

Teachers' Attitudes towards Using English as a Medium of Instruction in Sub-Saharan Africa: The Case of a Higher Polytechnic College in Rwanda

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Abstract. The trend to adopt English as a medium of instruction (EMI) in different countries, in recent years, has created controversy about how effective this is and its possible effects specifically on the quality of education and on other (local) languages. This study investigated teachers' attitudes towards using English as a medium of instruction in one polytechnic college in Rwanda. Interviews were carried out to 10 teachers and, based on the results from these interviews, a questionnaire was designed, and 92 teachers were able to respond to this. The results revealed that most teachers view EMI as an important policy as it has enabled the college and even the country to get internationally integrated and to have access to more teaching and learning resources. The majority of teachers reported that EMI has increased employment opportunities and has facilitated more academic mobility. However, teachers' and students' limited proficiency and lack of support were found to be the main challenges to using EMI. Despite this, most teachers reported that they use both linguistic and methodology-related strategies to overcome some of these issues. Generally, though teachers said they face some problems while using EMI, they also reported that teaching vocational courses is less demanding in terms of English proficiency as most classes are practical. Access to varied online resources, as they argued, has also reduced the burden of teaching in a language they are not accustomed to. Overall, the study revealed the need to offer more training and support to teachers in order to improve the impact of EMI.

Keywords: English as a Medium of Instruction, Teacher's attitude, Polytechnic College

Introduction

A Language plays an important role in teaching/learning process activities. Academic researchers and educationists generally agree that education is best carried out in the mother tongue and suggest that pupils should learn different concepts in their mother tongues as media of instruction. Niyomugabo (2015) states that the teaching and learning of mother tongue gives the learner the ability to understand more, the unique phenomenon inherent to human being which is speaking. This can also be the basis for learning foreign language very easily through written texts, dialogues, pictures, practices etc.

In his report to UNESCO for Education for All Global Monitoring, Carol (2004) argued that while there are many factors involved in delivering quality education, language is clearly the key to communication and understanding in the classroom. Many developing countries are characterized by individual as well as societal multilingualism, yet continue to allow a single foreign language to dominate the education sector. This time the researcher's intention was to evaluate the teachers' attitude towards using English (the language which is not amongst their mother tongues) as a Medium of Instruction in Sub-Saharan Africa, specifically in Rwanda.

Background for the Study

The English language has had a tremendous influence on the educational systems of various countries in recent years. According to Marsh (2006), English is growing as a worldwide lingua franca at unprecedented speed and as a result, educational institutions are adopting English as a medium of instruction (EMI) at some or all levels of education. He argues that this is due to socio-economic motives and the need for a language that can commonly be

used for instrumental purposes. However, he argues that using EMI in some low-resource countries directly implies failure and exclusion in education. This issue therefore requires some enquiry.

The quality of education that learners receive from school by using a foreign language as a medium of instruction is questionable. As Williams (2011) demonstrates, most children in Sub-Saharan Africa have limited access to English and as a consequence, there is low quality of education where it is used as a language of instruction. This is then a problem if children cannot understand the subject content due to using a language they are not conversant with. Regarding this problem, Marsh (2006) argues that it is important to consider various strategies to mitigate problems related to the use of a foreign language as a medium of instruction. Understandably, these strategies must be set prior the implementation of EMI policies.

In contrast to the above, the language of instruction can be adopted for reasons other than promoting students' learning. For example, as Marsh (2006) says, EMI was adopted in Ethiopia partly as a way of solving the problem of learners with different mother tongues. He also demonstrates that schools put more emphasis on teaching the content of core subjects and less is done to improve the language of instruction, which is the foundation for learning other subjects. Concerning this issue, McIlwraith (2013) claims that most of the policies in Africa are driven by economic, political and ideological aspirations instead of educational realities; hence, the implementation of these policies becomes problematic. This should thus be addressed as the quality of education must be prioritised over other factors that influence EMI adoption.

In relation to the above, Dearden (2014) asserts that, currently, there is a global trend to use EMI specifically for science and other major school subjects. Understandably, this has consequences on the level of students' assimilation of the content. He shows that few studies have been conducted to show the reasons, the right time and feasibility of introducing EMI. In addition, as he argues, several issues are associated with EMI including the refusal or amendment of EMI in some countries, existence of controversial views about EMI, lack of competent teachers to implement EMI, code switching and code-mixing issues in connection with the use of EMI, assessment issues, and lack of appropriate teaching and learning materials adapted to EMI just to mention few. In such situations, there is a remarkable interest to investigate the status of using EMI particularly for school-leading subjects including technology and vocational ones.

The status of EMI in Africa requires more investigation in order to be improved. According to Clegg and Simpson (2016) most policies regarding the language of instruction in Sub-Saharan Africa privilege foreign languages as there are beliefs that local languages cannot be used beyond basic education. As EMI is predominant in these countries, the authors argue that, due to limited skills in this language, most students are restricted to quality education. They argue that the available pedagogical expertise about learning in a second language (L2) is rarely applied in these countries. This is then a problem if little attention is paid about learning problems that can arise because of using a foreign language as a medium of instruction.

As a result of reading about the statuses of EMI in different contexts, the researcher got inspired to search more about this phenomenon. When trying these to connect his personal history, as a teacher, about using foreign languages (French and English) as media of instruction and by considering the experiences he went through; he felt it was crucial to investigate the attitudes and experiences of teachers about using EMI in Rwanda Education, which was introduced in 2008.

Statement of the Problem

In Rwanda, the language of instruction has had numerous educational implications. Following a number of critical changes in the Rwandan linguistic setting and particularly in

education whereby foreign languages namely Kiswahili, French and English have had major influences on the quality of education; and, considering the abrupt introduction of EMI in 2008 in situations whereby French has had a monopoly of being used as medium of instruction for a long time; Samuelson (2013) argues that the benefits of having a quick change to EMI are not granted as most schools do not have well-trained and competent users of English. Since the introduction of EMI in Rwanda, there have been few studies to show its status specifically the challenges in the implementation and the ways of addressing them. It was therefore critical to investigate how teachers had coped with this situation to deliver lessons in a language which is considered to be relatively new in their context. Specifically, the study was conducted in one polytechnic college in Rwanda, where most teachers were primarily technicians with little or no pedagogical training.

Rationale

As Rwanda has done a lot to promote access to education for all in recent years, there is currently a trend to improving the quality of education at all levels. As the language of instruction plays a key role in determining the quality of learning, it was important to evaluate the teachers' attitude towards the use EMI in promotion of students' experiences and performance at school, especially in the context of Rwanda where English is not widely used in the community.

Objectives of the Study

The objective of this study was as follows:

Determine teachers' attitudes towards using English as a medium of instruction.

Literature Review

Global Rise of EMI

The spread of EMI is closely linked to the proliferation of English in recent years. As Erling and Seargent (2013) argue, English is now used as a global lingua franca where it plays a key role in various technological, economic, political and social exchanges. Consequently, English is considered by various governments and individual people as one of the most important skills that people should possess in order to fit into the current international society. This trend is thus heavily manifested in education whereby various countries are adopting EMI at almost all levels regardless the foreseeable challenges in the implementation and the negative effect to the quality of education for most children (Ibid). It can thus be argued that there is need to carefully examine the effects of this internationalisation movement.

Apart from the aforementioned trend, the issue of language of instruction mostly in Africa is in need of special consideration. Smith (2011) argues that it is widely recognised that the medium of instruction, particularly in Sub-Saharan Africa, influences the quality of instruction. This implies that lack of appropriate mastery of this language can lead to poor school performance. Concerning this issue, Williams and Coooke (2002) argue that students' competence in EMI is low in these countries; hence, comprehension of the subject matter is affected in return. He also points out that many teachers are not qualified enough to use the medium of instruction to the required standards. Ideally, to deal with this issue, these countries are expected to make informed decisions in order to minimise disruptions resultant from EMI adoption. On the other hand, Meganathan (2011), referring to a study he conducted in India, concludes that it is more reasonable to solely teach English as a subject instead of imposing a poor EMI system. However, this also poses a problem as the presupposed benefits of EMI go far beyond those of teaching English only.

Other realities are congruent with the use of EMI. (Macaro, Hultgren, Kirkpatrick, & Lasagabaster (2019) conducted a study in 54 countries, in 2013 and 2014, with the intention to find the status of EMI and its future trend. The findings were that: EMI is growing fast due to the need for globalisation; EMI is not given proper consideration in teacher training institutions in many countries; some teachers are not competent enough to teach their subjects in English; the possibility to widen the gap between the rich and the poor; and EMI is seen as a threat to local languages. These seem to be significant challenges that should be carefully analysed before adopting any EMI policy. In this regard, Dearden (2014) claims that most countries adopt EMI policies by mainly considering economic and internationalisation factors and pay less attention to the actual implementation of these policies in terms of the required teaching expertise, materials to be used, and how to adapt assessment to the complexities of using EMI in a foreign context. However, Coleman (2011) argues that there is also increased scepticism about claims that put English forward as a tool for development. He argues that other local or international languages can have an important complementary or supplementary role.

Attitudes, Affordances and Challenges about Adopting EMI

There are varying reasons why different countries adopt EMI in their educational policies. One of the salient motives is the need for Internationalisation. According to Jensen and Thøgersen (2011), proponents of English as a language to be used in higher education in Denmark, for example, raise the concern about internationalising university programs so that students can compete on the global job market and hence, English as a lingua franca is preferred to Danish. This is also a strategy to attract competent students and teachers from different parts of the world. Those who were arguing against the introduction of EMI in Danish higher education were of the view that since universities are creators of knowledge through research, then they have an obligation to disseminate that knowledge in Danish, which is understood by the majority of the population. This was also related to another problem that teaching in English, when neither students nor teachers are native speakers of English, would lead to poor quality of education (Ibid). This can be argued to be a controversial issue that would require to balance the advantages and downfalls of each side and then take a more appropriate decision.

In relation to the above issue, Macaro, Hultgren, Kirkpatrick, & Lasagabaster (2019), reporting about EMI in Myanmar, say that students fail to understand important concepts because they don't have necessary English skills and hence, they simply memorise key terms to be reproduced during exams whereas their teachers use the local language (Myanmar) to give explanations and then English is specifically used for highlighting technical terms. With regard to teachers' competence, the level of English is fossilised as they do not learn any more English and what is worse is that they even try to cram the content of what they teach and as a consequence, students' skills in English also remain poor (Ibid). This shows how hard it can be to ensure that EMI improves students' proficiency in English. They argue that the situation in Myanmar is similar to that of many other contexts. These authors recommend the following: finding ways of considering other local languages to complement EMI in schools; teachers and students should not feel guilty to code-mix or code-switch as a means of deepening the understanding of the subject content instead of relying on EMI only; it is important to encourage students to read materials written in other languages other than English; the native-like English practices should not be overemphasised as English is mostly used as a lingua franca. Therefore, EMI policy makers should take these recommendations into consideration.

In contrast to the above, Macaro, Hultgren, Kirkpatrick, & Lasagabaster (2019), referring to teachers' beliefs about EMI in Spain, say that teachers have a positive attitude towards EMI. This is because these teachers argue that EMI does not affect content learning; it is regarded as a means of fostering internationalisation; and their students are also motivated to learn using EMI. However, they said they feel linguistically constrained while using EMI as opposed to

using their L1; it takes them much time to adapt materials and requires them more effort compared to the use of L1. Though the attitude of these teachers is regarded as positive, in a study conducted in 55 countries by Dearden (2014), on behalf of EMI Oxford, one of the conclusions about the attitude of the public towards EMI was that: “the attitudes can be described as ‘equivocal’ or ‘controversial’ rather than being ‘against’ its introduction and/or continued use” (p.1).

Though these aforementioned teachers in Spain said that EMI does not affect content understanding, Clegg and Simpson (2016) argue that the design of curricula in Sub-Saharan Africa tend to ignore the fact that learners are L2 users who need extra support with regard to overcoming some potential language barriers. They claim that these curricula seem to be designed for competent users of EMI. They mention Rwanda and South Sudan as countries where this issue is observable in their curricula. They also argue that the shift from knowledge-based curricula to competency-based ones in developing countries is a challenge as this change implies higher requirements in terms of language mastery; hence, the mismatch between the complexity of the language in the curricula and the low level of proficiency on the side of both teachers and learners. So, to solve this issue, they suggest parallel learning of language and content in the same curriculum by, for example, highlighting the main vocabulary and some important academic aspects of English. This, arguably, can be a good idea where there is a remarkable low proficiency in English.

If the above aspect of language is not taken into consideration, there can be numerous pedagogical implications. According to Klassen and De Graaff (2001), directing attention to language production affects didactical practices in classes and can result in less flexibility on content delivery, prolonged monologues, lack of humour and poor interactional practices. So, this could result in some concentration problems on the side of students than if they were using their L1. They also argue that students’ listening and attention span are reduced if they are not enough competent in the second language (L2) and this may result into failure to meet various academic requirements. For this issue, O’ Dowd (2018) demonstrates that, even though most universities offer various courses in English, there are still concerns about how to offer adequate training in EMI and there is currently increasing trend of accrediting teachers who deliver their subjects using EMI. Accordingly, Macaro, Hultgren, Kirkpatrick, & Lasagabaster (2019) argue that EMI policy makers should put in place adequate mechanisms to support teachers during the implementation phase. Understandably, this continuous professional development would even increase the morale of teachers to deliver their courses in EMI.

In the light of the affordances and challenges of introducing EMI, Badwan (2019) argues that, as it is shown in the conclusions of her study about the potential of EMI in Tunisian Higher education, though EMI is perceived useful as it is associated with employability opportunities and its valuable role in the internationalisation matters, some challenges need to be addressed before embarking on EMI. These include ensuring proper teacher training with a strong emphasis on English language proficiency and this has to be linked to a strong assessment system on all the English language skills. This, reasonably, would help mitigate various issues related to EMI.

Strategies Commonly Used by Teachers to Cope with the Challenges of EMI

Different authors have investigated different approaches which could be used to mitigate challenges associated with the use of EMI. First, Carrio-Pastor (2019) shows that pragmatic strategies for teachers are crucial in a context where English is used as a foreign language. This author argues that teachers must plan their discourses in detail and rhetoric tactics should be selected carefully while communicating with students. This is supposed to be done through what the author calls ‘the use of mitigation devices and boosters’ (p. 145). However, Islamov, Shimanskaya, and Doroshina (2015) argue that teachers do not use appropriate and varied

methodologies, and this tends to develop only students' vocabulary and that they principally remain passive listeners whereby lecture is the prevalent method and as a consequence, students develop what these authors call 'passive language skills' (p.50). They argue that EMI is supposed to help and motivate students to develop their strategies to learn the subject content but also improve students' language skills. This can be argued, however, that subject teachers would have a double task which might be difficult to handle.

In contrast to the above argument whereby EMI is expected to improve students' language skills, McIlwraith (2013) argues that, in many places where EMI is used, there are various code-switching practices between English and the local languages and that some arguments are in favour of systematically incorporating bilingual practices especially in class talk and in assessment. In relation to this, Johnstone and Selepeng (2001) recommend teachers to always check whether they share the same meanings of words/ concepts with their students; hence, they could give explanations in students' first language where it is applicable in order to avoid rote learning. They also suggest that textbooks and examinations should cater about complexities and problems related to using EMI where it is not the first language of students and hence adapt the teaching and learning materials accordingly.

Additionally, teachers' English proficiency is very crucial in determining the effectiveness of using EMI. Islamov et al. (2015) question teaching staff competence in the language of instruction as this may hinder their teaching and assessment capacity. In regard to what students need in order to cope with instruction in a second language, these authors mention things such as allowing some adaptation period, checking vocabulary understanding in class, giving presentation work and code-switching just to mention few. On the side of teachers, these authors mention things such as adjusting the rate of speech, reformulation, giving summaries, group work activity, collaboration with language teachers and the use of concrete materials. However, Dearden (2014) argues that an EMI teacher would then need the same skills as those of an English as a Foreign Language (EFL) teacher such as modifying the input so that it matches the needs and language levels of students, improve content comprehension by engaging students in interactional tasks and creating an atmosphere that can motivate students to speak freely with no shame. Still, he claims that most teachers have limited or no understanding of various pedagogical implications of teaching using EMI. It is therefore important to investigate into approaches and strategies that can help subject teachers to overcome these obstacles that result from using a foreign language as a medium of instruction.

Methodology

This chapter discusses the methodology which was used for this study. Firstly, it highlights the aims of the study and the research questions that guided this study. Next, it discusses research design and approach in detail. In addition, the context and the participants of the study are described. Finally, the chapter presents some ethical considerations for the study.

Aims and Justification of the Research

This research mainly aimed to investigate attitudes of teachers towards using English as a medium of instruction.

This aim is significant because the language of instruction is critical to the understanding of subject content. In Rwanda, Kagwesage (2013) observes that, though the language of instruction is English, students still use Kinyarwanda in order to cognitively process the academic content. He goes far to suggest that this national language should be granted an official status as a medium of instruction to be used along with English through translanguaging and code-switching during class or while offering remedial support to students. This study

hence intended to discover what teachers, in one polytechnic college in Rwanda, go through while using EMI.

Research Question

To have a deep understanding of teachers' attitudes towards and experiences of using EMI, this study was guided by the following research question, arising from literature review:

What are teachers' attitudes towards using English as a medium of instruction?

Research Approach

Description of the study design

To answer the research questions, the data was collected using mixed methods namely quantitative and qualitative methods. Murray and Beglar (2009) argue that a mixed method approach allows researchers to understand the matter under study better than using one kind of method. Accordingly, both interviews and questionnaires were used because neither of the two could be sufficient alone. Administering interviews allowed to collect more detailed and richer data compared to questionnaires. In accordance with Creswell (2008), the researcher started with collecting qualitative data in order to be able to develop an instrument to use for collecting quantitative data. This was done as a way of checking the extent to which the rest of the sample population shared the views which had been expressed from interviews. Also, as Murray and Beglar (2009) point out, mixed methods are advantageous as they enable researchers to take or reject findings from one method basing on those from the other one. Correspondingly, Cohen, Manion, Morrison, & Morrison (2009) argue that mixed method helps researchers to avoid bias by viewing reality in one angle and this thus leads to the researcher's confidence about the findings. However, Creswell (2008) questions the feasibility and objectivity in blending data from these different research paradigms. This was not a simple task since the questionnaire consisted of only closed questions.

The fact that observations could not be made constitute a major downfall of the research methods for this study as teachers' experiences and attitudes towards EMI would be understood better by conducting observations of what actually takes place in the classroom when teachers are using EMI instead of solely relying on teachers' self-reported experiences. To cope with this issue of not being able to make classroom observations, however, some stimulated interview questions were included whereby teachers could report their experiences about EMI referring to a lesson that they had taught previously.

It is also important to mention that a case study approach was used. Murray and Beglar (2009) mention that a case is an intensive, thorough study of a given context, which allows to get more details that can help clarify, explain and describe a certain situation. However, Creswell (2008) mentions reliability and generalisability issues with case studies. This study was also cross-sectional in nature because it investigated the matter at a single point of time. However, Cohen, Manion, Morrison, & Morrison (2009) argue that this has limitations because things change with time. This type of research was used because of time constraints.

Interviews

Regarding qualitative method, used semi-structured interviews were used with interpretivist approach. According to Blandford (2013), this type of interview relies on predesigned themes for interview questions which are elaborated depending on participants' responses. It is hence suitable for investigating and exploring participants' experiences and perceptions. As there are limitations about people's capacity to report facts about themselves, it is crucial to offer participants opportunities to expand their responses (Ibid).

Based on literature review and reflection, questions were formulated considering different aspects within the research question. To evaluate the teachers' attitude towards EMI, four sub-questions have been included regarding how teachers value EMI, teachers' confidence

about using EMI, teachers' views about students' attitude towards EMI, and teachers' attitude about whether EMI has promoted the quality of education

In addition, a practice interview was conducted prior the administration of actual interviews in order to identify any problems that could occur. Timing and using proper probing techniques were the challenges and strategies were set to avoid them for subsequent interviews. In June 2020, 10 interviews were conducted and recorded myself using either WhatsApp, Zoom or Skype calls for an average duration of 36.5 minutes for each interview. However, the absence of face to face communication constituted a major limitation to interpreting participants' responses. There were also some network interruptions as most teachers were at home where they had limited access to internet. Another issue was related to the fact that most of these teachers were not used to systematically reflect about EMI and this relatively new experience to them can be considered problematic with regard to the validity of the results for this study. However, interview questions were sent to them some days prior the interview so that they could have enough time to think about them. Moreover, as some of the participants had a problem to fully express themselves orally in English, the option to code-switch to Kinyarwanda was given to them where necessary and as the researcher was conversant with Kinyarwanda, translated this into English. Still, even for those who chose to use English only, their utterances contained some grammatical and semantic mistakes, but they could be understood and adjustments were made during the transcription by indicating the right form, in square brackets, where it was necessary.

Questionnaires

First, the first draft of questionnaire was designed based on the results from interviews. Due to time constraints, the researcher listened to the interview audios, identified the main themes, noted them down on a sheet of paper and then prepared statements which were included into the questionnaire. This was done as a way of checking the extent to which the rest of the sample population agree or disagree on the same views which had been expressed in the interviews. Based on various themes from teachers' interview responses, the questionnaire was made in the following way. 12 statements were set regarding the research question illustrating teachers' attitudes towards EMI whereby the four first statements are about how teachers value EMI; the next five statements are about teachers' confidence to use EMI and the last four statements are related to the link between EMI and the quality of education.

After preparing the questionnaire, a pilot study was carried out by sending it to 3 respondents with the intention to check whether all questions were clearly set. The feedback was about some grammatical mistakes and the questionnaire was adjusted accordingly. The questionnaire was then sent in Google Form as a link to the participants via WhatsApp to fill in their responses. It consisted of only statements on which participants, using a four -point Likert-scale, were expected to strongly agree, agree, disagree or strongly disagree. This made it easier for participants to answer and enabled the researcher to receive answers automatically. Moreover, it was easier to get some statistical information from data. However, participants could not elaborate their responses.

Context of the Study

This study was conducted in a tertiary polytechnic college in Rwanda. This institution was created in 2008 with the mission of providing hands-on skills that can help the youth to be competitive on the national, regional and international labour market. This then shows how the language of instruction is significant in determining the quality of graduates with such aspirations. The institution is located in an urban area, but the students are recruited from various rural and urban backgrounds, mainly in Rwanda but also few of them come from the neighbouring countries. The majority of the teaching staff are Rwandans and only very few have other nationalities. Linguistically, Kinyarwanda is the national language and spoken by

almost all Rwandans. Other languages namely French, English and Kiswahili have an official status. English is used as a medium of instruction from primary four to higher education and it replaced French on this status in 2008.

Participants of the Study

Population of the study

The total population of the study consisted of 132 teachers from NUKU college (anonymised). These were only core subject teachers in the fields of science and technology. All teachers who were not fully engaged in teaching related activities at the time of data collection and those who teach other subjects were not considered as part of the population for this study. The table below highlights different sections of the population of the study.

Table 1. Population of the study

Department	Males	Females	Total
Science	10	1	11
Civil Engineering	35	5	40
Electrical and Electronics Engineering	31	3	34
Mechanical Engineering	22	2	24
Information and Communication Technology	18	5	23
TOTAL	117	15	132

Source: Primary data

Sampling strategy

For qualitative research, 10 participants were recruited as it was thought to have reached the saturation point by the tenth one. It had been expected the majority of the teachers to accept participating in the research, but some participants did not turn up for the interviews and these were replaced by others. For collecting quantitative data, all core subject teachers in NUKU college (anonymised) were considered. Mugo (2002) argues that the larger the sample, the lower the sampling bias and error. Since the population was small and did not require much time and resources to administer a questionnaire, It was decided to take the whole population as potential participants in the study. As topics related to languages are generally considered to be of low interest for technicians in Rwanda, some of these teachers, who are mainly technicians and not really trained in pedagogy, showed low interest to participate in the study or even were reluctant to fully commit themselves to providing well-thought-out answers. To address this issue, It was ensured that the participants could understand the benefits of the study by contacting them individually and by allowing them to ask any questions they had so that they could understand the importance of taking part in the study. Generally, most participants volunteered to contribute to the study by providing the required responses and this must have increased the validity of the results for this study. However, It was aimed to remain as objective as possible in order to avoid any kind of bias. Still, some few participants might have decided to hold some information as a way of not revealing, to their workmates, what they really do.

Identifying and recruiting participants

Contact details of all potential participants from NUKU college were requested (anonymised) and the permission has been granted by the institution to conduct the study. The participants were contacted as soon as the researcher got the Ethics Form signed by the University of Warwick where he was affiliated during this study. The participants were communicated via WhatsApp; the participant information sheet was sent to them and then asked if they were willing to participate in the study.

To recruit participants for the semi-structured interviews, the researcher used what Longhurst (2003) refers to as ‘cold calling’ (p.104). This is about calling people to request them if they would be willing to participate in an interview. In addition, Cameron (2005) stresses that participants in semi-structured interviews are chosen depending on their experience in relation to the matter under investigation; thus, purposive sampling technique is appropriate. For this reason, 3 years of experience were considered as a condition to participate in interviews. These participants were requested to complete questionnaires as well but only some of them did this. For anonymity matters, the college and informants were anonymised such that they could not be externally identified. This enabled them to answer questions more openly and truthfully; hence, the validity of the study was increased. Below are personal information details about participants for collecting qualitative (interview) data: ME= Mechanical Engineering, CE= Civil Engineering, EEE= Electrical and Electronic Engineering, BA =Bachelor’ degree, MA= Master’s degree.

Table 2. Interview participant personal information

Participant	Age range	Gender	Department	Experience	Qualification	Languages
Participant A	40-50 years	Male	ME	10-15 years	BA	Kinyarwanda, French and English
Participant B	40-50 years	Male	Science	10-15 years	BA	Kinyarwanda, French and English
Participant C	30-40 years	Male	EEE	5-10 Years	MA	Kinyarwanda, French, English and Kiswahili
Participant D	40-50 years	Male	CE	5-10 years	BA	Kinyarwanda, French, English and Kiswahili
Participant E	40-50 years	Male	EE	5-10 years	BA	Kinyarwanda, French and English
Participant F	30-40 years	Male	ME	5-10 years	MA	Kinyarwanda, French and English
Participant G	30-40 years	Male	EEE	5-10 years	MA	Kinyarwanda, French and English
Participant H	30-40 years	Male	EEE	0-5 years	MA	Kinyarwanda, French and English
Participant I	30-40 years	Female	ME	5-10 years	MA	Kinyarwanda, French and English
Participant J	30-40 years	Male	CE	5-10 years	BA	Kinyarwanda, French and English

Source: primary data

As indicated in the table above, most of the participants in interviews were men (nine) and only one was female. All of them speak three languages and aged between 30 and 50 years.

Apart from the above, for collecting quantitative data, participants were contacted via WhatsApp, and a questionnaire was sent to them in Google Form link. Only 92 participants out of 132 expected participants were able to respond to the questions and this made a response rate at $69.6\% \approx 70\%$. However, some 3 respondents skipped only few numbers without answering them; so, the researcher could have made all numbers compulsory for checking the box. Some participants made a promise to complete the questionnaire, but they didn’t manage to do it in the due time. Some did not even reply to the researchers’ request. Below are personal details of respondents for the questionnaire.

Table 3. Personal information for questionnaire respondents

Feature	Option	Number
Age range	20-30 years	12 (13%)
	30-40 years	59 (65%)
	40-50 years	19 (21%)
	50-60 years	2 (2%)
	Above 60 years	0 (0%)
Gender	Female	10 (11%)
	Male	82 (89%)
Department	Science	10 (11%)
	Civil Engineering	26 (29%)
	Electrical and Electronics Engineering	28 (31%)
	Mechanical Engineering	17 (19%)
	ICT	10 (11%)
Teaching Experience using EMI	0-5 years	23 (25%)
	5-10 years	49 (53%)
	10-15 years	17 (19%)
	Above 15 years	3 (3%)
Qualification	Diploma	8 (9%)
	Bachelor's degree	52 (57%)
	Master's degree	32 (35%)
	PhD	0 (0%)
Spoken languages	Kinyarwanda	89 (97%)
	English	87 (95%)
	French	78 (85%)
	Swahili	28 (30%)
	German	4 (4%)
	Deutsche	1 (1%)
	Chinese	1 (1%)
	Russian	1 (1%)

Source: primary data

As the table above indicates, out of 92 participants, the majority were males represented by 82 respondents (89.1%) whereas only 10 respondents (11.9%) were females. Most of the teachers (64.8%) were aged between 30 and 40 years. The majority (30.8%) were also in the field of Electrical and Electronics. Most of them (53.3%) had a working experience ranging from 5-10 years. The majority (56.5%) had a Bachelor's degree. Moreover, most of them speak Kinyarwanda (96.7%), English (94.6%) and French (84.4%).

Data Analysis

To analyse qualitative data, two approaches were combined. In accordance with Evans (2018), thematic analysis was carried out by identifying themes from data, and this started with collection of data, during the transcription phase, by reading the transcript as many times as possible and trying to interpret the data available. As she suggests, the importance of a theme does not necessarily depend on its frequency but on how it overlaps with the given research question. Moreover, referring to Longhurst (2003), in order to identify the main themes, the

researcher listened to the audiotaped interviews many times, transcribed them, coded the main themes by writing codes down in the transcript next to each theme and then interpreted them.

To analyse quantitative data, with reference to Phakiti (2015), descriptive research methods were utilised whereby frequencies of responses were presented in form of percentages. Since the questionnaire was made out of the themes that had emerged from interviews, statements in the questionnaire were arranged according to the themes. As the questionnaire consisted of closed statements on which respondents were to agree or disagree, and considering that the questionnaire was sent using Google Form, basic statistics indicating frequency and percentages and their corresponding diagrams were generated automatically. So, this data was transferred into tables and then described the findings accordingly.

In accordance with Mason (2002), integration and merging method was used to present both quantitative and qualitative data. Therefore, as the main research instrument was the interview; as the questionnaire was meant to check how pervasive the themes expressed from interviews were with a larger sample; for each research question, the researcher first described the themes, with the support of quotations from interviews, and then quantitative data was subsequently presented, in form of percentages, by indicating how close or divergent the results were in relation to qualitative data.

Ethical Considerations

Participation in this study was completely voluntary; participants were allowed to decline to participate in the study from the very beginning or withdraw at any time not later than two weeks after data collection; their decision to withdraw or not participate was not meant to have any negative consequences for them or their organisation. This was to be done by writing an email to the researcher. However, participants were assured that data was to be pseudonymised and stored securely in such a way they could not be identified, and I fully explained to them the benefits of participating in the research.

All participants were sent a participant information sheet detailing the purpose of the research, the benefits of getting involved, their rights for participation and withdrawal from the study, confidentiality assurance and what the data was to be used for. The participant information sheet was sent at least two days before the actual collection of data. For collecting qualitative data, I sent the participation and recording consent form to the participants and requested them to read it before the interview. Then, they were asked to give their oral consent during the first minutes of the interview and all the participants gave their consent without any objection. For obtaining the participant consent to collect quantitative data using Google Forms, a consent note was included in the introductory paragraph of the questionnaire stating that by completing and submitting the form, the respondent had consented to participate in the study and 92 participants who submitted their responses consented to participate in the study. Moreover, the researcher did not recruit any vulnerable participant for this study. The participants who took the decision (not) to participate in the study did it on their own.

Findings: Attitude of Teachers towards EMI

EMI as a Valuable Policy

Five sub-themes emerged under this category. These include: viewing EMI as a tool for internationalisation particularly for expanding the labour market, more preference for EMI to teach technology subjects, EMI as a powerful instrument to boost teachers and students' proficiency in English and accessing more teaching resources. These sub-themes are elaborated below.

Teachers generally argued that English is an influential language in the world, and they reported that its status as a language of instruction in their college should be emphasised. This extract can illustrate this idea.

Within this college, English as a language of instruction is very critical [as] the college is dealing with technology. Technology is not limited [to] one country or [to] the boundary of one country; it is global. English is taken as the most [international] language in the world. [...] As a lecturer in Engineering, English is very important not only for learning but also on the market. (Teacher C)

This extract illustrates how the value of EMI is closely linked to the significance of English language in international communication. More importantly, as it is said in the extract, the value of EMI also stems from the influence of English on the labour market; hence, these teachers expressed their favour for EMI.

In addition, they mentioned that English is more relevant to be used as a medium of instruction because the local language is not rich enough in scientific and technological terminology. For this point, they even argued that it is easier to teach vocational subjects in English as it can be hard to translate them into Kinyarwanda. This respondent said this in these words:

In case you want to change from English to maybe the mother language, it can be somehow difficult because those technical terms are in English; so, I think [it is] better to teach in English. (Teacher D)

The excerpt above indicates that the choice for EMI also results from the linguistic limitations of the local language which does not have enough terms to express various technological concepts.

Moreover, some teachers reported that EMI is important as it enables both teachers and students to become more proficient in English language itself as this respondent put it:

In case the English [EMI] is applied in the institution, I can say it help[s] the learner, even the trainer, to know it very much. (Teacher D)

The idea of improving English skills as illustrated in the extract above was pervasive as most teachers argued that EMI improves communication skills.

Another important point that most teachers mentioned was that EMI is considered as a strong tool for accessing more teaching and learning materials and hence they clearly said EMI should be supported. This respondent said it in this way:

I give English the value because with English; you can access online libraries for example e-books; we can access the teaching materials and other, other instruments. (Teacher H)

This extract echoes that it can be a challenge to teach in another language and yet, most of the resources are found in English.

Table 4. Questionnaire findings about teachers' attitude about the value of EMI

No	Statements	SA	A	D	SD
1	I feel English should be emphasised in our classes because it is a significant language of science, technology, business and international cooperation.	58 (63%)	32 (35%)	2 (2%)	0 (0%)
2	I feel English is more valid than other languages that can serve as media of instruction in my college.	40 (44%)	46 (50%)	6 (7%)	0 (0%)
3	I feel that not all content/courses should be delivered using English as a medium of English.	19 (21%)	40 (44%)	29 (32%)	4 (4%)

Note: SA=Strongly Agree A=Agree D= Disagree SD=Strongly Disagree

Source: primary data

To compare the above interview findings with the results from quantitative data about the same point regarding how teachers value EMI considering different elements; almost two thirds of the participants (63%) were strongly in favour of using EMI in their classes as a significant language in science, business and international communication; 35% simply agreed whereas only 2% disagreed with this idea. The majority (50%) also agreed that they consider English to be more valid than other languages in relation to being used as a medium of instruction; 46% strongly agreed. Still, 7% of the participants disagreed on this proposition. Additionally, the majority (44%) also confirmed that all courses and content should be delivered in EMI. However, a non-negligible number (32%) disagreed on this point, even 4 % totally opposed this.

The above results from the questionnaire tend to align with the views from interviews except a slight difference where more teachers showed that all content should not be taught in English.

Confidence about Using EMI as Diversified

The sub-themes that have been grouped under this theme show that teachers' confidence to use EMI can be classified as satisfactory, medium, low, and depending on students' proficiency in English. These are further illustrated below:

Few teachers demonstrated that they feel confident to use EMI in their classes and also claimed that teachers' confidence depends on one's academic competence as this respondent put it:

This time, on my side, I studied in English; if I can remember, I did my Bachelor in English; I did my Masters in English; I am even doing my PhD in English; it is something which is very easy for me,[...] means around ten years in English, then this time, I don't have any problem in English. (Teacher G)

The above extract sheds light on the impact of one's linguistic background on teaching confidence about using EMI. Though only few teachers said they don't have many problems to use EMI, some other teachers mentioned that their confidence is either medium or low. This view was common, and this teacher said it in these words:

It is too difficult actually, we are not native speakers of English, but we have to adapt, [it] means [it is a] challenge on both sides, [it] is not [a] simple challenge to me, myself, and [a] challenge to the learners as well. (Teacher C)

This extracts implies that some teachers are still struggling with using EMI. Some teachers reported that it was not easy for them to make a smooth transition from using French as a medium of instruction to EMI, but they said they made a good progress in this regard.

However, some teachers demonstrated that confidence and comfortability to use EMI also depends on students' attitude towards English and on their proficiency. About this point, teachers had mixed feelings as they showed that there are different groups of students. Some argued that students' attitude and competence depend on their previous school background. This participant stated this in the following words:

Many of them don't like it; they don't want to use it [English]; I think it depends on where they started their studies. (Teacher I)

The opinion in the extract above demonstrates that students' linguistic background can be a determinant of students' experiences with EMI. In relation to this, some teachers also mentioned the tendency of students to use their mother tongue (Kinyarwanda) or other languages (mainly French) because of low proficiency in English. This shows that some students don't feel comfortable using English only as a medium of instruction. On the contrary, some teachers reported that their students are motivated to study using EMI especially because of the market demands as it can be illustrated in the following extract:

Of course, they are motivated and they feel confident for it[EMI], because if I give you an example, here, like I teach in motovehicle mechanics, here in Rwanda, we have those guys from Uganda [many mechanics are from Uganda], they use English; they use Luganda and English; all the skills, all the market here is in English; [...]; so, when they[our students] learn in English, they feel confident that they will not need the other training to meet the market. (Teacher F)

This indicates that there is an extrinsic motivation that pushes some students to make some effort to use EMI in class. Though some students face EMI problems, some teachers reported that most students face difficulties in their first year but become more conversant with English in their second and third years.

Table 5. Questionnaire findings about teachers' confidence about using EMI

No	Statements	SA	A	D	SD
1	I feel confident and comfortable to teach my subject in English.	38 (41%)	50 (54%)	3 (3%)	1 (1%)
2	I feel that my proficiency in English is not all that satisfactory to effectively deliver my subject using English as a medium of instruction.	13 (14%)	39 (43%)	32 (35%)	7 (8%)
3	Using English as a medium of instruction to teach vocational subjects (hands-on skills) does not require much English and it is easier than using it to teach general courses.	33 (36%)	34 (37%)	24 (26%)	1 (1%)

4	Generally, I feel there is a noticeable need to improve teachers' English skills in my college.	57 (62%)	31 (34%)	3 (3%)	1 (1%)
5	Overall, I feel that my students like studying in English.	22 (50%)	50 (55%)	16 (18%)	3 (3%)

Note: SA=Strongly Agree A=Agree D= Disagree SD=Strongly Disagree

Source: primary data

Concerning teachers' confidence to use EMI as the above views from interviews indicate, the results from quantitative data on the same points indicate that a good number of respondents (41%) strongly confirmed that they feel confident to teach their courses in English; the majority (54%) simply agreed about this while only 3.3% disagreed. This indicates that more teachers feel confident to use EMI compared to the findings from interviews. However, this seems to contradict what the majority (43%) agreed indicating that their proficiency is not all that satisfactory to teach their courses in EMI. Only 36% and 8% disagreed or strongly disagreed about this statement respectively. In the meantime, most of the respondents 37% agreed that teaching vocational courses is easier than teaching general courses; 36% strongly agreed while 27% disagreed on this and only 1% strongly disagreed. The above positive results for teachers' confidence seem to be hardly supported as most respondents (62%) strongly agreed that there is a noticeable need to improve teachers' English; 34% simply agreed on this while 4% disagreed. However, the majority 55% confirmed that they feel their students like studying in English; 25% strongly agreed while 18% disagreed.

EMI as a Positive or Negative Factor towards the Quality of Education

As this title indicates, two sub-themes emerged under this theme. One indicates that EMI can have a positive impact on the quality of education and the other shows the opposite. These are further clarified below:

Teachers generally claimed that there are various determinants of the quality of education and it was not easy for them to evaluate the contribution of EMI in relation to this. Some of them did not clearly explain how EMI had promoted the quality of education; they simply argued that using EMI allows the college to have more access to teaching and learning materials, facilitates international communication and opens more employment opportunities; hence, they thought that EMI can have a positive impact on the quality of education as this participant responded when he was asked whether EMI had promoted the quality of education:

Yeah, yeah, it [has] actually because, as I said, we are dealing with technology in this college, [it] means whatever the books, whatever the technology, whatever the interaction with experts from different countries, the unique way to provide this is to do with English. (Teacher C)

This excerpt indicates how English is crucial in various academic settings. Hence, some respondents argued that EMI can play a fundamental role in improving the quality of instruction.

However, some other teachers were not of the same view as they argued that EMI can only positively contribute to the quality of education only if proficiency in this language is granted and this can be implied from the following excerpt:

But when you switch the discussion [from Kinyarwanda] to English, the class is somehow quiet, but when you try to use the mother tongue, they try to give the ideas; they are open. So, it is a long journey. (Teacher I)

The above extract implies that some teachers are sceptical about the power of EMI to improve the quality of education as long as students (even teachers) are not sufficiently competent in English language.

Table 6. Questionnaire findings about teachers' attitude about the link between EMI and the quality of education

No	Statements	SA	A	D	SD
1	I feel that using English as a medium of instruction favours more rote (memorisation) learning and inhibits the potentialities of most of my students.	14 (15%)	51 (55%)	24 (26%)	4 (4%)
2	I feel that using English as a medium of instruction offers me more opportunities to innovate and conduct research in my area of specialisation.	54 (59%)	29 (32%)	6 (7%)	3 (3%)
3	I feel that using English as a medium of instruction gives me more opportunities to give clearer explanations of the content to my students.	28 (31%)	41 (45%)	17 (19%)	5 (6%)
4	Overall, I feel that using English as a medium of instruction has promoted the quality of education in my college.	24 (26%)	47 (51%)	19 (21%)	2 (2%)

Note: SA=Strongly Agree A=Agree D= Disagree SD=Strongly Disagree

Source: primary data

Apart from the above findings from interviews, teachers were also asked, in the questionnaire, to rate the degree to which they think EMI has impacted on the quality of education considering the aspects that the other teachers had mentioned in the interviews and these were the outcomes: more than half of the participants (55%) confirmed that EMI favours more rote learning and inhibits the potentialities of most of students; 15% strongly agreed. However, 27% disagreed on this point and 4% strongly disagreed. Instead, the majority (59%) strongly asserted that EMI offers them more opportunities to innovate in their fields of specialisation; 32% simply agreed whereas only 7% disagreed and 3% strongly disagreed on this. In addition, the majority (45%) agreed that EMI gives them more opportunities to give clearer explanations of the content; 31% strongly agreed but 19% disagreed on this and only 6% strongly disagreed. Overall, most participants (51%) reported that they feel EMI has promoted the quality of education and even 26% strongly agreed on this. Nevertheless, 21% disagreed on this point and only 2% disagreed on it.

Discussion

Research Question: What are Teachers' Attitudes towards Using English as a Medium of Instruction?

Teachers' attitude towards the value of EMI

The findings of this study suggest that teachers generally consider EMI as valuable and critical specifically for instrumental reasons including accessing educational resources easily, especially in science and technology and for broader economic and political reasons. This particularly concurs with the argument of Macaro (2015) stipulating that most institutions adopt EMI as a strategy to access the large amount of academic resources, with special focus on science, which are mainly available in English. However, the findings indicate that majority of teachers said that not all content should be delivered in EMI. This might imply then that other languages can be used as media of instruction along with EMI. This would then be in accordance with the findings from the study conducted by Tamtam et al. (2013) whereby Science and Engineering lecturers in Libya suggested that a bilingual system of Arabic and English can work better instead of adopting one sole medium of instruction.

Teachers' confidence towards using EMI

There are mixed findings about teachers' confidence to teach in EMI. Some said that they feel confident but also at the same time acknowledge that their proficiency in English is not satisfactory to teach their subjects in EMI and even showing that there is a noticeable need to improve this, but it was commonly said that they try. On the other hand, the findings also show that few of them feel confident and also believe that their English skills are enough. According to Goodman (2014), referring to his conclusions about a study on EMI in Ukrainian University, EMI has had an impact on how confident teachers interact with their students in relation to how they deal with fluency problems and other classroom management problems that require proper language to handle.

Teachers' views about the connection of EMI and the quality of education

Generally, in qualitative data, teachers did not tend explicitly say that EMI has promoted the quality of education as they thought it involves many factors, but they simply said EMI can promote the quality of education since it gives access to more learning resources and employment opportunities. However, in questionnaires, the majority of the teachers said EMI has promoted the quality of education in fact. Still, some teachers said EMI favours more rote learning and can inhibit students' potentialities. In this way, the extent to which EMI can have a positive impact on the quality of education in measurable terms is still unclear. According to Qorro (2006), a language which is a medium of education can positively influence the quality of education only if both students and teachers are proficient in that language since it is the only way in which discussions, debates, questions, answers and building one's knowledge are possible.

Implications for EMI Practitioners

The findings for this study have various implications for different stakeholders in EMI, specifically in the TVET sector in Rwanda.

First, it is important to consider that even though most teachers view EMI as an important policy, it is necessary to monitor and evaluate the extent to which EMI can bear tangible transformation which can lead to sustainable development. By systematically indicating the achievements and existing challenges about EMI, it is possible to make adequate adjustments.

As the findings for this study indicate, most teachers admit that there is a gap between their current English competence and the required competence to effectively teach their subjects. Unfortunately, they reported that they have not received any training related to EMI. Regarding this matter, Dearden (2014) shows that there are no support programmes for EMI provision in some countries whereby there are no clearly stated requirements for English proficiency, few or no institutional guidelines about how to use EMI effectively, and lack of appropriate in-service training plans. Therefore, policy makers should ensure that they devise

plans on how to progressively train teachers in EMI and put in place assessment and accreditation strategies so as to have a clear orientation of how to implement EMI policies; and in accordance with Goodman (2014), basing on EMI implementation strategies in Ukraine, only those teachers who are proficient in English should be allowed to deliver their courses though he argues that proficiency in English does not necessarily guarantee effectiveness in the subject content.

Additionally, teacher training colleges must ensure to offer adequate training that will enable teachers to cope with the challenges of teaching and learning in a foreign language. As it was found that online materials and programmes helped some teachers to improve their English proficiency, there should be a systematic way of incorporating e-learning into teacher development programmes.

Synopsis of the Study

This paper has discussed teachers' attitudes and experiences about EMI in one polytechnic college in Rwanda. The study demonstrated that teachers generally regard EMI as an important tool for internationalisation, access to more relevant academic materials and employability opportunities.

The usage of mixed method was particularly useful for the validity of the results for this study. By administering semi-structured interviews first, the researcher was able to collect diversified data about teachers' views about EMI. To check the extent to which the rest of the population shared the same views; a questionnaire was designed, and this gave some statistical information that allowed to draw some inferences in relation to the results from interviews, by identifying aligned or unaligned results from both instruments. The fact that the whole population was considered as a sample also gave extra strength to the results though the response ratio was 7:10. Conducting this study in a single institution also allowed the researcher to understand that particular context in depth, though the generalisability of the results is significantly low.

The most significant contribution of this study was in finding out that teaching vocational and technology courses using EMI, where hands-on skills are the focus, presents, as teachers reported, an added advantage over other courses since most of the tasks and skills can be transmitted through demonstrable and practical sessions and hence the demand in English proficiency was said to be lessened; though Clegg and Simpson (2016) argue that high competence in English is required when learner-centred methods are applied. It was also revealed that most of the terminology for these vocational courses are in English and hence using EMI is the most effective way of accessing these skills as teachers argued that some concepts can be hardly expressed using local languages. Interestingly, this study revealed that, as a result of having quick access to online resources, teachers can instantly solve many issues related to using EMI in class.

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