/system regarding payments, certificate regulations, and long wait times for peer feedback (compared to traditional formal education). Some students said that because the course grading mechanism required a peer assessment step, their work performance was affected by other students' comments. A tardy peer review may even cause the student to miss a deadline.

> *Student Liu:* Because I neglected my homework, it took a lot of time for online classmates to review, and I didn't do good work, which caused my homework to be revised and re-reviewed. Therefore, I spent a lot of time waiting for review, re-correction, and waiting for review again, so it was too late to complete this self-study. (from fall, 2019)

In addition to the problem of waiting for other students to finish their work, some students didn't have enough peers to rate themselves, so the student could not get the final grades.

> *Student Tseng:* Unfortunately, no classmates study the same course as me. So I can just keep waiting for my final score - and miss the due date. (from spring, 2019)

Regarding the drawback of the peer feedback mechanism, some students still own positive feelings about the mutual evaluation mechanism. Students believe that regardless of whether they get a positive or negative feedback in the mutual evaluation mechanism, they can improve their skills in English speech.

> Student Lin: I think it's quite interesting for students to evaluate each other because we can try to express their thoughts in English. We can also get feedback from others about our recorded videos (though I felt really shy), but the other online classmates are very good and give me very positive comments. (from fall,

2019)

4.3 The Relationship Between English Proficiency and LMOOCs Learning

Taiwanese students living in an EFL context learn but rarely "use" English in daily life. Some students think it takes advanced English proficiency (especially excellent listening ability) to understand the content knowledge of courses taught in English. However, after this LMOOCs learning, students expressed that this learning method is efficient because they can gradually get used to (or forced to) a whole English environment and participate in foreign universities through online platforms. Not only can students interact with foreign students, but also learn more about the teaching/learning culture of foreign universities. In this way, it becomes a "real language learning." In addition, some students have taken a step forward by taking English speech courses and confidently using English to produce communicative exercises and online interaction orally with students from different countries.

Unlike traditional education, this method enables students to feel less awkward speaking English in front of peers who share the same native language (Mandarin). Students self-reported their improvement of English ability at the end of the semester and gained obvious help from whole English environment training.

> *Student Yi:* Coursera's courses are all in English, and many films do not even include scripts and subtitles. Therefore, they are very challenging in English listening ability. After this month, I believe that my English has also improved a lot, and I am gradually getting used to foreign universities culture. The way of their class, even if I want to apply for an exchange in the near future, I probably don't have to be afraid anymore. I still want to thank the teacher for giving us this opportunity. (from fall, 2019)

> *Student Wu:* I would really recommend other students who want to improve their English skills or want to have organized lives in the future to take this class. It can definitely help a good student to become an excellent one! (from fall, 2019)

However, students with intermediate English proficiency revealed nervousness and frustration at English taught LOOMCs courses because they described incapability of coping with the weekly course path and confusion about acquiring the course content. Besides, the pressure is amplified if they need to communicate online with a peer with fluent English. In terms of evaluation, students also mentioned the cultural differences in "there will not always have 100% correct answers." It takes extra time for students to understand the assignment guidelines, and sometimes they even misunderstand the assignment requirements due to language barriers.

> *Student Hu:* I haven't delivered an English speech before. Even in online communication with foreigners, I usually feel nervous and can't express my ideas clearly. (from fall, 2018)

> *Student Yeh:* In fact, the homework process did not go smoothly, I often couldn't get the correct direction of the homework, and my English speaking was not very fluent. So I spent a lot of time thinking and writing the homework. After it was graded, I had to revise the writing every week because It is often rated as lower than I expected, which is equivalent to double my time to complete the same assignment, so it is actually difficult for me. (from spring, 2019)

4.4 The Relationship Between ICC and LMOOCs Learning

In terms of cross-culture communication, students feel positive/interesting and describe that they sense cultural differences in explaining ideas. For example, some students were amazed by how American students use vivid examples or storytelling to clarify their ideas, which should be taught more for Taiwanese students.

> *Student Lee:* During this self-learning, I was extremely excited to acquire something new that was associated with business negotiating strategy, which was a field I was unfamiliar with. (from fall, 2018)

> *Student Fan:* For these weeks, I have learned a lot about different approaches for handling problems with foreigners, which benefits me enormously. (from fall, 2019)

There were few students who reflected that accents or colloquial, conversational language confused them because students can usually use an online search engine (google, urban dictionary) to figure out problems themselves. It is interesting to see whether they can solve these language barriers by themselves.

> *Student Chen:* At that forum, I was a bit offended and felt confused when he always used "Listen" to start a sentence; I felt he was ordering me. (from fall, 2019)

5. Discussion

5.1 Do Not Let Students Sink or Swim Alone in LMOOCs

The flipped classroom is increasingly popular in Taiwan, and more and more universities have been advocating

the tactic of online self-learning. This study discovered that self-learning experiences and English proficiency played crucial roles in LMOOCs learning. Before the integration of LMOOCs to format education, it is essential to equip students with self-learning skills, self-discipline, and a committed attitude through orientations. The step of empowering students with MOOCs learning strategies like time management and scaffolding of sufficient English communication skills is vital before throwing students to sink or swim on their won.

5.2 The Proposed Revised "Intercultural Communicative Competence" Model

This study adopted the Intercultural communication competence model (Byram, 1997) and made an adjustment to redefine ICC competence in LMOOCs learning as "how students constantly perceive and revise their self-learning skills through online learning progress; meanwhile, how students may interpret and relate their gained knowledge to LMOOCs, in terms of instructors course content, peer discussion, and evaluation system."

The following three stages are observed in students' self-learning, which is non-necessary to follow according to the following order.

5.2.1 The First Stage: Recognize the Differences and Similarities Between Cultures

When exposed to foreign cultures, students may first be attracted by and start to gain knowledge of the target culture instead of language itself, especially the differences between their home culture and other cultures (Lee & Song, 2019). By communicating with people of different cultures, people begin to discover cultural differences from eating habits, speaking patterns, and even critical and logical thinking, echoed previous studies (Godwin-Jones, 2019). In-depth communication and long-term exposure to different cultures can allow people to have a deeper and more comprehensive understanding of cultural differences. The time to recognize the differences and similarities between cultures differ in individual or the exposure time.

5.2.2 The Second Stage: Compare the Differences and Similarities Between Cultures

When cultural differences are recognized, people begin to compare foreign cultures with their own. By comparison, they can interpret ideas, events, or documents from another culture, explain them, and relate them to those of their own culture (Üzüm, Akayoglu, & Yazan, 2020). Explanation and relation can foster the cultural awareness of one's own culture and improve understanding between cultures. Instructors should support this part because students reported that they were aware of differences; however, it is rather challenging for them to explain or articulate in English, sometimes even in their native language. Moreover, cultural sensitivity also rises when people start to compare cultural differences (Caluianu, 2019). So there should be more compare and contrast culture exercises design embedded in LMOOCs courses.

5.2.3 The Third Stage: Dissect and Interpret Implicit Reasons Behind

By comparing cultural differences and similarities, some students will begin to think deeply about the reasons behind cultural differences, such as historical background, ethnicity, economics, society, and other factors. As people learn more about the reasons behind cultural differences, they also have a deeper understanding and analysis of the culture. This process can increase people's cultural inclusiveness, help them understand cultural diversity, and improve their cross-cultural communication skills (Godwin-Jones, 2019).

6. Limitations and Future Research

With the aforementioned revised ICC competence definition adopted to the new framework, which integrates LMOOCs into formal education, culture diversity (such as content knowledge delivery, learner styles, whole English discourse environment, and teacher-student roles), a new learning model is created, which is totally different from that of traditional teaching in Taiwanese higher education. Online videos provide more flexibility in time and length, because students are not required to view them at any fixed time slot. Besides, with the teacher's instant questions and answers as feedback, students need to have stronger learning motivation, self-discipline, time-management, initiative, and critical thinking to achieve better learning results. However, this study is limited to the EFL context with participants from Medical University. More research should be possibly conducted in both ESL and EFL contexts and on different learners from general universities or vocational colleges.

Future research could be oriented toward cross-culture communications in LMOOCs; inevitably, communications will become comparably vital, existing as partners of co-learning (teachers in the videos or peers on online forum discussions). When the learning partners are from different countries, they have to learn effective intercultural communication without misunderstanding. Therefore, correlated measures must be taken to integrate LMOOCs' learning styles into formal education. Take this study as successful blended learning, for instance; class learning is first integrated with the flipped classroom to help students increasingly adjust to the

culture of self-learning, along with the language assistance of intercultural communication (workshops or conversation practices), giving students a leg up in language learning and buffering period to further self-learning through MOOCs lifetime.

7. Conclusion

7.1 Pedagogies and Practices: "Precision Instruction"

With so many online courses to take, students may be confronted with some difficulty in signing up for one. It is thus important or necessary for curriculum experts to analyze and place all courses on different levels and recommend a self-learning curriculum for students in terms of individual interest or proficiency. Whether it is language teaching or self-study, online courses should develop in the direction of "precision teaching" in the future. Apart from the focus on curriculum development and learning assessment, teachers should also be engaged in analyzing the propriety of online courses for students with different levels of English proficiency and providing them with a suggested curriculum. Only when students take the courses most appropriately in tune with their proficiency, interest, and future job market can they achieve the utmost learning performance within a limited period. The course assessment data and students' learning performance should be stored in a cloud data bank for interdisciplinary experts to do big data analysis to fit the educational modes in the future.

8. Ethical Statement

All participants in this study were clearly informed and signed written consent, and they may choose to withdraw anytime. All collected materials were confidential, would be carefully handled after research. All related names were replaced with pseudonyms in the data.

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