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English as a Medium of Instruction in Japanese Universities

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Abstract: With the increased interest in the viability of English as a medium of instruction (EMI) in higher education institutions, teachers and university administrators need further information in order to aid them in their decision as to whether or not to implement EMI in their institutions, what manifestation of EMI to attempt, and how to go about ensuring that students receive the predicted benefits of learning through English, without sacrificing the learning outcomes of their content course. This paper will review some of the theory behind EMI – both for and against – and will analyse and synthesize the findings of research into EMI programs around the world. The goal of this paper is to develop a starter's guide to implementing EMI and identifying the risks and benefits of its various incarnations.

Introduction

English as a medium of instruction (EMI) is becoming increasingly popular in Japan and other countries around the world. However, institutions wishing to implement EMI face many challenges. These challenges include the design and instructional strategy of EMI courses, the expectations in terms of student goal setting and achievement, and staffing issues.

In this paper, EMI and its various manifestations will be explored with a view to illuminating some of the options available to any higher education institutions (HEI) that are considering or intending to implement EMI. An effort will also be made to identify some of the pitfalls and challenges of implementing such courses in HEI contexts. The paper will begin with a look at some of the fundamental second language acquisition (SLA) issues surrounding EMI in tertiary level education contexts: those of age and L1/L2 use. Next, an account of the different EMI options will be given, and some of the results of implementation of EMI around the world will be considered. Following that, the content based instruction (CBI) and content and language integrated learning (CLIL) approaches will be analysed for their applicability to HEI contexts. Finally, the implications of EMI from a cultural point of view will be noted and a summation of options for various kinds of institutions will be presented. Although research has been done on some of the issues raised in this paper, no papers to date have attempted to draw together these issues and present them as a starter guide to EMI in HEIs.

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Tertiary level EMI and SLA

The pursuit of proficiency in English is a topic of considerable interest in Japan. The current system of English education is seen as deficient by many interested parties (i.e., students, teachers, parents, businesses, and educational institutions) and has been criticised for not producing competent speakers of English (Tsuneyoshi, 2005). In recent years, the Japanese government – and in particular the Ministry for Education, Culture, Sports, Science and Technology (MEXT) – have emphasised the need to develop "Global Human Resources" to increase Japan's competitiveness in the global arena (MEXT, n.d.). A vital component of "Global Human Resources" is English communicative ability as outlined in "An Interim Report of The Council on Promotion of Human Resource for Globalization Development" (The Council on Promotion of Human Resource for Globalization Development, 2011). The same report also stressed the need to increase the number of foreign students studying in Japan, an initiative that has led to many universities implementing EMI to attract more students and students from differing fields (not just Japanese majors) to study at Japanese HEIs

(Tsuneyoshi, 2005). It is beyond the scope of this paper to explore all of the implications of these decisions; however, from an SLA perspective, we will look at two issues which are pertinent in the discussion of foreign language mediated instruction (FLMI) in HEI contexts: Age and L1/L2 use.

Age: You can't teach an old dog new tricks?

Much has been written regarding age and SLA (e.g., Birdsong, 1999; Marinova-Todd, Marshall, & Snow, 2000; Scovel, 2000; Singleton, 2001) with many researchers making a strong case for critical or sensitive periods for L2 acquisition. With these theories in mind, it is reasonable to ask if university-age students in Japan with the aforementioned deficits in English proficiency can be expected to function in an EMI environment.

Immersion programs in Canada have seen great success with younger students and late immersion programs (as late as tertiary education contexts) have also met with success in Canada and elsewhere (Hauptman, Wesche, & Ready, 1998; Norris, 1997). Swain and Lapkin (1989) suggested that older students can often have an advantage over those who begin language learning earlier. They posited that older learners can accomplish the same amount of learning in a shorter time and that there are surprisingly few differences between early and late immersion students. The advantage that allows late immersion/adult students to "catch up" with those who have been in immersion environments for longer is posited to be the transfer of literacy skills from the L1, which allows students to achieve comparable proficiency in reading, writing, and often speaking skills after a number of years of immersion (Swain & Lapkin, 1989). The importance of age of onset of L2 immersion was also found to be less than expected by d'Anglejan (1990).

There are, however, important differences between early and late immersion programs at primary/secondary school levels and tertiary education contexts. The amount of contact hours with the L2 in tertiary education would be expected to be far less than the five-day-a-week total immersion offered at the primary and secondary levels. In addition, the more lexically and cognitively demanding subject matter taught in HEI contexts would further complicate the comparison. This has led some researchers to believe that language learning goals must be adjusted to realistically predict what level of proficiency can be expected from those who are immersed in the L2 at a tertiary level only (Norris, 1997).

L1/L2 Use in the Classroom: English Only?

Given the limited English proficiency of many high school graduates in Japan and the cognitive demands of tertiary level subject matter, the question of whether an English-only immersion policy is realistic must be explored. As we will see in the next section, such a policy has been found to be unrealistic in many EMI courses. However, in this section, we will analyse the question of whether an English-only policy is desirable. There are a growing number of researchers who suggest that L1 use in the classroom may not only be necessary but also favourable (e.g., Gearon, 2001). Dailey-O'Cain and Liebscher (2009) suggested that an optimal amount of codeswitching can indeed enhance L2 development and bilingual communication practices. Swain and Lapkin (2000) also proposed three purposes for codeswitching: (a) moving the task along, including figuring out the order of events, retrieving semantic information, and task management; (b) focusing attention on language; and (c) enhancing interpersonal interaction. Turnbull, Cormier, and Bourque (2011) also found that controlled use of L1 during tasks to scaffold understanding of complex subject matter can lead to deeper cognitive processing of complex content, especially for students with low levels of TL proficiency (as in the case of the majority of university-level Japanese students):

> This body of literature suggests that the cognitive benefits of the first language may be especially relevant for learners with a low level of TL proficiency dealing with challenging tasks and content. This making-sense process most probably begins in the learner's L1, where prior knowledge is encoded and needs to be accessed. Content and language learning happen simultaneously while bridging prior and

> new knowledge, during learning events that may occur in L1 while bridging towards the L2. Since language is also the tool students use to communicate learning, interactions between L1 and L2 may occur during the making-sense process. (p. 183)

To conclude this section on some of the basic SLA issues surrounding EMI in HEI contexts, we can summarise that age may not be as large an impediment to success in EMI contexts as some would believe; however, it may also be prudent to adjust expectations of the proficiency achievements of students in HEI contexts. Furthermore, taking into account the limited proficiency of many students, some L1 use may not only be necessary for students to tackle complex tertiary-level subject matter, but it may actually play a vital role in helping students to understand and process the content they will encounter.

EMI in HEI Context

In this section various efforts at EMI will be explored with a view to identifying some of the pitfalls and issues that institutions around the world have faced. The following is a transcript of an exchange between a science teacher and a class taken from Arden-Close (1993) that illustrates some of the frustrations associated with EMI instruction:

> T [teacher]: As it says, there is a special stability of half-filled subshells which have spherically symmetrical charge distribution. Now, ha ha, do you know what that means? Uh well, I'll do my best to explain. Do you know what spherical is? What's spherical?
>
> S [student]: Round.
>
> T: Round. So, spherical. Do you know what symmetry is?
>
> SS [students]: Same, same as. Two.
>
> T: It's like a mirror. You get mirror symmetry, or uh - how to explain symmetry simply? Uh uh have you come across symmetry in your Arabic lessons, in your Arabic science lessons? It's two things that are related by a mirror, by movement uh. . .
>
> S: XX [words not clear] divides some things into . . .
>
> T: Into two halves, yes. Uh, the two halves are related by mirror symmetry or by
>
> SS: Same, same.
>
> T: They are the same uh. In this case spherically symmetrical refers to the charge distribution. Do you know what distribution means? Spreading out, uh arrangement. But when they refer to spherically symmetrical they're talking about, it means the charge is equally distributed around the sphere. It's not quite regular, it's not quite uniform. That's what they mean by spherically symmetrical charge distribution. It's spherical, round, it's symmetrical because it's the same everywhere, it's uh - we're lost. It's- we're going to have to rewrite that. (p. 251)

The above interaction is typical of the dangers which await EMI projects. In Arden-Close's account of EMI at Sultan Qaboos University, the issues that must be accounted for when implementing EMI are detailed. Arden-Close found that the primary problems in lectures in EMI contexts were lexical, which is in keeping with Pica's (1987) assertion that learners rely on semantic processing to comprehend input (as opposed to syntactic processing). Arden-Close goes on to explain that foreign lecturers (who are common in EMI contexts) often lack any shared knowledge with the students by which they can explain unknown vocabulary (p. 255), which in turn can lead to explanations which end up being even more complicated than the initial item they are seeking to explain (p. 259). Byun, Chu, Kim, Park, Kim, and Jung (2011) also detailed language difficulties associated with EMI in the Korean higher education context. They mentioned that some teachers are uncomfortable using English in their classes and that the texts are too difficult for the students to understand. Furthermore, as many university classes are very large, it is unrealistic to imagine that the teacher could deal with individual language problems in a lecture hall. Apart from language issues, there is a general consensus among many institutions that have implemented EMI courses that the content of the course needs to be adapted and simplified in order to aid comprehension (e.g., Arden-Close, 1993; Byun et al., 2011; Flowerdew, 1997; Sert, 2007), and that less material can be covered over the course.

Sert's (2007) analysis of three forms of EMI in Turkish higher education institutions also highlights this trade-off of language acquisition and content. In his discussion of EMI, he looked at EMI, English-aided instruction (EAI), and Turkish-medium instruction (TMI). EAI consists of lectures in Turkish with English texts and examinations, supported by (general) English lessons. TMI consists of Turkish lectures, texts, and examinations with longer (general) English lessons. He concluded that although EMI was the most effective of the three for gains in English proficiency, the loss to content achievement did not outweigh the gains to language proficiency.

Flowerdew (1993), again at the Sultan Qaboos University, offered some suggestions as to how these issues can be overcome in EMI contexts. These solutions require a great deal of preparation for the course and on-going language and content support for the students in the form of a content teacher and a language teacher.

- It is important to identify exactly what tasks will be required of the students.
- A database of the necessary lexical items and expressions required by the content course must be produced (possibly by means of a concordance analysis).
- Profiles of common student difficulties must be produced.
- Texts must be simplified by language teachers (to ensure comprehensibility) and content teachers (to avoid distortion of material).

Once these measures are in place, the students can be prepared for the lexical challenges that await them in their subject lectures, and English support lessons can be instrumental in ensuring that students comprehend what they have studied. However, some reduction in goals for content achievement will still be necessary.

CBI and CLIL in HEI Context

In the above examples, most of the instructional energy was focused on facilitating the comprehension of the content when that content was supplied in EMI contexts. Content-based instruction (CBI) and content and language integrated learning (CLIL), on the other hand, take a different approach to the same issue. Instead of language classes designed to support content instruction, in these approaches, content and language instruction are equally prioritised. The basic principle behind these two concepts is that language development is best achieved when it is integrated with content into a single course. This means that the focus is not simply on having the students understand the content (i.e., comprehensible input; Krashen, 1984), but to have those students be able to produce language through spoken and written tasks (i.e., output; Swain, 1993).

An important aspect of these approaches is the sociocultural perspective on language learning, which maintains that language is fundamentally social and has its genesis in the interaction between people (Lantolf & Thorne, 2006). This theory is based on the Vygotskian concept of the zone of proximal development, which posits that a learner has two levels of development: the actual level of development, which is characterised by functions which have already matured, and a zone of proximal development, which refers to what a learner can do when interacting or being guided by a more competent other (Vygotsky, 1978). Through this interaction, learners create meaning and deal with subject matter (content) while simultaneously learning language through comprehensible input and pushed output. The teacher supports these activities by providing comprehensible input (often with a proactive focus on form), providing feedback on content and language (reactive focus on form), and guiding students through materials designed to follow Cummins' (1981, 1986, 2000) developmental framework. The developmental framework predicts that if students are introduced to topics in a context-embedded and cognitively undemanding initial step, and if this step leads to steps that are more cognitively demanding and less context embedded, the learner will develop not only more complex understandings of the subject matter, but also more proficient comprehension and productive language skills.

Examples of CBI and CLIL in HEI contexts are not as numerous as those in primary and secondary contexts. Some reasons for this are that the added focus on form suggests much less time to cover content and the difficulty of finding teachers who are both proficient content teachers and proficient language teachers. In the EMI courses studied by Sert (2007), the conclusion was reached that "CLIL in Europe has not been thoroughly examined in HE, and it does not seem to be practical in the Turkish context to train CLIL lecturers" (p. 167). However, some tertiary-level institutions have attempted to implement CBI/CLIL approaches.

Hauptman et al. (1989) met with considerable success using CBI/CLIL approaches for psychology classes at the University of Ottawa. They found that "[i]n general, sheltered courses are a viable alternative to traditional types of second-language instruction for high-intermediate and advanced students, particularly with respect to the development of the receptive skills (listening and reading)" (p. 457). Norris (1997) conducted an immersion-like CBI/CLIL course in Japanese in Australia for future Japanese teachers and found that the student gains in content knowledge and language were considerable; however, as mentioned previously, he noted that with low-level L2 learners expectations regarding final proficiency should be conservative (p. 97).

To conclude this section, we can summarize that CBI/CLIL approaches to HEI courses are viable for students who already possess high-intermediate language abilities, and that they also produce superior results to traditional language classes (Sert, 2007). Regarding content, however, it is likely that expectations of the amount of material covered will have to be reconsidered if the goal of language fluency is to be included.

Is EMI a Good Idea?

Having discussed the various approaches to EMI in HEI contexts, it now behooves us to ask if conducting courses in English (or indeed any FLMI) is a good idea for the student, teacher, university, or country as a whole.

The advantages for the student of EMI are improved English skills, which may prove beneficial when job hunting. Depending on the context, the student may also be exposed to different cultures and ideas through their EMI courses (if the lecturer is from another country, for example). The disadvantages are that the student may not be able to cover as much material as they could in their L1 and may not be able to process it as deeply.

For the teacher, working in English may give them opportunities to reach a wider academic audience as Coleman (2006) notes: "Publication and teaching in English also allow academics in poorer states to improve their career prospects by becoming job-mobile" (p. 6). The disadvantages are that they will need to work significantly harder; it has been estimated that preparing for an English language course requires five times as much effort as preparing for a course in one's native language (Tsuneyoshi, 2005). Professors in Turkey also lamented that they couldn't make their classes as entertaining in a foreign language as the students were not capable of understanding the L2 at such a complex level (Sert, 2007).

For the institution, the benefits are attracting more international students and, by so doing, bolstering income from fees, leading Coleman (2006) to characterise the current climate as one in which"[t]he phrase 'international students' increasingly means not the 'organized mobility' of mutual exchanges but the 'spontaneous mobility' of fee-paying individuals" (p. 5). The drawbacks for institutions are that the loss in content could lead to a perceived decline in the value of their graduates and that there is the need for the administration to adapt to foreign students with various expectations not experienced in a homogenous student body (Tsuneyoshi, 2005).

For the country as a whole, or as a culture, more "global human resources" means increased competitiveness in a globalised world. Furthermore, interaction with other universities will enable the sharing of knowledge and research, which will help the culture keep pace with its neighbours and competitors. The drawbacks include a loss of certain aspects of their culture which could be

replaced by English. Coleman (2006) speaks at length about the image of English as a "killer language." Indeed, some countries have reduced the number of EMI courses in an effort to protect the lecturing style and academic register of their own language (for the case of Sweden, see Airey, 2004).

In conclusion to this section, using English as a medium of instruction holds both benefits and drawbacks for the student, teacher, school, and culture as a whole. These must be carefully considered before adopting EMI in HEI contexts.

What Manifestation of EMI is Most Suitable for Your School?

In this, the final section of this paper, by way of clarification and summary, three possible educational priorities will be suggested and the appropriate form of EMI will be proposed.

"My institution prioritises content over language skills."

If content and subject matter are your primary concern, and you view language development as a subordinate goal, perhaps EMI is not for you. However, if you wish to adopt EMI, then the approach taken in Turkey of EAI (Turkish lectures with English support lessons) may be the right choice for you. Adjustments to the Turkish situation might be appropriate, for example, by linking the content of the EFL classes with the content of the subject classes to increase motivation and making sure that the tests and textbooks are in the same language as the lectures.

"My institution prioritises language gains over content."

In this kind of institution, a CBI/CLIL approach would be ideal. Without having to worry about how much content is covered in a term, your teachers are free to spend time fully exploring each topic and allowing plenty of interaction between students as they attempt to master the L2. Motivation should remain high as long as the content area chosen is of interest to the students. Popular areas include Global Studies, Media Studies, and European/Asian Studies.

"My institution places equal importance on both content and language gains."

Achieving acceptable benefits and gains in both content and language can be challenging in HEI contexts. The large amount of subject matter to be covered, its complexity, and the resulting lack of time to focus on individual student needs, make the balance extremely difficult to achieve. Best results have been achieved when the students were already well grounded in both the L2 and the subject matter (see Hauptman et al., 1989, for an account of a course where the students had already completed one year of Psychology and were judged to be at a high intermediate level of language proficiency). If your students are at a beginner proficiency level, acceptable goals will be difficult to achieve.

Conclusion

This paper has attempted to explore the issues surrounding English as a medium of instruction in higher education institution contexts. As much as possible the ideas in this paper have been based on actual research and case studies from tertiary institutions around the world. There is still very little research in the area of EMI in HEI contexts, and, therefore, any institution considering adopting this approach should consider carefully its reasons for doing so, it goals, and its available resources.

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