INTERACTIVE CONTENT DELIVERY IN ENGLISH-MEDIUM UNIVERSITIES: IMPLICATIONS FOR NON-NATIVE SPEAKING LECTURERS AND STUDENTS

M. Ismailov

University of Tsukuba (JAPAN)

Abstract

While most of the literature on English medium instruction (EMI) in higher education is written by scholars of applied linguistics, sociolinguistics, and comparative philology, there are fewer EMI studies conducted by the content lecturers themselves. Also, there are few studies that probed the quality of interaction and learner engagement in highly interactive content learning environments using English. The aim of this study is two-fold: (1) to investigate how a content lecturer designs, applies, and re-adjusts interactive pedagogy to match students' linguistic, cognitive, socio-cultural, and affective needs, and (2) to qualitatively assess the effect of these interventions on student outcomes. The participants were undergraduate students from several universities in Japan. The study applied classroom ethnography and discourse analytic research methods to examine participants' behavior, interaction, class activities, and discourses in the formal and semi-formal settings during and after the course. Findings suggest that students faced challenges like those explored in previous studies. However, a closer investigation of how this process transformed once the content lecturer applied various interactive pedagogical strategies sheds light on a few previously unexplored factors that help understand quality interaction in EMI settings. The paper discusses the empirical and theoretical implications of the findings.

Keywords: English Medium Instruction, EMI, Interaction, Non-Native, Lecturers, Higher Education.

1 INTRODUCTION

Interaction is arguably the most significant pedagogical resource that contributes to learning in a multilingual environment. In the internationalizing English-medium university classrooms, interaction occurs widely and systematically such as during weekly seminars, team projects, and student presentations. Unlike primary and secondary stages of education, such interactions involve more linguistically and academically diverse learners and lecturers (Ismailov et al, 2021; Ismailov & Chiu, 2022). For these reasons, applied linguists have been researching various facets of interaction through English Medium Instruction (EMI), such as teacher and learner beliefs, linguistic backgrounds, and sociocultural and psychological influences, providing further insights into the complexity of classroom interactions (Macaro, 2018). Such studies concluded with the recognition of language use as 'an extremely complex' element in EMI playing a critical role in making or breaking interaction, especially in the context of higher education. While there are a plethora of studies discussing the nature of interactions during pre- and in-service teacher training programs, empirical research on the nature of interactions in EMI classrooms remains very limited (Sahan et al., 2021). Furthermore, alternative perspectives have been difficult to come by given that the studies exploring interactional competencies in EMI are mostly designed and conducted by applied linguists specializing in TESOL, ELF, ESL, teacher training, curriculum development, academic skills, all but content lecturers themselves. Also, little is known about the competencies the content lecturers need to become more interactive and student-centered (Macaro & Han, 2019).

Such gaps in knowledge lead to generalizations that all content lecturers underestimate the role of languages and other semiotic resources in teaching their disciplines. These views may prove counterproductive unless solid evidence depicting content lecturers' experiences of interaction in EMI (as assessed by content lecturers themselves in various contexts) is widely presented. Therefore, the main purpose of this longitudinal case study was to qualitatively document a content lecturer's experiences of maintaining quality interaction when teaching content courses.

2 METHODOLOGY

This qualitative longitudinal study draws from three case studies (N=62): summer 2020 (n=21) and winter 2020 (n=19) courses were taught before the lecturer attended training programs when measures

of quality interaction were not part of the lecturer's pedagogic repertoire, whereas the winter 2021 course (n=22) was taught following an extensive 56 clock-hour training program with the intentional use of the quality measures throughout the post-training instruction. The study sought to answer the following research questions: (RQ1) What factors necessitate quality interaction in EMI from a content lecturer's perspective? (RQ2) What are the effects of using the measures of quality interaction on student outcomes and content teaching?

The current study takes an interpretive epistemological position that warrants the use of ethnographic classroom observation in conjunction with qualitative content analysis of interview data. Such a design is justified on the premise that one can only infer new knowledge about interaction patterns in EMI by observing and experiencing real-classroom lecturer-student and student-student encounters. Ethnographic observation views the teacher-researcher as an interpreter of knowledge based on shared experience, someone who can also facilitate the generation of data in specific interactional situations as they take place. Once conceptual categories were established using classroom ethnography, they were investigated and triangulated further with qualitative content analysis of post-intervention interviews to understand how the five quality measures helped or hindered learning.

Figure 1. Interaction in EMI in a simulation activity (course #3; N=20)

Participants were first- to fourth-year undergraduate students (N=62) from two medium-sized universities (thereafter U1 and U2) in western Tokyo, Japan. U1 (n=46) had a strong reputation in teaching Liberal Arts and offered a wide range of EMI courses, whereas U2 (n=16) with its focus on teaching Sciences offered a limited number of EMI courses, instead, focusing on teaching academic English skills. Both universities were part of a regional university consortium that allowed their students to enroll in selected courses offered by a partner university and exchange credits. Thus, all three courses had mixed populations of students from both U1 and U2. Pre-enrollment surveys were administered and showed that most students from U1 (n=34) enrolled in the EMI course to gain new content knowledge, whereas all students from U2 (n=16) enrolled in the courses to improve their English skills as their primary goal. There were 10 international (Course 1 n=8; Course 2 n=2) students all of whom belonged to U1, and 52 home (Japanese) students from both U1 and U2 respectively. The research followed the ethical standards and personal information protection guidelines at Japanese universities.

3 RESULTS

By investigating the measures of quality interaction in EMI pedagogy (Macaro, 2018), this study shed light on a previously under-researched dimension of EMI (i.e., a content lecturer's experience of interaction) to propose a number of theoretical implications. Specifically, the study showed that the measures of quality interaction were, as claimed by Macaro (2018), indeed conceptually relevant to the L2 content teaching context. This relevance stemmed not only from the previous literature on math and science teaching in learners' L1 (Mortimer & Scott, 2003), but as this study revealed, the measures proved rather practical in measuring quality interaction when teaching a content subject in students' L2. For instance, the study found strong evidence to support that the intentional application of the measures by lecturers, such as using extended I-R-F, wider language functions, and higher-thinking questions,

could significantly improve the quality of teacher-student interaction, albeit had little impact on student-student interaction.

Another important theoretical consideration is that in his original discussion, Macaro examined the measure of the quality of interaction in pedagogy in a close relationship with code-switching in secondary level EMI, i.e., stemming from the choice of language medium that the teacher adopts at any given time (Macaro, 2018; pp.198-201). This study's conceptual focus moved beyond these conditions: code-switching was not examined in this study because the content lecturer consistently used English during his interactions with the students, and all interactions were part of university-level courses. Despite these differences, the current study nevertheless proved useful by validating these emerging measures in a different context.

The findings suggested several empirical implications. First, this study provided further evidence that the five measures should not be looked at in isolation, instead, they need to be considered as integral parts of a holistic system in EMI. For instance, extended I-R-Fs can occur when both lower- and higher-order questions are posed but the quality of interaction seems to be significantly enhanced when students feel less pressure to respond with a flexible input rather than the fixed one. Similarly, the content lecturer's use of a wider range of language functions or question types could impact the length of student turns because some language functions/questions may either be inappropriate, unknown to a student, or too complex to address. Such interdependencies (Macaro, 2018: p.197) were observed throughout this study leading to a preliminary conclusion that relationships among these measures may be either positive or negative, but certainly highly contextual.

Second, while previous research provided strong evidence about the benefits of interactive approaches to teaching in EMI, many published studies to date focused on student and lecturer beliefs about EMI interaction (Ismailov et al, 2021; Ismailov, 2021a, Ismailov, 2021b; Ismailov, 2021c), with very few papers seeking to empirically examine specific strategies for supporting and measuring interaction in EMI classrooms (Sahan et al., 2021). In many studies, the issues were less to do with the assessment of the approaches toward quality interaction, and more with the generic accounts establishing the presence or lack of interaction in university EMI courses.

Third, content lecturers may or may not want to engage in fixing their students' language errors, but what they cannot ignore is the need to become more language-aware. Such awareness is the foundation for developing their meta-linguistic competencies (e.g., using extended I-R-F, wider sets of language functions, longer wait time, etc.) to help students effectively produce and comprehend the content knowledge in English and interact with the lecturer and peers. The positive outcomes will ultimately depend on the lecturer's preparedness and willingness to transition from teacher-centered content delivery to student-centered content co-creation (Ismailov & Ono, 2021; Ismailov & Laurier, 2021). Studies of student-centered learning in EMI suggest that the latter strategy has a lasting impact on the retention and application of learned content knowledge. Also, such an approach is useful for stimulating students' intrinsic motivation by elevating their sense of autonomy, competence, and relatedness, especially during online education during the ongoing pandemic.

The content lecturer has the tools to scaffold and increase the impact of quality measures during teacher-student interactions, and less so during student-student interactions, though a small set of housekeeping procedures (e.g., frequent reminders, assigning team facilitators) may help to apply these measures in student-student interactions too. As mentioned earlier, these measures are highly contextual as they cannot always be applied uniformly across all content subjects and by all content lecturers. Many disciplines, especially in sciences, do require knowledge checks, and lecturers especially in large classes may not always want to ask higher-order questions or allow more time for individual students to express higher-order concepts (Chiu, 2021a; Chiu, 2021b). These measures appear to be more effective in content subjects in arts and humanities courses and with smaller classrooms (such as seminars or student presentations) provided the lecturers have the competencies needed to implement these measures in the classroom. For the competencies to be developed, as this study suggested, it is not enough to rely on the effects of teacher training programs alone; what lecturers need is a systematic application and adjustment of these strategies to their unique disciplinary contexts. Special attention must be paid to enrolled students' characteristics, including language level, prior knowledge, etc. Thus, based on the study's findings the following interventions are recommended:

At an institutional level, teacher training in EMI will remain the most effective way to prepare content lecturers to overcome the instructional challenges in internationalizing English-medium universities. The training programs should be customized to lecturers working in unique disciplinary contexts. Most crucially the programs should have clear goals related to the most critical competencies that teachers

need. This paper argues that given increasing intercultural interactions and the growing significance of 21st-century skills in workplaces, such training programs should make interactional competencies their priority. At a classroom level, this study focused on 5 measures of quality interaction, however, the class observation and student interviews suggested that such measures are much broader with each subject requiring their own sets of measures of quality interaction. In the end, it is a content lecturer who is going to be the ultimate judge of what 'quality' is and how much it is needed. From a content lecturer's perspective, many issues need attention before generalizing the impact of the use of a wider variety of measures across all EMI interactions. Let us take the example of LFs. Although the need to use this measure of quality interaction is hardly questionable and this awareness is typically heightened following teacher training, still from a non-native speaking lecturer's perspective it is incredibly challenging to use these functions systematically while focusing on other instructional roles. The lecturer in this study used various aids, such as printing the list of useful stems and regularly referring to them or setting a reminder. Long-term and consistent use of this measure in the classroom environment is therefore required. Secondly, it may be still easier for lecturers to consistently use these language functions, but it may be harder for students with limited academic or general vocabulary to swiftly switch their attention from one function to another when interacting with a teacher or peers. Importantly, a wider variety of teacher-used functions should refer to both quantitative and qualitative diversity of phrases to help students with different levels of English proficiency. Third, content lecturing in L2 classroom may be more exposed to the risks of misperceptions stemming from the use of certain culturally sensitive functions (e.g., In this study, Japanese students seemed less reciprocal when the teacher used more direct language, such as 'I am not sure I agree with you there' when disagreeing).

4 CONCLUSIONS

With many universities in non-Anglophone countries actively promoting Science and Arts teaching through the medium of English to attract more international students, rarely do such institutional initiatives take account of what happens in the actual classrooms once such courses commence. Also, while a limited number of undertaken studies on interaction in EMI, what was often missing in them was the content lecturers' perspectives and an in-depth understanding of the strategies they used to interact with students based on their unique disciplinary contexts. It was especially important to understand whether certain SLA frameworks would work effectively if they were to be applied and observed by content lecturers themselves. This study partially filled this gap by examining Macaro's (2018) framework of 'Quality Interaction in Pedagogy' and assessing the effectiveness of its five specific measures, from a content lecturer's perspective. This study, within the boundaries of its qualitative design, confirmed that despite many contextual nuances the framework pertains to, it is nonetheless generally useful and feasible. However, the effective use of such measures in a content course necessitated a high level of lecturers' commitment, energy, and most crucially their language awareness.

REFERENCES

[1] E. Macaro, English Medium Instruction. Content and language in policy and practice. Oxford, UK: Oxford University Press, 2018.

[2] E. Macaro and S. Han, (2019). "English medium instruction in China's higher education: teachers' perspectives of competencies, certification and professional development," Journal of Multilingual and Multicultural Development, vol. 41, no. 3, 219–231, 2019. https://doi.org/10.1080/01434632.2019.1611838

[3] E. Mortimer and P. Scott, Meaning making in secondary science classrooms. Maidenhead: Open University Press, 2003.

[4] K. Sahan, H. Rose, and E. Macaro, "Models of EMI pedagogies: At the interface of language use and interaction," System, vol. 101, no. 102616, 2021. https://doi.org/10.1016/j.system.2021.102616

[5] M. Ismailov and T.K.F. Chiu, "Catering to Inclusion and Diversity with Universal Design for Learning in Asynchronous Online Education: A Self-Determination Theory Perspective," Frontiers in Psychology, vol. 13, no. 819884, 2022. https://doi.org/10.3389/fpsyg.2022.819884

[6] M. Ismailov, T.K.F. Chiu, J. Dearden, Y. Yamamoto, and N. Djalilova. “Challenges to internationalization of university programmes: A systematic thematic synthesis of qualitative research on learner-centered English Medium Instruction (EMI) pedagogy,” Sustainability, vol. 13, no. 22, 2021. https://doi.org/10.3390/su132212642

[7] M. Ismailov and J. Laurier, “We are in the “breakout room.” Now what? An e-portfolio study of virtual team processes involving undergraduate online learners,” E-Learning and Digital Media, 204275302110397, 2021. https://doi.org/10.1177/20427530211039710

[8] M. Ismailov and Y. Ono, “Assignment design and its effects on Japanese college freshmen’s motivation in L2 emergency online courses: A qualitative study,” The Asia-Pacific Education Researcher, vol 30, no. 3, 263–278, 2021. https://doi.org/10.1007/s40299-021-00569-7

[9] M. Ismailov [a], “Virtual exchanges in an inquiry-based learning environment: Effects on intracultural awareness and intercultural communicative competence,” Cogent Education, vol. 8, no. 1, 2021. https://doi.org/10.1080/2331186X.2021.1982601

[10] M. Ismailov [b], “Conceptualizing an inquiry-based lingua-cultural learning through telecollaborative exchanges,” F1000Research, vol. 10, no. 677, 2021. https://doi.org/10.12688/f1000research.55128.2

[11] M. Ismailov [c], “Designing Motivating Online Assignments and Telecollaborative Tasks in the Time of a Pandemic: Evidence from a Post-course Survey Study in Japan” in Research Highlights in Technology and Teacher Education 2021 (Gibson, D.C. and Ochoa, M.N. eds), 117-125, Waynesville, NC: Association for the Advancement of Computing in Education, 2022. Retrieved from https://doi.org/10.6084/m9.figshare.19609020.v1.

[12] T.K.F. Chiu [a], “Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic,” Journal of Research on Technology in Education, vol. 1, no. 17, 2021. https://doi.org/10.1080/15391523.2021.1891998

[13] T.K.F. Chiu [b], “Digital support for student engagement in blended learning based on Self-determination Theory.” Computers in Human Behaviour, vol. 124, no.106909, 2021. http://dx.doi.org/10.1016/j.chb.2021.106909