

# ISSUES AND CHALLENGES OF ENGLISH-MEDIUM INSTRUCTION IN HIGER EDUCATION AND THE USE OF DIGITAL TECHNOLOGY

By

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## **Abstract**

The language medium used for teaching and learning is a critical factor for academic success because of the close connection between language proficiency and academic competence. The use of English-medium instruction (EMI) as found in higher education in Nigeria is also a world-wide phenomenon through which advanced concepts are expressed. However, in spite of the prevalence of the use of EMI to teach content in non-language related courses at this level and the important role it plays in learning outcomes, it is an under-research field. Therefore, based on Spolsky's (1989) model of second language learning which describes how learners' social context, attitudes and motivations, formal and informal learning opportunities interact to determine the quality of language and content learning as well as his theory on language policy formulation and management, EMI in Nigeria is examined. Taking into account how teaching and learning in higher education courses are impacted by government policy as well as the challenges experienced by students and teachers, this study attempts to assess how effectively national learning goals are being achieved. Attention is then drawn to how digital technology can address identified problems and advance effective language use in content learning.

**Keywords: English-medium instruction, Higher Education, Content Learning, Digital Technology**

## **Introduction**

The use of English-medium instruction (EMI) in higher education is a worldwide phenomenon. This is evident not only in countries where English is the first language (L1) such as the United Kingdom, United States, Canada, Australia, New Zealand, or African and Asian countries once colonized by the British such as Nigeria, Ghana, India and Pakistan to mention a few, but also in countries like France, Italy, Finland, Sweden, China and Japan that have never been part of the British colonial empire (Coleman, 2006; Hu & Lei, 2014; Fenton et al, 2017). This general acceptance of English is due to multifaceted factors that range from the historical, the political, to the cultural and the economic. Increasingly, in many countries, English is fast gaining ground as the most important language to learn. In some where it is the official language used in government, law courts, education, media and business, it has second language (L2) status (Crystal, 2003). Noting this trend, Warschauer (2006) claims that English is becoming “the second language of everybody”, a view that is shared by the co-chairman of the Commission on Global Governance, Ramphal (1995) who once asserted that “There is no retreat from English as the world language; no retreat from an English speaking world.”

The preeminence of English amongst other world languages such as Spanish, French, Arabic, and Chinese can firstly be attributed to British imperialism which took the language across the globe. And then to the rise and influence of the United States in world affairs that has further advanced the use of English around the world. Presently, it seems that the convenience of adopting a language that enables interactions between diverse people who speak different languages is be valued by many who have embraced it as the language for international communication. These three main factors have promoted the use of the language in important sectors of such as diplomacy, business and the internet and have led Power (2005) to describe English as “the turbine engine of globalization” particularly in terms of interaction and integration in the areas of trade, the movement of people and the dissemination of knowledge (p.41). In many sectors, it drives the interchange of ideas, views and products across the world thus enabling nations to contribute to

international socio-cultural, economic and technological processes in spite of linguistic variations. Consequently, Crystal (2003) claims that English assists globalization which in turn further consolidates it as a world language.

The dominance of English is especially evident in the fields of science and technology where it is used as the lingua franca that allows scientists from around the world gain access to an enormous storehouse of scientific ideas and knowledge. Some studies have noted that more than 75% of international scientific communications are written in English (Research Trends, 2008; Hamel, 2007), a claim that is further substantiated by the vast quantity of researches in science and technology that are disseminated through the internet where 80% of the world's electronically stored information is in English (Crystal, 2003). Seen as a universal language with a huge audience that provides access to up-to-date information for personal, professional as well as national development, it is not surprising that English has become the language of the digital world.

The academic community has likewise embraced this “global language” not only as a subject of study in itself but also as the language used to teach the content of other disciplines. In this latter role, it is referred to as English-medium instruction (EMI). If as Crystal (2003) notes, “access to knowledge is the business of education” then, it is not surprising that the language that opens the most doors to scholarship will be valued by academia (p.112). Hence, a study by Dearden (2015) reports that in more than 54 countries, EMI is a rapidly growing trend that cannot be ignored especially in higher education where the teaching, research, and applied work at this level demand strong language and communication skills. Therefore, to achieve information literacy, critical thinking as well as fluency in speaking and writing, EMI is used to teach academic content. Some scholars even attribute the accelerated expansion of higher education throughout the world to the adoption of EMI because it cuts across language barriers, and in so doing, expand the field from which institutions can attract foreign students (Wächter & Maiworm, 2014). Globally, it is adopted as a tool that simultaneously enables students to access a vast storehouse of information while improving their proficiency in English. More and more, the expectation is that it will also improve the job prospects of those fluent in it and enable them contribute to national and global challenges (Barrett, 2019; Hu & Lei, 2014).

In countries that were never British colonies, EMI is increasingly gaining ground. For instance,

English has acquired significant importance in the Chinese educational system. From 2001, it became an entry requirement for the most exclusive and desirable higher education programs in business, law, sciences and technology (Fenton-Smith et al, 2017). Likewise, there has been a “ten-fold increase in EMI provision in European universities” (Wächter & Maiworm, 2014). For example, in France, EMI is used in teaching the sciences, social studies and business in higher education because of the perceived benefits which include access to and inclusion in research, mobility and competitiveness for both students and staff.

However, while the use of EMI is on the rise, the implications of learning through a second language in countries such as Nigeria are under-researched in spite of the impact it may be having on the quality of education. In an attempt to address this gap, the following examines some of the major issues of EMI in Nigeria taking into consideration government policy objectives and how well set learning goals are being achieved. The ways in which EMI is employed in content learning in higher education are discussed and challenges arising from it are examined. The use of digital technology to aid both teaching delivery and learning is explored and suggestions are made to help improve the quality of academic instruction

### **What is English-medium Instruction?**

The importance of the medium of instruction in education is highlighted when Wolff (2011) states that “Language is not everything in education but without language everything is nothing in education” (p.55). Hence, the necessity of looking closer at the use of English-medium instruction which Macaro (2018) defines as “the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English” (p.19). By this definition, EMI does not solely have a language learning goal for learners for whom it is second language (L2). But while Macaro’s description of EMI is accepted by a number of researchers, some are of the view that it omits English-medium educational practices in Anglophone settings. For instance, Baker and Huttner (2016) argue that the exclusion of those for whom English is a mother tongue (L1) is “unhelpful” as it does not take into account the presence of multilingual students in the same institutions who learn non-language related academic content through English. Similarly, Pecori and Malmstrom (2018) claim that EMI is frequently assumed to include “all contexts in which English is a dominant

language and in which English language development is supported and actively worked for” (p.507). Importantly, for both L1 and L2 students, the benefit of EMI is not restricted to merely enhancing their linguistic abilities but it also provides access into international communities in academics, business, scientific research and development for all concerned. This is why the use of EMI for content learning adds to the “international” appeal of institutions that adopt it and thereby boost their income generation (Galloway, Kriukow, & Numajiri, 2017; Macaro et al., 2018). However, Coleman et al (2018) assert that “understanding the historical and political dimensions of EMI is crucial to policy and practice as these dimensions determine the parameters that in turn determine the differences between EMI environments” (p.702).\_\_

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### **EMI in Nigeria**

In most African and Asian countries, British colonial incursions undoubtedly provide some explanations for the long history of English-medium instruction. But Phillipson (1995) opines that the adoption of EMI is not always attributable to “linguistic imperialism”, rather, to deliberate policy decisions made by national governments. This view is illustrated by Pakistan where the adoption of EMI is dictated by the government’s education policy which directs that English language is compulsory from Class 1 onwards. Here, it is “the medium of instruction for science, mathematics, computer science and other subjects like economics and geography in all schools in graduated manner” (Piller, 2016, p.176.). In Malaysia, the implementation of the 1967 National Language Act led to the conversion of English–medium schools to Malay-medium schools but as the switch resulted in high unemployment rates among graduates because of low proficiency in English, the policy was widely criticized and the decision was reversed in 1993 (Puteh, 2010). The re-implementation of EMI particularly for science and technology courses in higher education was considered necessary for providing students with international competencies, enhancing employability, social mobility, promoting intercultural understanding” (Hickey, 2012, p.280).

Similarly, British colonialism bequeathed the English language on Nigeria and even after independence it has continued to occupy a unique position in national life mainly because it serves

the function of bringing together diverse groups of people who make up the country (Bamgbose, 2001, Ochoma, 2015; Ezeafulukwe &Chinyeaka, 2016). Seen as the language of unity that enables Nigerians from over five hundred linguistic groups to interact and cohere as single entity, in some important instances, English appears to take precedence over indigenous languages. In the Nigerian educational system, its pedagogical relevance arises from the fact that it has remained unchallenged as the language of instruction throughout the school system from primary school through secondary school to the highest tertiary levels.

Again here, the adoption of EMI has been a top-down decision by policy makers with little or no consultation with language experts. The foremost consideration appears to be its utility as a lingua franca in the multilingual society that is Nigeria. In addition to enabling learners engage with global knowledge and innovations, the perception is that it confers an “international” standard on education. But in spite of the length of time EMI has been in use in Nigeria, it is not backed by a national language policy which according to Spolsky (2004) is driven by four conditions—national ideology, the role of English in the globalization process and a nation’s sociolinguistic situation. Instead, the nearest attempt at a policy statement concerning the use of English is enshrined in Section 55 of the Nigerian Constitution of 1999: “The business of the national Assembly shall be conducted in English and Hausa and Igbo and Yoruba when adequate arrangement has been made thereof”. This is followed with a proviso in Section 97 that says: “The business of the House of Assembly shall be conducted in English but the House may in addition to English conduct the business in one or more other languages spoken in the State as the House may by resolution approve”. At first glance, English seems to be of the same standing as the three major indigenous languages mentioned but a closer scrutiny of the reference to “adequate arrangements” calls to question the government’s position since requisite resources have not been provided for teaching Nigerian languages. Apart from the constitution, what could be regarded as the national language policy may also be gleaned from “incidental occurrences of language provision in official documents on policies on education” (Akindele & Adegbite, 1999, p.7). This explains why the notion of a “language policy” in Nigeria is usually considered within the framework of the educational system and policies pertaining to it as set out in the National Policy on Education (NPE).

### **National Policy on Education**

A country's policy on education is a means of realizing national goals by way of its learning institutions. Thus, the Nigerian National Policy on Education (NPE) states that the country's educational goals "shall be clearly set out in terms of relevance...in consonance with the realities of our environment and the modern world" (4). First published in 1977, revised in 1981, 1998, 2004, 2007 and 2013, it lays out the government's position on the language of instruction:

The medium of instruction in the primary school shall be the language of the environment for the first three years. During this period, English shall be taught as a subject. From the fourth year, English shall progressively be used as a medium of instruction and the language of immediate environment shall be taught as subjects. (2013, p.8)

The NPE appears to recognize the importance of the mother tongue in the first instance but adds that English will also be used for the first few years of education (Ochoma, 2015). The 2008 review of the NPE was even more explicit when it says that "the medium of instruction in the primary school shall be the language of the environment for the first three years in monolingual communities during which period English shall be taught as a subject". However, with the exception of remote areas that are more homogenous, most communities in Nigeria are multilingual which means that English will most of the time be the default language of instruction. A closer look at stated objectives in the NPE for the three years of senior secondary education as well as for higher education again indicate the direction the government intends the use of EMI will take.

### **NPE Objectives of Language Learning at Senior Secondary**

The aim at this level of education is mainly to develop students' knowledge of English, their grasp of the rules of grammar as well as to develop the ability to make use of it in their own writing. Thus, NPE (20.3) specifies that students should:

Express themselves correctly and fully in the language, employing appropriate registers, lexemes and figures of speech.

Read literature written in the English language without difficulty and at reasonable speed.

Carry out continuous writing in the language by employing correct usages of grammar, idiomatic

expression, orthography, and other mechanics of the language.

Acquire the necessary tools, skills, and competencies for tertiary education.

From the above, it is evident that English is to be used as the medium of instruction while it is also taught as a core subject. It is expected that by the time students leave secondary school, they should have acquired a level proficiency in English that will enable them utilize it effectively in their chosen courses. Hence, a credit pass in English is made a condition for admission into higher education (Babatunde, 2002).

### **NPE Objectives of English Language in Higher Education**

At this level of education, the following language and communication skills are expected of students:

Build on and improve upon all the English language skills acquired at the pre-tertiary levels.

Read and write with more competence in English.

Follow sequence of ideas, facts, locate significant points.

Engage in critical thinking, analysis, evaluation.

Develop self study habits.

Although not explicitly stated, English remains the language of instruction in higher education. But in spite of previous steps taken to ensure that students can cope competently with EMI at this level, researchers have identified deficiencies in their academic reading and writing which is attributed to the non-existence of a clear language policy (Babatunde, 2002; Adegbija, 2004; Ochoma, 2015). Thus, in a last ditch effort to remedy student's problems with EMI, a course titled the Use of English has become a compulsory graduation requirement for all higher education students (Freeman & Jibril, 1988). Meant to upgrade learners' standard of English, it is a service course that tries prepares them for the demands of studying in the language. The functional skills of reading and writing form the core of the curriculum with study skills added to help students get the most out of their chosen courses. Yet in spite of this attempt to overcome obstacles in the way



of effective learning, the lack of a clearly articulated government policy regarding EMI has resulted in a disconnection between expectations and actual practice raising important questions about the quality of content learning in higher education.

### **EMI and Content Learning**

Spolsky's (2004) assertion that, "The language policy of a speech community may be revealed in its practices, its beliefs, or in straightforward language management" is substantiated by the way EMI is actually implemented in the Nigerian educational system (p.8). The measures taken to ensure that the quality of teaching and learning is not hampered by the use of EMI are lacking. On the contrary, a major assumption is that the acquisition of content knowledge and second language proficiency happens simultaneously for students, and yet, available research indicates otherwise (Bangbose, 2001). Nonetheless, the use of EMI for non-language courses makes it an essential tool for learning all academic subjects, therefore, it is necessary that difficulties that hinder the effective use of EMI in content learning need to be examined from both the teachers' perspective as well as that of the students.

### **Learners, Teachers and EMI**

Rose et al. (2019) report that lack of English proficiency and academic language skills are significant predictors of students' performance. Certainly, the academic problems that students in Nigeria encounter in higher education can often be traced to their lack of mastery of EMI through which they are expected to understand ideas, concepts and theories and to develop modes of thinking in specific disciplines. After years of impoverished learning of English, EMI continues to pose certain challenges in students' ability to comprehend, evaluate and synthesize content that they are exposed to in lectures as well as in written materials which also leave them disadvantaged in the productive skills expected of them. For example, EMI, it is not unusual to find students unable to construct complete sentences in academic discourse without syntactical flaws largely because they lack a metalinguistic- awareness of academic English, that is, the ability to think about language use. Their struggles with the vocabulary of academic content also highlight the need to improve their grasp of discipline-specific language in core subject areas. All of these challenges end up having a deleterious effect on students' motivation to learn across subjects areas.

Macaro et al. (2018) believe that students' limited command of the medium of instruction hamper classroom activities as some become unwilling to participate in order to avoid embarrassment in front of their classmates especially when low proficiency in the language of instruction is seen as a lack of intelligence. The danger here is that only language competence is assessed excluding those who possess strong content knowledge thereby undermining the quality of academic courses being pursued. Content teaching and testing for L2 students therefore needs to take into account learners' different levels of linguistic abilities. This is why emerging research stress the importance of paying attention to language use in discipline-specific classes indicating a need for a different type of language planning.

As Rose et al. (2020) claim, "language support might best be operationalized in the form of specific classes that target the vocabulary, language, and academic needs associated with the subject area"( p. 10). This suggests that the language needs of L2 students in EMI could be improved by adopting the English for Specific Purposes (ESP) approach since it is aimed at enhancing language support geared towards the specific needs of EMI students in order to prepare them for their content classes. The potential of this approach lies mainly in its concern with how people learn (learner-centered) rather than with what people learn particularly in situations where English is not the mother tongue (Hutchinson & Waters, 1987; Hyland, 2019). But employing it effectively demands for collaboration between English language teachers and content lecturers who have subject-specific knowledge of their disciplines.

Dubow & Gundermann (2017) assert that in some ways, content teachers are also language teachers and therefore need to acquire appropriate knowledge and skills that will help learners develop both content and language through EMI. Presently, the general assumption that all content teachers in L2 contexts are qualified to utilize EMI in the classroom is belied by the low proficiency of some in the language and the resultant effects on the quality of teaching and learning (Dearden, 2014; Pecorari et al., 2011). While EMI demands a specialized use of English that departs from everyday usage, in Nigeria, there is no benchmark for the level of language proficiency content teachers need to have in order to use it. Instead, the same yardstick of a credit pass in English that is used to gauge students' capability for higher education is the same that qualifies all teachers to use EMI. Consequently, most teachers are unaware of the implications their own language competence may have on learners ability to grasp subject content.

In such instances, researchers claim that poor proficiency in EMI diminishes overall classroom interaction as content teaching is both linguistically and cognitively simplified and elaboration is reduced (Pecorari et al., 2011). They noted that in L2 contexts, the subject content is often diluted and/or important subject issues are misunderstood or even unrecognized. Although EMI comes with peculiar pedagogical demands, studies have found that professional development is rare and pre-service training in the use of it for subject content teaching is almost nonexistent in most EMI contexts. Hence, the calls for some training in language of instruction for all teachers regardless of whether this is their specialty or not. But such a course of action would serve a remedy only if all content subject teachers are willing to adjust their beliefs about the role of EMI their disciplines (Macaro et al. 2020). The benefits of language training for all teachers is underscored in Roothoof's (2019) study that found that a majority of 59 EMI instructors from five universities in Spain focused only on content when teaching but those that had received some language training were able to focus more effectively on both content and language. This highlights the need for academic language support that is often lacking once students come into higher education, and yet, without which their ability to comprehend what is taught in EMI classes is impaired.

As mentioned earlier, the Use of English course which is mandatory in all institutions of higher education in Nigeria and is meant to address students' deficiencies in higher academic reading and writing has not been entirely successful for reasons which include the limited human and other resources that is allocated to it as well as the inadequate time given to it on academic timetables. Alternatively, a variant of English for Academic purposes that is referred to as English for Specific Purposes has more potential of improving content learning because it deals with the peculiar language needs of learners in their chosen courses. But it requires collaboration between English language teachers and content teachers in order to tackle specific challenges in EMI (Shehu, 2022). However, the use digital technology in teaching and learning content presents another effective and more immediate means of handling problems in EMI.

### **Digital Technology for Content Learning**

When an educational system decides to adopt EMI, the degree and quality of utilization is largely dependent on the resources both human and otherwise that are devoted to it. Thus, in the 21<sup>st</sup>

century, technology offers an additional tool to enable ease of learning. Interestingly, the rapid developments being witnessed in digital technology are happening at the same time as EMI is on the increase. Therefore, according to Eady & Lockyer (2013), it is time embrace the use of digital technology in the learning process especially as the use technology in the classroom appears to be the future of education. Certainly, the initiatives resorted to during Covid 19 highlight the potential of technology to impact positively on education (Khabbazbashi et al., 2022). Furthermore, the use of digital technology by young people in all its forms such as computers, laptops, tablets, smart phones apps, streaming and cloud storage is so wide spread that it cannot be ignored, but rather, harnessed to improve content teaching and learning in all disciplines. Thus, some researchers (Hennessy, 2005; Tswana, 2007) state that technology could act as a catalyst that could motivate teachers and students to work in innovative ways to improve the overall quality of learning.

Several advantages come to the fore when digital technology is integrated to support learning objectives. From the beginning of preparing learning materials through to teaching, **EMI classes could become richer in content and more participative in nature.** The inherent ability of technology to unlock a huge store of information on a variety of topics would enable both teachers and learners to gain more insights into academic content (Tswana, 2007). Another benefit is that through the use of technology, teaching methods and strategies could be adapted particularly when using content materials that do not take into account the language difficulties of L2 students. Tasks that may not be easily facilitated in class could be created on digital platforms to enable them to fully grasp academic information. **The use of digital technology** could also mitigate some of the problems associated with EMI in large multilingual classes and where contact hours between teachers and learners are inadequate. It would allow teachers to, provide individual students with the one-on-one attention that may be needed, conduct assessments, monitor learners' progress and give feedback more efficiently.

Greater learner autonomy which is ultimately the goal of all good quality education can be advanced by the use of digital technology. Online search engines such as Google Scholar, Microsoft Academic, Directory of Open Access Journals, Yahoo and so on provide learners with resources to discover answers to questions in their chosen disciplines (Hennessy et al, 2005; Pourhossein, 2013). By enabling them to actively exert some control over their own learning, students will be able to absorb content material at individual pace while at same improve their

language proficiency and skills in independent reading and writing. This would help learners develop a stronger sense of responsibility and self-motivation and also encourage collaboration with other students during the learning process. Similarly, the possibility of easy storage and retrieval of learning materials whenever and wherever students need them is a major advantage of using digital technology in education.

Once learning outcomes have been identified, technology could enable learners to gain confidence in tackling academic tasks that require the mastering of content knowledge as well as procedural knowledge, that is, how something is done. As each employs different genres and text types that can be accessed online, learners would have more exposure to the content that they need to comprehend and to use in their own work. Resources and aids that improve content learning could be easily accessed to provide practice in different aspects of EMI such as understanding context, meaning, text structure, grammatical patterns and word collocations which will help students in their own efforts at academic writing. In this way, they would be better prepared for content teaching in the classroom, be more motivated to work cooperatively together, and, learn from each other.

All of the above is best achieved by being clear-eyed about how digital technology can support EMI. However, while it offers different platforms on which information and ideas could be shared, a major requirement in higher education is training learners in critical thinking so as to enable them recognize the difference between opinions and factual information. For this, teachers need to be mindful of how easily learners could be distracted by the variety of material available online. Therefore, course content, teaching strategies as well as assessments need to be adapted to the strengths of digital platforms instead of merely transferring existing content on to them. This is why Khabbazbashi et al. (2022) claim that teachers would need to model the use of digital technology for learners.

## **Conclusion**

In the above, the impact of EMI on content learning in higher education and how digital competencies can be employed to aid teaching delivery and advance both language and content learning are discussed in order to situate Nigerian students more confidently within the global context in which they have to operate. The quality of higher education is important because by

imparting knowledge, high- level skills and innovations, it links intellectual and educational pursuits to the development and growth of society. Therefore, if students experience difficulties with the language of instruction or with the materials used in this level of education, then the nature of content learning in academic courses will inevitably be impacted. Therefore, the decision to use EMI in L2 contexts needs to be reassessed by stakeholders in education as it could exclude students with strong content knowledge but with weaker language abilities and thus end up limiting both learners' potential as well as the soundness of academic courses on offer. To this end, the task of the government is twofold, to make clear policy decisions regarding the use of EMI and to devote adequate resources that facilitate effective teaching and learning.

The pressing question of how to provide language as well as academic subject support in needed in EMI courses is answered by the variety of options provided by digital technology that could be utilized to enhance the experience of learning. While students in Nigeria maybe handicapped by the lack of sustainable power supply and affordable internet services, nonetheless, the use of technology has become an important part of the learning process in and out of the class. But as control over the learning process devolves to students, the use of technology will need to be managed appropriately by teachers in order to achieve learning goals. Some of the challenges of EMI in Nigeria are shared by other countries that have also adopted it in their educational systems. Therefore, collaboration between EMI practitioners, policy makers, curriculum developers, and even examination bodies within Nigeria and internationally is necessary so as to find solutions to common problems encountered in content learning. The urgency of this cannot be overstated because unless EMI is improved upon, it will be difficult for learners to get the full benefit of the academic content to which they are exposed in higher education.

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