



## Research paper

# Linguistic challenges of pre-service teachers in English medium instruction and its relationship to their teaching self-efficacy beliefs

Charles Selorm Dzormeku<sup>a,\*</sup>, Koen Veermans<sup>b,c</sup>, Jake McMullen<sup>b</sup>

<sup>a</sup> University of Turku, Faculty of Education, Assistentinkatu 5, 20500, Turku, Finland

<sup>b</sup> University of Turku, Department of Teacher Education, Assistentinkatu 5, 20500, Turku, Finland

<sup>c</sup> University of Turku, Centre for Research on Learning and Instruction Assistentinkatu 5, 20500, Turku, Finland



## ARTICLE INFO

## Keywords:

English medium instruction  
Language skills  
Pre-service teachers  
Self-efficacy beliefs  
Linguistic challenges

## ABSTRACT

Using a latent profile analysis, we attempted to categorize Ghanaian pre-service teachers according to the levels of their English language linguistic challenges and to investigate how these challenges relate to their teaching self-efficacy beliefs. A sequential mixed method approach was adopted, surveying 300 participants and followed by eight interviews. We found that speaking skills were the most challenging for the participants. Qualitative results revealed that the participants have limited vocabulary, difficulty in developing coherent paragraphs, challenges with pronunciation, inadequate orthographic knowledge, and grammatical challenges. We observed that the higher the participants' linguistic challenges, the lower their self-efficacy beliefs.

## 1. Introduction

English as a medium of instruction in jurisdictions where the English language is not the first language (L1) of the majority of teachers and students has gained prominence over the past decades (Soruç et al., 2021; Macaro et al., 2018). This trend could partially be attributed to the introduction of English-mediated programmes in higher education institutions which have adopted English as a language of instruction due to a desire for internationalisation (Bradford, 2012). However, even before the increase in this trend, English has been used as a language of instruction in some Commonwealth African countries like Ghana since the beginning of formal education in those nations. Despite the history of English being the medium of instruction in some parts of Africa, little attention has been given to this phenomenon in these countries (Macaro et al., 2018). This has led us to investigate the linguistic challenges Ghanaian pre-service teachers encounter in their training to become teachers when English is used as a medium of instruction, and how these challenges relate to their (pre-service) teacher self-efficacy beliefs.

Due to the numerous indigenous languages spoken in Ghana, a circumstance which can be partly attributed to the country's colonial past with Britain, English, a colonial legacy, is the language of education at most levels of formal education in the country. Over time, there have been some fluctuations in the country's language policy. However, the

current language-in-education policy of the country stipulates that the L1s of respective communities should be used as the language of instruction from kindergarten to grade three, whereas the English language will be taught as a subject during this period (Leherr, 2009). When pupils progress to grade four and beyond, English becomes the language of instruction, and some of the various L1s become subjects of study. This structure aims to ensure a smooth transition from L1 to the second language (L2). Unfortunately, it has not resulted in completely satisfactory outcomes as members of the Ghana Association of Teachers of English have raised concerns about the inadequate English proficiency of senior high school students (Akowuah et al., 2018). In addition, the English language chief examiner's reports (2018, 2019, 2020) from the West Africa Examination Council (WAEC<sup>1</sup>) indicated that most senior high school graduates in Ghana face significant challenges with the English language. These challenges are evident in the final West Africa Senior Secondary School Certificate Examination (WASSCE), the most common requirement for admission into tertiary education in Ghana. Among the challenges identified were 'spelling errors', 'faulty constructions', 'poor grammar', 'wrong use of words, and poor punctuation in the essays of the candidates' (WAEC, 2020, p. 142).

Students with these challenges may nevertheless obtain the minimum grade required to gain admission to various higher education institutions. However, if these English linguistic challenges remain

\* Corresponding author.

E-mail addresses: [csdzor@utu.fi](mailto:csdzor@utu.fi) (C.S. Dzormeku), [koevee@utu.fi](mailto:koevee@utu.fi) (K. Veermans), [jamcmu@utu.fi](mailto:jamcmu@utu.fi) (J. McMullen).

<sup>1</sup> West Africa Examination Council.

unresolved, they may encounter challenges in the learning process at the higher education level since teaching and learning at that level of education are based on more abstract concepts and theories. In the case of teacher education students, these challenges do not end there, as these students will become full-fledged teachers in schools where they will have to teach English (as content) and teach in English (as a medium of instruction). In the lower grades, the (pre-service) teacher should be able to assist children to learn to read and to read to learn in the English language. In grade 4, they should support the transition from L1 medium instruction to English Medium Instruction (EMI) and from grade 4 onwards use English as the language of instruction. Throughout all grades, they are expected to identify children with literacy problems in the English language and provide remediation (Ministry of Education, 2017).

To execute this task effectively, the (pre-service) teachers among other things, should be fluent in the English Language; otherwise, their lack of proficient English skills may be passed on to pupils in their formative years. If critical attention is not paid to this situation, it could remain an unfortunate cycle in the country's education system.

## 2. Literature review

### 2.1. Students' language-related challenges at the higher education level

Previous studies have revealed that productive language skills (speaking and writing) pose more challenges to students than receptive language skills (listening and reading) do in most EMI contexts (Aizawa & Rose, 2020; Kamaşak et al., 2021; Shepard & Rose, 2023). For instance, writing skills have been identified as difficult for students in EMI programmes (Aizawa et al., 2020; Evans & Morrison, 2011; Galloway et al., 2017; Shepard & Morrison, 2021) and Spontaneous speech production, an aspect of speaking skills, has also been identified as a challenge for students (Suzuki et al., 2017; al Zumor, 2019).

Although productive skills have been identified as predominantly challenging for students, this does not imply that students do not encounter challenges in receptive language skills. Some students find it difficult to comprehend their teachers' accents (Evans & Morrison, 2011) and understand lectures and study materials (Curle et al., 2020), leading them to resort to memorization (Galloway et al., 2017). Therefore, it could be predicted based on these previous findings that these students may complete their educational programmes without being able to apply the knowledge acquired in real-life situations. This reiterates the importance of the language of instruction in the achievement of educational objectives.

To overcome these linguistic challenges, adequate knowledge and mastery of certain micro-skills are required. For instance, students require adequate vocabulary knowledge (Dabbagh & Janebi Enayat, 2019), grammar, and orthographic skills (Arfê et al., 2016) to enhance their writing skills. In the same vein, they need graphophonic knowledge or word recognition skills alongside knowledge of punctuation to read effectively. The insufficiency of these micro-skills may lead to various linguistic challenges, thereby resulting in a lower language proficiency level. Therefore, it is not surprising that Pessoa et al. (2014) discovered that students have difficulties in reading comprehension because of their lack of vocabulary knowledge. Further in line with the specific challenges students encounter in EMI, Rose et al. (2020) revealed that working out the meaning of difficult words (unfamiliar words) is a stumbling block for students in EMI situations in China. This indicates that these Chinese students first lack the requisite vocabulary knowledge and cannot rely on other contextual clues to derive the meaning of unfamiliar words.

Previous studies (see Aizawa et al., 2020; Kamaşak et al., 2021; Soruç et al., 2021) have delineated the linguistic challenges that students encounter when studying in EMI programmes. However, there are gaps in the literature, as none of these studies has focused on pre-service teachers in Africa who are expected to use English for instruction in

their future teaching careers. In addition, most existing studies adopted a variable-centred approach in their investigations. These approaches usually gloss over qualitative heterogeneity that may exist among participants. For instance, Kamaşak et al. (2021) concluded that on average, participants did not report significant challenges because overall, items on the EMI challenge instrument had a mean score above 4 on a scale from 1 to 7. However, the standard deviations for all items were above 1, which indicates considerable variation in the level of linguistic challenges among participants. This suggests that at least part of the participants had scores below the midpoint and reported linguistic challenges. In the case of (pre-service) teachers in English-mediated educational systems, this is of utmost concern not only for their learning but also for their future careers as they are expected to use English for instructional purposes and teach English as a subject (content).

### 2.2. The concept of self-efficacy

The concept of self-efficacy is premised on Bandura's (1997) Social Cognitive Theory, which proposes that individuals have a degree of control over their cognitive processes and behaviour (Bandura, 1997; Pajares, 2003). The implication is that the individual is considered the agent of the resultant event that they deliberately orchestrate. On a general level, self-efficacy is the conviction that individuals hold about being able to execute a given task in different situations (Bandura, 1997). This conviction influences the behaviour of the individual in executing the task and has consequences for the outcome they achieve. Importantly, self-efficacy is situated on internal strengths and capabilities needed to execute a task. In other words, although self-efficacy alone can raise and sustain motivation, it does not necessarily lead to the accomplishment of the desired result if the requisite skills are absent (Bandura, 1993, 1997; Zimmerman, 1995).

According to Markova (2021), teacher self-efficacy is the belief a teacher has in their abilities to accomplish tasks related to pedagogy within specific teaching contexts. This concept is important because it is related to other factors relevant to effective and efficient teaching and learning. First, teachers' self-efficacy beliefs impact their commitment to teaching (Bandura, 1993) and the teaching profession (Chesnut & Burley, 2015). Further, it has a significant influence on the academic environment they create for their students, the teaching and learning activities they design for lessons (Bandura, 1997; Markova, 2021; Tschannen-Moran & Hoy, 2001), and teachers' willingness to try new and different instructional strategies (Cerit, 2013; Tschannen & Hoy, 2001). Additionally, teachers' self-efficacy beliefs have implications for teachers' classroom planning and management (Tschannen-Moran & Hoy, 2001; Bay, 2020), teachers' desire to spend more hours with struggling students (Bottiani et al., 2019) as well as students' achievement (Tschannen-Moran & Hoy, 2001; Mojavezi & Tamiz, 2012; Mohamadi & Asadzadeh, 2011). In essence, teacher self-efficacy belief is one of the powerful constructs needed to attain educational objectives.

According to Bandura (1997), although a teacher's self-efficacy is related to their actions, certain factors can affect the strength of this relationship. Some of these factors may be the requirements of the teaching task to be accomplished (Tschannen-Moran et al., 1998; Tschannen-Moran & Johnson, 2011) and teachers' judgments of their personal competence such as internal strengths and deficits (Tschannen-Moran & Hoy, 2007). For instance, in a context where the language of instruction is not the L1 of the teachers, inadequate proficiency in English (the language of instruction) may be one of the factors that affect self-efficacy negatively. This echoes Bandura's (1997) assertion that 'people do not hold vacuous efficacy beliefs devoid of any underlying capabilities' (p. 61). This also makes it relevant to investigate the relationship between pre-service teachers' English language linguistic challenges and their teaching self-efficacy to see if there are indications of such relationships.

### 2.3. (Pre-service) teachers' self-efficacy and English as a language of instruction

In most educational contexts where English is not the L1 of both teachers and students including Ghana, the English language is viewed from two different perspectives (Procorari, 2020). The first perspective is that English is a pedagogical tool (medium of instruction) for teaching other content areas, such as Mathematics and Science. The second perspective is English is considered a subject of study (content). However, while much research has focused on English language teachers' self-efficacy (see Chacón, 2005; Ghasemolani & Hashim, 2013), little attention has been paid to the impact of using English as a medium of instruction on the self-efficacy beliefs of teachers who use English as a pedagogical tool to teach other subject areas. Existing scientific evidence from English as L2 contexts indicates that the self-efficacy of some teachers who teach in English is undermined. This is in line with Wyatt's (2018) assertion that the self-efficacy beliefs of teachers who do not teach in their L1 may be threatened, which can impact how they feel about using the language in class for instructional purposes. For instance, Tsui (2018) identified in Taiwan that the self-efficacy beliefs of teachers who teach in English-mediated programmes were adversely affected because of a lack of training to use English as a language of instruction.

### 3. Research questions

Since English is used as a medium of instruction in most formal education in Ghana, it implies that pre-service teachers (teacher education students) do not only experience EMI in their education (training); they are also responsible for providing EMI in later professions. The duality of EMI for learning and future work may pose challenges in either context if teacher education students have linguistic challenges in English. Against the background of general concerns about students' English language skills, we sought to answer the following research questions:

1. Which English language skills pose the greatest challenges to pre-service teachers in Ghana?
2. What are the patterns of EMI linguistic challenges among pre-service teachers in Ghana?
3. What is the relationship between Ghanaian pre-service teachers' self-efficacy beliefs and their EMI linguistic challenges?

To answer RQ1, a sequential mixed method approach (Creswell, 2009) was employed where quantitative analysis was initially used to identify which of the English macro language skills – listening, speaking, reading, and writing – posed the most challenges to the participants and later followed by qualitative analysis to explore the micro language skills that pose challenges to participants. A quantitative analysis was used to answer RQ2 and RQ3. It is important to mention that RQ3 was dependent on RQ2 because the relationship between participants' teaching self-efficacy beliefs and their EMI linguistic challenges was determined based on the patterns identified in RQ2.

### 4. Method

The first step in the research was to obtain formal permission from the principals of four colleges of education. They granted permission after perusing hard copies of the questionnaires, viz-a-viz, the objectives of the study. As these colleges do not have personalised institutional email addresses for students, the link to the survey was posted to WhatsApp groups which are designated channels for communicating official information. The link was accompanied with a text and voice note explaining the idea behind the survey and instructions for

completing the survey.

#### 4.1. Participants

Pre-service teacher, as used in this context, refers to fourth-year college of education students. There are two reasons for selecting fourth-year pre-service teachers for this study. The first is that they are in the final stages of an English-mediated teacher education programme and the second is that at this time in their studies, they also had teaching experience during their internship. This combination makes them uniquely suitable to respond to questions on their teaching self-efficacy beliefs and EMI linguistic challenges because they have some teaching experience and at the same time, are technically still higher-education students.

The quantitative sample consists of 300 pre-service teachers from four public colleges of education in the Ashanti Region of Ghana. Participants were generalist pre-service teachers who were being trained to teach all subjects at the primary school level. Two participants from each college of education were interviewed in the qualitative part of RQ1. With 57% male and 43% female students, the gender distribution among participants is fairly similar to the national gender distribution of students in Ghanaian public colleges of education (52.4% males 47.6% female) as of 2019 (Ghana National Accreditation Board, 2020).

#### 4.2. Data collection

Participants responded to a web-based survey in Webropol for the quantitative aspect of the study and we conducted interviews via Zoom for the qualitative aspect of RQ1. The first page of the survey asked the participants for their consent and provided a link to the full privacy statement. All questions were mandatory, and participants could not submit their responses without answering all questions. However, they were free to discontinue answering the questions and close the browser at any point in time without their data being saved for analysis.

##### 4.2.1. Quantitative data collection instruments

A 45-item EMI linguistic challenge instrument (Aizawa et al., 2020) and the short form of the Teachers' Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001) were adopted to measure EMI challenges and pre-service teachers' self-efficacy beliefs, respectively.

The EMI Challenges Scale is a four-part instrument organised on a seven-point Likert scale ranging from 1 (very difficult) to 7 (very easy). The first 15 items on the EMI Challenges instrument elicit respondents' beliefs about their challenges pertaining to writing skills ( $\alpha = 0.96$ ). The next set of 10 items elicits information pertaining to reading skills challenges ( $\alpha = 0.93$ ), followed by 10 items for speaking skill challenges ( $\alpha = 0.96$ ) and finally, 10 items for listening skill challenges ( $\alpha = 0.93$ ).

The short form of the TSES, organised on a 5-point Likert scale from 1 (Nothing) to 5 (A great deal), measured self-efficacy for Student Engagement ( $\alpha = 0.72$ ), Instructional Strategies ( $\alpha = 0.80$ ), and Classroom Management ( $\alpha = 0.72$ ). Each of these three subscales consists of four items in the short version of TSES.

##### 4.2.2. Qualitative data collection instrument

Qualitative data were collected through semi-structured interviews to explore EMI linguistic challenges. We constructed an interview guide made up of 13 items based on the preliminary results of the quantitative analysis. The questions were formulated based on two major thematic areas: 'What are the linguistic challenges participants encounter due to English being the medium of instruction?' and 'How do these challenges affect their studies?' Since we conducted semi-structured interviews, there was room for further questioning based on the interviewees' responses.

### 4.3. Data analysis

#### 4.3.1. Quantitative data analysis

IBM Statistics SPSS 25, JASP, and Mplus were used for quantitative data analysis. RQ1 sought to identify the linguistic challenges pre-service teachers encountered due to EMI. We adopted a descriptive statistics package to analyse the data obtained from the responses concerning RQ1. Means and standard deviations were calculated for the writing, reading, speaking, and listening skills subscales of the EMI challenge instrument. The higher the mean, the lower the linguistic challenges participants reported, and vice versa. We ran a repeated-measures ANOVA in JASP (JASP Team, 2021) with the different linguistic challenge skills as repeated measures to examine the differences in the level of challenge between the different subscales. QR2 sought to categorize pre-service teachers according to their self-reported linguistic challenges. The four language skills served as indicators to identify profiles that best fit the model in the latent profile analysis (LPA<sup>2</sup>) with Mplus 8.4 (Muthén & Muthén, 2017). Finally, RQ3 is dependent on RQ2, and its motive was to ascertain whether there were differences between the teaching self-efficacy belief levels of the groups of pre-service teachers identified based on the levels of their EMI linguistic challenges. First, it is expedient to determine the kind of global relationship that exists between participants' EMI linguistic challenges and their self-efficacy levels. Therefore, Pearson's correlation analysis was conducted to identify the direction and strength of the relationship.

A preliminary visual inspection of the histograms for all variables showed that they were approximately normally distributed. This graphical method of assessing normality was chosen over the numerical methods because numerical methods can be overly sensitive to large sample sizes (Laerd Statistics, 2018). Scatter plots drawn between participants' responses to EMI linguistic challenges and their self-efficacy in SPSS indicated that there were associations between these variables and participants' self-reported EMI linguistic challenges pertaining to the four language skills and their self-efficacy. Finally, we conducted ANOVA to compare the means of the various groups' teacher self-efficacy belief levels.

#### 4.3.2. Qualitative data analysis

The qualitative aspect of the study is linked to RQ1 and it focuses on elaborating the quantitative findings regarding participants' challenges related to the major (macro) language skills that participants find most challenging. Qualitative data were analysed following the six phases of 'theoretical thematic analysis' (Braun & Clarke, 2006, p. 84).

## 5. Results

### 5.1. Ghanaian pre-service teachers' EMI linguistic challenges

The overall means (mean of means) of each of the four language skills were above the midpoint of 4 on the EMI challenges scale (See Fig. 1). This indicates that on average, participants did not report immense linguistic challenges. However, the results indicated differences in mean levels of linguistic challenges between the four macro language skills. An ANOVA indicated significant differences in participants' mean levels of challenge between the different language skills:  $F(3, 897) = 23.91, p < 0.001, \eta^2 = 0.07$ . Speaking (mean = 4.46; SE = 0.09) was the most challenging skill among the four language skills, with a slight difference from writing (simple contrast = 0.21, SE = 0.08,  $t(897) = 2.66, p = 0.008$ ) and larger differences from reading (simple contrast = 0.47, SE = 0.08,  $t(897) = 6.01, p < 0.001$ ) and listening (simple contrast = 0.60, SE = 0.08,  $t(897) = 7.75, p < 0.001$ ). Writing skills were considered the next most challenging (mean 4.67; SE = 0.09); these were considered more difficult than reading (simple contrast =

0.26, SE = 0.08,  $t(897) = 3.35, p < 0.001$ ) and listening (simple contrast = 0.40, SE = 0.08,  $t(897) = 5.09, p < 0.001$ ). Reading skills (mean = 4.92, SE = 0.09) were the third most challenging language skills and perceived as having the same level of difficulty as listening skills (simple contrast = 0.13, SE = 0.08,  $t(897) = 1.74, p = 0.08$ ), which was the least challenging of the four language skills (mean = 5.06, SE = 0.09). As expected, productive language skills – writing and speaking – posed the greatest challenge to participants compared to receptive language skills – reading and listening. Furthermore, the standard deviation of the four skills ranged from 1.68 to 1.91, indicating a marked variation in the challenges of the participants which is evident in Fig. 1.

### 5.2. Categorization of Ghanaian pre-service teachers according to the levels of their linguistic challenges

To thoroughly explore the variation in the levels of linguistic challenges among participants, we conducted LPA. The LPA revealed a four-profile solution that provided the best fit because it had the lowest Bayesian Information Criteria (BIC) of 2580. According to Hickendorff et al. (2018), BIC is a very suitable statistical fit measure for determining the number of latent profiles that best fit the data.

The profiles revealed that the majority of the differences between the participants' responses were quantitative in nature, as they had fairly consistent responses across all four types of challenges. Thus, three of the four profiles were named according to the levels of their linguistic challenges and were the Least Challenged Profile (LCP<sup>3</sup>), Average Challenged Profile (ACP<sup>4</sup>), and Most Challenged Profile (MCP<sup>5</sup>). The fourth profile however reported productive skills challenges comparable to MCP and receptive skills challenges comparable to the LCP and therefore labelled as a Mixed Challenged Profile (MixCP<sup>6</sup>). LCP is the largest profile and consists of 141 participants, representing 47% of the total sample size (300). The second largest profile is ACP, which is made up of 82 participants representing 27.3% of the total sample size. MixCP is the next in line with a total of 48 participants representing 16% of the total sample size. Finally, with a membership of 29 participants, representing 9.7% of the total sample size, MCP has the smallest membership. However, its members encounter the greatest level of EMI linguistic challenges among all participants. Fig. 2 depicts the level of EMI linguistic challenges of the four profiles across the four language skills.

Firstly, these results show that 47% of the 300 participants (LCP) generally experience minimal challenges with the English language as a medium of instruction. Secondly, another 27.3% (ACP) of the participants are moderately challenged because of EMI. Thirdly, 9.7% (MCP) encounter serious challenges with the English language as a medium of instruction. Finally, 16% (MixCP) of the participants experience fairly minimal challenges with reading and listening skills; they however experience moderate to serious challenges with both speaking and writing skills.

### 5.3. Pre-service teachers' self-efficacy beliefs and their EMI linguistic challenges

As a first exploration of the relationship between participants' self-reported linguistic challenges levels and teaching self-efficacy beliefs level, correlation analysis revealed that there are statistically significant and positive correlations between participants' self-reported linguistic challenges for each of the four language skills and each of the sub-constructs of TSES. These correlations indicate that lower levels of

<sup>3</sup> Least Challenged Profile.

<sup>4</sup> Average Challenged Profile.

<sup>5</sup> Most Challenged Profile.

<sup>6</sup> Mixed Challenged Profile.

<sup>2</sup> Latent Profile Analysis.

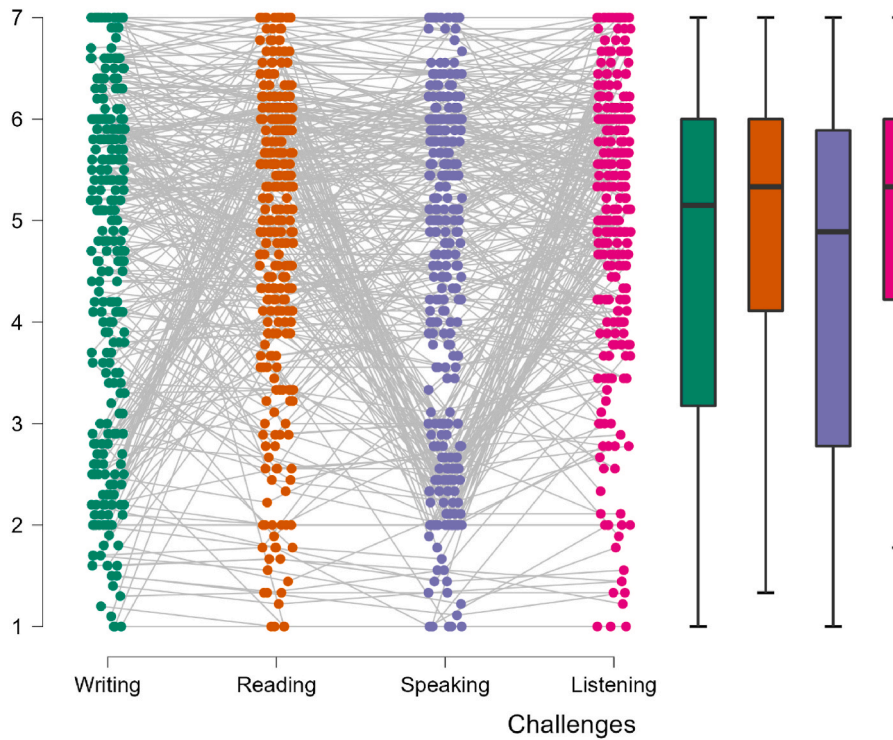


Fig. 1. Raincloud (left) and box-plots of self-reported linguistic challenges for the entire sample. Raincloud plots represent each participant’s mean response levels for the linguistic challenges with lines connecting each participant’s responses pertaining to the four language skills.

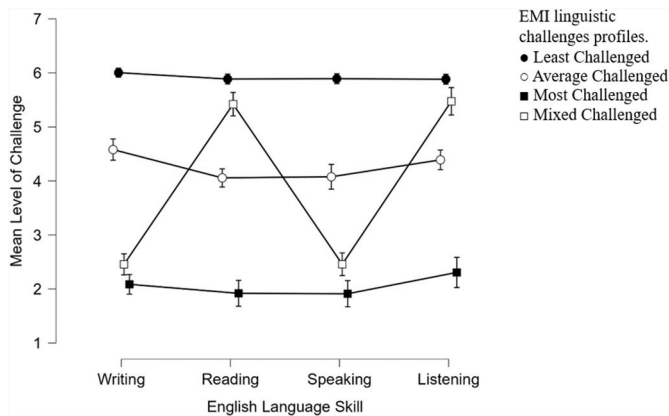


Fig. 2. Mean levels of English language skill challenge for the four EMI linguistic challenge profiles.

EMI linguistic challenges are associated with higher levels of their teaching self-efficacy beliefs and vice-versa. It is also evident from Table 1 that participants’ self-efficacy beliefs for student engagement and classroom management show higher correlations with their self-reported EMI linguistic challenges than with their self-efficacy beliefs for instructional strategies. Additionally, participants’ self-reported EMI linguistic challenges with productive skills, especially speaking, are more strongly correlated with each of the sub-constructs of TSES in

Table 1  
Correlation between linguistic challenges and self-efficacy belief.

	Reading	Speaking	Writing	Listening
Student Engagement	0.56*	0.73*	0.63*	0.46*
Instructional Strategies	0.35*	0.49*	0.40*	0.30*
Classroom Management	0.56*	0.71*	0.59*	0.48*

Note: \* correlation is significant at the 0.01 level (2-tailed).

comparison to their challenges with receptive language skills.

The general correlations between teaching self-efficacy beliefs and EMI linguistic challenges should also translate into different levels of teaching self-efficacy beliefs across the four EMI linguistic challenges profiles i.e., LCP, ACP, MCP, and MixCP. Based on the correlations, a global pattern of higher EMI linguistic challenge levels relating to lower teaching self-efficacy beliefs levels is to be expected. However, it is less clear what the picture would look like for the MixCP.

Table 2 presents the means and standard deviations for the three self-efficacy scales for the four profiles. ANOVAs conducted to determine the differences between the teaching self-efficacy beliefs levels of the four EMI linguistic challenges profiles indicate statistically significant differences for Student Engagement  $F(3, 296) = 92.73, p < 0.001, (\eta^2) = 0.48$ , Instructional Strategies  $F(3, 296) = 30.99, p < 0.001, (\eta^2) = 0.23$  and Classroom Management  $F(3, 296) = 83.43, p < 0.001, (\eta^2) = 0.45$ .

Tukey’s post-hoc test for multiple comparisons for Student Engagement revealed that apart from the mean difference between ACP and MixCP ( $p = 0.12$ ) which was not statistically significant, the mean difference between all the other EMI challenges profiles was statistically significant at  $p = 0.01$ . In the same regard, unlike the mean difference between ACP and MixCP ( $p = 0.92$ ) as well as ACP and MCP ( $p = 0.92$ ), the mean difference between all other profiles was statistically significantly different for Instructional Strategies at  $p = 0.01$ . The pattern for Classroom Management was similar to Student Engagement; with the

Table 2  
Self-Efficacy Descriptives for the profiles and Homogeneous Subsets for the Tukey post-hoc tests (boxed together).

Profile	Student Engagement		Instructional Str.		Classroom Mgt.		
	N	M	SD	M	SD	M	SD
LCP	141	4.76	0.58	4.53	0.60	4.82	0.62
ACP	82	4.05	0.88	3.82	0.85	3.71	0.94
MixCP	48	3.77	0.66	3.74	0.51	3.68	0.58
MCP	29	3.13	0.64	3.73	0.67	2.93	0.70
Total	300	4.39	0.96	4.13	0.77	4.16	0.98

exception of MCP and MixCP ( $p = 0.99$ ), all other differences between means were statistically significant.

It is worth mentioning as it is evident from Table 2 that the higher the linguistic challenges of the participants, the lower their (pre-service) teacher self-efficacy beliefs for student engagement, instructional strategies, and classroom management. It is obvious that the group means for the EMI linguistic challenges profiles decrease from that of LCP to that of MCP in all three aspects of TSES.

In sum, these results could inform the conclusion that the EMI linguistic challenges encountered by participants are related to the levels of their self-efficacy beliefs.

#### 5.4. Qualitative results

Through the six phases of theoretical thematic analysis (Braun & Clarke, 2006, p. 84), it was discovered that participants faced several linguistic challenges in EMI. These challenges mainly revolved around five themes - inadequate vocabulary, grammatical errors, orthographic issues, problems with paragraph development, and pronunciation difficulties. The details of these themes are presented in Table 3.

##### Theme 1. Limited Vocabulary

Qualitative analysis indicated that some interviewees encountered difficulty in all four language skills due to their limited vocabulary. Some of them mentioned that their challenges with listening skills are because of their inability to understand some vocabulary and expressions some speakers use. [R7] for instance indicated that '... sometimes people speak English and I don't understand certain words and expressions they use'. [R6] went further to explain that though he does not understand some vocabulary used by speakers, he is unable to seek the meaning of that vocabulary during the conversation. He mentioned this by saying that:

*.....listening skills is more challenging than the others because you know, the person talking is speaking English. And so, you wouldn't always have the opportunity to ask what is the meaning of this word you used, what did you mean, you know, the person is just talking and you are listening to that person, it would be very much difficult for you to understand what the person meant. But if you're [...] reading on your own, you can check from the phone so it wouldn't be that challenging. [R6]*

They also mentioned their inability to comprehend passages, some study materials, and even examination questions in some cases due to unfamiliar vocabulary. Furthermore, participants lack adequate and appropriate expressions and vocabulary to effectively communicate their thoughts both in speaking and writing as indicated by [R2] and [R4] in the following extracts.

*There are times when I do understand a concept being discussed in class and I would want to contribute to the discussion, but I can't pick the right words to use in English. Since I wouldn't want to embarrass myself in class, I remain quiet in class and I have similar issues when I am writing essays too [R2].*

... when writing, there are ideas I sometimes wish to include but I lack the appropriate vocabulary to write them down. There are

things I may know in Twi, and I wish I could write them, but I do not know their English equivalent ... [R4].

Participants' limited vocabulary also has adverse effects on their studies as [R7] expressed that he does not understand some concepts explained in his textbooks because of unfamiliar words. This circumstance could be worsened if there are a lot of unfamiliar words in the study material. This is because according to [R7], he 'cannot be referring to the dictionary every minute when learning or when reading since that makes the learning process very slow and tiring'.

##### Theme 2. Grammatical Challenges

Some of the participants have difficulties conforming to the grammar rules of English when writing and speaking. [R8] for instance maintained that he initially thinks about what he intends to say or write in English in his L1 before translating it into English. This leads to confusing the grammar of his L1 with the grammar of the English language because of the disparities between the grammar of both languages. Another revelation about grammatical challenges is that some of the participants do not recognize that they have challenges with grammar when writing. This is because [R1] initially claimed not to have any grammatical challenges with writing. However, when asked about the feedback from teachers on essays submitted, [R1] responded that:

*I will say that in terms of writing, I don't have any problem with it but after submitting project work write-ups to the supervisor, you will see red pen marks here and there. He also corrects a lot of things that I've written, reconstructing sentences, and the like [R1].*

This indicates that there may be disparities between the levels of participants' actual linguistic challenges and the levels of their self-reported linguistic challenges.

##### Theme 3. Orthographic Challenges

Some of the participants' challenges in writing emanate from issues with orthography and that is an indication of a deficit in orthographic knowledge. R1, R2, R4, R5, and R8 mentioned this as one of their major challenges. [R5] for instance attributed his orthographic challenge to the phonetic inconsistency of the English language by saying that: 'Most of the sounds of words in the English language are different from their spellings ...'. These are indications that most interviewees' lexical orthographic knowledge is not commensurate with their academic level's requirements. [R5] further mentions that he knows the vocabulary to use and the right context to use it. Nonetheless, the physical realization (spelling) of those words when writing becomes a challenge.

##### Theme 4. Pronunciation difficulties

Pronunciation is another challenge participants encounter with both reading and speaking. Participants' pronunciation challenges when reading could be viewed from two perspectives. Some participants claimed that it is challenging for them to pronounce unfamiliar words as in the case of [R7]. Other participants like [R1] also maintained that there are words they know orally. However, they do not know their corresponding orthographic (spelling) forms. In such a situation, they are unable to pronounce those words correctly when they encounter the written forms. [R7] For instance maintained that:

*'there are certain words that I've never seen or heard before [...] when I come across such words for the first time, I find it difficult to pronounce them.*

*The pronunciations of certain English words are totally different from how they are spelt [...] an example I can give is the word 'knead'. I know this word from Home Economics, but I couldn't pronounce it when I was reading a recipe recently because I didn't know the spelling ... [R1].*

##### Theme 5. Challenges with Paragraph Development

Some participants in this study found organising ideas into coherent paragraphs challenging. Consequently, they are unable to formulate

**Table 3**  
Themes generated from qualitative data.

Theme	Language skills
1 Limited vocabulary	Listening, Speaking, Reading, Writing
2 Grammatical challenges	Speaking and Writing
3 Orthographic challenges	Writing
4 Pronunciation difficulties	Reading
5 Challenges with paragraph development	Writing

ideas and put those ideas into interconnected sentences to develop paragraphs when writing. This came to light when a participant categorically mentioned that *'link[ing] sentences in a paragraph and linking a second paragraph to the first paragraph becomes difficult'* [R2].

In a nutshell, these admissions by some of the participants about their challenges with structuring ideas and sentences in *coherent* and *cohesive* paragraphs, imply that there is a deficit in their writing skills.

## 6. Discussion

The current research revealed that English as a foreign language context is not the only context in which learners face EMI linguistic challenges. The results show that while all participants are from a background where English is their L2 and the majority of formal education is conducted in English, some do not automatically acquire the English language to an appreciable level. This is concerning especially in the case of teacher education students, who are expected to use English as a medium of instruction and also teach the English language. These findings support and extend previous studies (see Tsui, 2018; Wyatt, 2018) that indicate a relationship between (pre-service) teachers' challenges with English and their teaching self-efficacy beliefs.

### 6.1. Ghanaian pre-service teachers EMI linguistic challenges

On average, the participants in the study did not report severe linguistic challenges, which is consistent with Kamaşak et al. (2021), but the sizeable standard deviations indicate that not all participants report low challenge levels. This was confirmed through the LPA that identified two groups that report high challenge levels. One group of participants (MCP) reports high challenge levels across all four macro skills, while the other (MixCP) reports high challenge levels for the productive skills only. This illustrates how a person-centred approach can reveal information that may be less evident or hidden in a variable-centred approach. This was corroborated by the qualitative data, where participants indicated difficulties in comprehending study materials, examination questions, and oral presentations due to limited vocabulary, a revelation that echoes the findings of Curle et al. (2020.)

On a specific level, productive language skills appear more challenging to participants as compared to receptive language skills. This revelation is critical because these participants are required to use English for instructional purposes in their future careers. Though receptive skills are also important, productive skills are pivotal for their work as teachers because they will predominantly need writing and speaking skills to explain concepts to their future pupils. Hence, a teacher's challenges with productive English language skills may adversely affect the knowledge acquisition of their pupils.

#### 6.1.1. Challenges with writing skills

'Organising ideas in coherent paragraphs' and 'linking ideas from different sources when writing' emerged as part of the most challenging language micro-skills for participants under writing skills. This is concerning because these micro-skills are fundamentals of writing as a literacy skill. One may wonder how these pre-service teachers will assist pupils in acquiring a skill that is a challenge to themselves. Will they be in the right position to give informative and constructive feedback on the essays of the pupils? If that is not the case, the literacy (writing in this situation) remediation they are expected to provide for pupils (Ministry of Education, 2017) may not be achievable.

The qualitative data revealed that some participants formulate ideas in their L1s before translating them into English when writing, and tend to confuse the grammar of their respective L1s with that of English. This is because of disparities between the grammatical rules of their L1 and the English language. The results also identified orthographic challenges as another reason why participants perceive writing to be challenging. English is generally considered to be less phonetically consistent than other languages, thus adequate orthographic knowledge is needed to

accurately spell many English words. As most participants pointed to orthography as a challenge, this can be an indication that they feel that this affects their functional use of the English language.

Overall, the findings related to writing skills suggest that some of the participants experienced challenges with writing that likely affected their learning, and this may in turn affect their efficacy as teachers.

#### 6.1.2. Challenges with reading skills

Both quantitative analysis and qualitative analysis revealed that participants' reading skills challenges predominantly centre around vocabulary. Specifically, the quantitative analysis indicated that participants are unable to use their own words when taking notes and they are unable to understand specific vocabulary when reading. This finding corroborates that of Kamaşak et al. (2021) in the Turkish context and that of Shepard and Morrison (2021) in Hong Kong. Furthermore, these two findings are interrelated in the sense that both the inability to use one's own words and the inability to understand specific vocabulary when reading are indications of limited vocabulary. The qualitative analysis also saw some participants complain that because they have challenges with vocabulary when reading, they have to frequently consult the dictionary. These support the argument that difficulty in reading is a result of a lack of vocabulary (Pessoa et al., 2014; Rose et al., 2020; Shepard & Morrison, 2021).

Additionally, it came to the fore that participants have difficulty pronouncing some words when reading. This could be a carry-over effect of vocabulary and orthographic challenges as familiarity with specific words and their pronunciations are generally related especially in the case of a phonetically highly inconsistent language like English. Because of this high inconsistency, participants may not be able to pronounce a (written) word though they may know the word orally. In general, participants' pronunciation challenges may impede their reading fluency as students, and also reading aloud to their future pupils. If a teacher has difficulty pronouncing words when reading aloud, this may adversely affect their self-efficacy belief and if pupils realize that their teacher has difficulty pronouncing words, it will also reduce the pupils' beliefs about their teacher's competency.

Overall, the findings related to reading skills suggest that participants may experience more challenges with reading than suggested by the quantitative result. This may in turn affect their learning and these challenges will also likely affect their efficacy as teachers.

#### 6.1.3. Challenges with speaking skills

Speaking, one of the productive language skills happens to be the most challenging skill for the participants based on the results of the quantitative analysis. These analyses also revealed that participants predominantly have difficulty with 'speaking accurately' (grammar) and 'speaking clearly' (pronunciation). In the same vein, the qualitative analysis reiterated grammar, pronunciation, and vocabulary as difficult elements of speaking skills. Due to these difficulties, some interviewees reported that they tend to use filler words when speaking. They do this because they think of the appropriate vocabulary to use and conform to the grammatical rules of the English language simultaneously while speaking.

Overall, the findings related to speaking skills concur with Suzuki et al. (2017), who concluded that 'spontaneous speech production' (p.13) is a topmost challenge for students in EMI. These challenges may affect participants' classroom interaction and classroom participation during their teacher training process.

It is also important to note that the speaking skills challenges faced by these participants can have a significant impact on various aspects of teaching, including student engagement, instruction, and classroom management. This is especially true for participants who fall under both the MCP and MixCP profiles. As a result, their ability to effectively engage with students, explain concepts thoroughly, and manage their classrooms may be negatively affected. It is therefore possible that these speaking challenges may lower their (pre-service) teacher self-efficacy

beliefs.

#### 6.1.4. Challenges with listening skills

The quantitative data indicated that listening is the least challenging language skill which is in line with previous research (e.g. Aizawa & Rose, 2020; Shepard & Morrison, 2021; Shepard & Rose, 2023). However, the qualitative data revealed challenges with listening skills, as some of the interviewees mentioned that there are instances where some speakers or lecturers use unfamiliar words that they do not understand. The interviewees explained that when they do not understand certain vocabulary, they feel unable to ask for explanations of those unfamiliar words in oral presentations. They explained that unlike in reading where they are at liberty to consult the dictionary or other digital tools, they are unable to seek explanations of vocabulary they are unfamiliar with without breaking the flow of the presentation. This may also contribute to the finding that some of the participants have challenges understanding the overall organization of lectures and understanding key vocabulary used orally. This may be because students in English as a Medium of Instruction settings often struggle with inadequate vocabulary (e.g. Aizawa & Rose, 2020 in Japan; Shepard & Morrison, 2021 in Hong Kong). In effect, the participants' inability to understand the key vocabulary used in oral presentations could also have a negative toll on their ability to understand the main ideas presented in lectures.

Something that came up in other studies that was not reported by the participants in this study is understanding classmates' accents (Kamaşak et al., 2021) and understanding lecturers' accents (Shepard & Morrison, 2021). This disparity could be attributed to the homogeneity in the origin of the participants and their lecturers in Ghana and the heterogeneity in the origin of the participants and their lecturers in other contexts. Even though the participants in our study do speak different L1s, they are all Ghanaians and went through the same educational system which is quite different from the participants in Kamaşak et al. (2021).

Overall, the findings related to listening skills indicate that while listening has been reported to be the least challenging, participants may encounter more challenges than they reported in the quantitative data. Additionally, the qualitative data suggests that some of these challenges may potentially have greater effects on participants' studies during the teacher education programme than on their lessons when they become full-fledged teachers.

#### 6.2. Pre-service teachers' EMI linguistic challenges and their teaching self-efficacy beliefs

The current study innovatively categorises participants based on the levels of their linguistic challenges, providing valuable insights into the field of EMI. Unlike previous studies (see Evans & Morrison, 2011; Kamaşak et al., 2021; Shepard & Morrison, 2021) that limited their analysis to variable-centred analysis, this study adopted a person-centred approach, which revealed profiles with linguistic challenges (MCP and MixCP) and their intricate relationship with teaching self-efficacy beliefs that could not have been highlighted otherwise. These findings indicate that despite an overall low average level of challenges, a considerable number of pre-service teachers reported English language challenges. This could negatively impact their ability to teach and help their pupils; something that could be amplified through interactions with self-efficacy. Evidence suggesting such interactions can be seen in the correlational analysis that shows that all aspects of self-efficacy in teaching and EMI linguistic challenges correlate. While all aspects correlate, the strengths of the correlations potentially reveal some of the underlying relations. The overall pattern shows that the more interactive aspects of teaching self-efficacy (classroom management and student engagement) are more strongly linked with all language skills than instructional strategies. In the same vein, both classroom management and student engagement show stronger links with the productive skills than with the receptive skills.

These suggest that linguistic challenges are more strongly related to self-efficacy for aspects of teaching that are more interactive. Also, productive skills linguistic challenges strongly impart a teacher's self-efficacy beliefs than receptive skills linguistic challenges. Thus, even participants who face linguistic challenges only in productive language may still be at risk of struggling when faced with the realities of the classroom. These findings align with previous research that suggests that teachers' self-efficacy beliefs are weakened when they are not adequately trained to use English for instructional purposes (Tsui, 2018) or when they teach in a language that is not their L1 (Wyatt, 2018).

Teachers' self-efficacy beliefs have been identified to have implications on classroom planning and management (Bay, 2020; Tschannen-Moran & Hoy, 2001), teachers' willingness to try new and different instructional strategies (Tschannen-Moran & Hoy, 2001; Cerit, 2013), and teachers' desire to spend more hours with struggling students (Bottiani et al., 2019) as well as students' achievement (Tschannen-Moran & Hoy, 2001; Mojavezi and Tamiz, 2012; Mohamadi & Asadzadeh, 2011). Given the findings from our study and earlier ones (Tsui, 2018; Wyatt, 2018) that indicate that the language of instruction in an L2 context correlates with teacher self-efficacy, these implications may also apply to the participants in the MCP and MixCP profile. Those participants may, for instance, be hesitant to try new instructional strategies during teaching, have difficulties with managing their classrooms, and readily give up on struggling pupils.

#### 6.3. Limitations, implications and future directions

The present study highlighted some important and new insights that may affect teacher education students' learning in the Ghanaian context and their later profession as teachers. Before going into the potential implications of these results, it is important to address some limitations of the study. The first limitation is that the study was conducted in one specific region out of 16 regions of Ghana. Although it was limited to only one region, the sample was 300 students and was drawn from four colleges of education in that region. Even though this means that these results may not be generalized to the whole country, it could be a precursor of the general EMI linguistic challenges among pre-service in Ghana. Therefore, extending the study to include the other regions of Ghana (and the other WAEC countries) may be a step in the right direction.

The study has a second limitation, which is the potential for bias due to its reliance on self-reported data though this is not exclusive to this study. The potential of bias in self-reported data in this study mainly pertains to the EMI linguistic challenges data, as teacher self-efficacy belief is a self-report measure by nature. Indeed, the interviews revealed some indications of bias in the self-reported challenges; one participant realized the challenges to be larger than initially thought while reflecting on feedback on assignments. Considering previous research and the qualitative data, it also seems somewhat surprising that the participants in the quantitative analysis see listening skills as less challenging than reading skills. One possible explanation for this finding is that the participants attribute challenges with vocabulary during reading to content rather than to the language of instruction. The distinction between attributing a challenge to language or content could affect self-reports and in future research, it would be important to investigate to what extent this introduces bias in the results of self-report questionnaires about linguistic challenges. It is also important to mention that these discrepancies suggest that bias in the self-reports may more likely be under-reporting rather than over-reporting the linguistic challenges. In any case, the overall patterns in this study largely concur with previous research on EMI linguistic challenges, suggesting limited biases.

One of the unique contributions of this study comes from the LPA and the relation between the EMI linguistic challenges profiles and the (pre-service) teachers' self-efficacy. While we see this as an important contribution, a major limitation of the present study is also that we

cannot make direct claims about the direction of these relations. They do, however, suggest a causal influence of linguistic ability on instructional self-efficacy. The ANOVA analyses, for instance, show that the (pre-service) teacher self-efficacy of the MixCP profile is more similar to the ACP profile than to either the LCP or MCP profile, which suggests that (pre-service) teachers' instructional self-efficacy is connected to both receptive and productive language skills.

While this study shows that EMI linguistic challenges is related to (pre-service) teacher's self-efficacy in English mediated education, we do not argue that language is the sole predictor of a (pre-service) teacher's self-efficacy. It would therefore be too simplistic to think that heightening the bar for English language skills in the college of education entry requirement would be the solution to the problem, as this may give too much weight to language and ignore other equally important criteria. Rather it may be more beneficial to invest in students who are currently entering teacher education. For that, we argue that it is important to adopt pragmatic measures that try to alleviate linguistic challenges both during and after the teacher education process. Preferably this would take a research-based approach with interventions that are systematically implemented and evaluated with both English proficiency and teacher self-efficacy measurements. The present study suggests that these interventions do not need to target all students, but mainly those in the MCP and MixCP. Since these two profiles reported challenges with the productive language skills and these challenges will likely affect their self-efficacy as teachers. These students could benefit from more explicit attention to the development of these skills in a way that does not affect their self-efficacy negatively. These may include writing practice and opportunities to practice English language instruction with emphasis on learning and development which should be in a safe environment to avoid negative effects on self-efficacy. Future research should also examine how such interventions to develop productive language skills offered during teacher education affect self-efficacy. Beyond their education, periodic in-service English language training may also be beneficial. While it may not be possible to immediately improve English skills in these trainings, it could target boosting confidence and making them more determined to work on improving their proficiency.

Theoretically, in L2 medium instruction, these findings suggest that the language of instruction could be a teaching task requirement (see [Tschannen-Moran et al., 1998](#); [Tschannen-Moran & Johnson, 2011](#)) that may inform teachers' self-efficacy formation about a particular teaching task. Furthermore, (pre-service) teachers' linguistic challenges and proficiency levels in the language of instruction become some of the 'internal strengths and deficits' ([Tschannen-Moran & Hoy, 2007](#)) they consider when forming their teaching self-efficacy. However, to confirm this idea, a comparative analysis is needed between the effects of language of instruction on the self-efficacy beliefs of (pre-service) teachers in an L2 context versus an L1 context.

## 7. Conclusion

The present research shows that the challenges identified by the chief examiner's report of [WAEC \(2020\)](#) persist among some of the participants even after four years of education at the colleges of education. During their studies, these linguistic challenges likely hindered their ability to acquire knowledge, as previous studies have also indicated (see: [Curle et al., 2020](#); [Galloway et al., 2017](#)), and subsequently will also affect their teaching self-efficacy as indicated by the correlation between the linguistic challenges faced by participants and their teaching self-efficacy beliefs. This could potentially have a negative impact on the quality of teacher education in Ghana and the country's education system as a whole.

The nature of this study does not allow us to draw any definitive causal conclusions and therefore, more research is needed in the future. Nonetheless, the results obtained could serve as a foundation for teacher education institutions to conduct diagnostic tests for all their

prospective students. Based on this, they could consider providing English language support to develop students' language skills and self-efficacy. This may be achieved by introducing English acquisition modules throughout the entire duration of the teacher education programme. New entrants who appear to need extra support could be provided with it in various formats. One possibility for future research would be to examine the effectiveness of formally assessing students' English language skills at the end of every semester and giving feedback on their progress. This may provide them with additional motivation to improve their skills. Peer support and mentorship networks may be additional ways to help strengthen pre-service teachers' self-efficacy beliefs. In the meantime, the government could consider providing in-service English language training for teachers with the same objectives. Together, these efforts could help prevent the possibility of (pre-service) teachers' linguistic challenges being transferred to their future pupils.

## CRedit authorship contribution statement

**Charles Selorm Dzormeku:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Koen Veermans:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Jake McMullen:** Writing – review & editing, Visualization, Supervision, Methodology, Formal analysis.

## Declaration of competing interest

Co-author received funding from the Jacobs Foundation – Jake McMullen. The other authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

The authors do not have permission to share data.

## References

- [Aizawa, I., & Rose, H. \(2020\). High school to university transitional challenges in English medium instruction in Japan. \*System\*, 95, Article 102390.](#)
- [Aizawa, I., Rose, H., Thompson, G., & Curle, S. \(2020\). Beyond the threshold: Exploring English language proficiency, linguistic challenges, and academic language skills of Japanese students in an English medium instruction programme. \*Language Teaching Research\*, 1–25. <https://doi.org/10.1177/1362168820965510>](#)
- [Akowuah, J. A., Patnaik, S., & Kyei, E. \(2018\). Evidence-based learning of students' performance in English language in adu gyamfi senior high school in the sekere south district of Ghana. \*Cogent Social Sciences\*, 4\(1\), Article 1503577.](#)
- [al Zumor, A. Q. \(2019\). Challenges of using EMI in teaching and learning of university scientific disciplines: Student voice. \*International Journal of Language Education\*, 3\(1\), 74–90. <https://doi.org/10.26858/ijole.v1i1.7510>](#)
- [Arfé, B., Dockrell, J. E., & De Bernardi, B. \(2016\). The effect of language specific factors on early written composition: The role of spelling, oral language and text generation skills in a shallow orthography. \*Reading and Writing\*, 29, 501–527.](#)
- [Bandura, A. \(1993\). Perceived self-efficacy in cognitive development and functioning. \*Educational Psychologist\*, 28\(2\), 117–148.](#)
- [Bandura, A. \(1997\). \*Self-Efficacy: The exercise of control\*. New York: W.H. Freeman and Company.](#)
- [Bay, D. N. \(2020\). Investigation of the relationship between self-efficacy beliefs and classroom management skills of pre-school teachers. \*International Electronic Journal of Environmental Education\*, 12\(4\), 335–348.](#)
- [Bottiani, J. H., Duran, C. A., Pas, E. T., & Bradshaw, C. P. \(2019\). Teacher stress and burnout in urban middle schools: Associations with job demands, resources, and effective classroom practices. \*Journal of School Psychology\*, 77, 36–51.](#)
- [Bradford, A. \(2012\). Adopting English-taught degree programs. \*International Higher Education\*, 69, 8–10.](#)
- [Braun, V., & Clarke, V. \(2006\). Using thematic analysis in psychology. \*Qualitative Research in Psychology\*, 3\(2\), 77–101. <https://doi.org/10.1191/1478088706qp0630a>](#)
- [Cerit, Y. \(2013\). Relationship between teachers' self-efficacy beliefs and their willingness to implement curriculum reform. \*International Journal of Educational Reform\*, 22\(3\), 252–270. <https://doi.org/10.1177/105678791302200304>](#)
- [Chacón, C. T. \(2005\). Teachers' perceived efficacy among English as a foreign language teachers in middle schools in Venezuela. \*Teaching and Teacher Education\*, 21, 257–272.](#)

- Chesnut, S. R., & Burley, H. (2015). Self-efficacy as a predictor of commitment to the teaching profession: A meta-analysis. *Educational Research Review*, 15, 1–16.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: SAGE.
- Curle, S., Jablonkai, R., Mittelmeier, J., Sahan, K., & Veitch, A. (2020). English Medium Part 1: Literature review. In N. Galloway (Ed.), *English in higher education*. Report No. 978-0-86355-977-8. British Council.
- Dabbagh, A., & Janabi Enayat, M. (2019). The role of vocabulary breadth and depth in predicting second language descriptive writing performance. *Language Learning Journal*, 47(5), 575–590. <https://doi.org/10.1080/09571736.2017.1335765>
- Evans, S., & Morrison, B. (2011). Meeting the challenges of English-medium higher education: The first-year experience in Hong Kong. *English for Specific Purposes*, 30(3), 198–208.
- Galloway, N., Kriukow, J., & Numajiri, T. (2017). *Internationalisation, higher education and the growing demand for English: An investigation into the English medium of instruction (EMI) movement in China and Japan*.
- Ghasemolani, F., & Hashim, F. B. (2013). Teachers' self-efficacy beliefs and their English language proficiency: A study of nonnative efl teachers in selected language centers. *Procedia-Social and Behavioral Sciences*, 103, 890–899.
- Hickendorff, M., Edelsbrunner, P. A., McMullen, J., Schneider, M., & Trezise, K. (2018). Informative tools for characterizing individual differences in learning: Latent class, latent profile, and latent transition analysis. *Learning and Individual Differences*, 66, 4–15. <https://doi.org/10.1016/j.lindif.2017.11.001>
- JASP Team. (2021). *JASP (Version 0.16) [Computer software]*.
- Kamaşak, R., Sahan, K., & Rose, H. (2021). Academic language-related challenges at an English-medium university. *Journal of English for Academic Purposes*, 49, Article 100945. <https://doi.org/10.1016/j.jeap.2020.100945>
- Laerd Statistics. (2018). *Pearson's product-moment correlation using SPSS Statistics*. Statistical tutorials and software guides. <https://statistics.laerd.com/>.
- Leherr, K. (2009). *National literacy acceleration program (NALAP) baseline assessment*. USAID/EDC Report. Available at: . (Accessed 9 May 2023).
- Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, 51(1), 36–76.
- Markova, Z. (2021). Towards a comprehensive conceptualisation of teachers' self-efficacy beliefs. *Cambridge Journal of Education*, 51(5), 653–671. <https://doi.org/10.1080/0305764X.2021.1906844>
- Ministry of Education. (2017). National teacher education curriculum framework. <https://uew.edu.gh/sites/default/files/Announcement%20Files/National%20Teacher%20Education%20Curriculum%20Framework%20.pdf>.
- Mohamadi, F. S., & Asadzadeh, H. (2011). Testing the mediating role of teachers' self-efficacy beliefs in the relationship between sources of efficacy information and students achievement. *Asia Pacific Education Review*, 13(3), 427–433.
- Mojavezi, A., & Tamiz, M. P. (2012). The impact of teacher self-efficacy on the students' motivation and achievement. *Theory and Practice in Language Studies*, 2(3), 483–491. <https://doi.org/10.4304/tpsls.2.3.483-491>
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (8th ed.). Muthén and Muthén.
- National Accreditation Board. (2020). [www.nab.gov.gh](http://www.nab.gov.gh).
- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, 19, 139–158. <https://doi.org/10.1080/10573560308222>
- Pessoa, S., Miller, R. T., & Kaufer, D. (2014). Students' challenges and development in the transition to academic writing at an English-medium university in Qatar. *International Review of Applied Linguistics in Language Teaching*, 52(2), 127–156.
- Procorari, D. (2020). English medium instruction: Disintergrating language and content? In S. Dimova, & J. King (Eds.), *Integrating content and language in multilingual universities* (pp. 15–36). Cham: Springer.
- Rose, H., McKinley, J., Xu, X., & Zhou, S. (2020). *Investigating policy and implementation of English medium instruction in higher education institutions in China*. London: British Council.
- Shepard, C., & Morrison, B. (2021). Challenges of English-medium higher education: The first-year experience in Hong Kong revisited a decade later. In D. Lasagabaster, & A. Doiz (Eds.), *Language use in English-medium instruction at university international perspectives on teacher practice* (pp. 167–192). New York: Routledge. <https://doi.org/10.4324/9781003134534-9>.
- Shepard, C., & Rose, H. (2023). English medium higher education in Hong Kong: Linguistic challenges of local and non-local students. *Language and Education*, 37(6), 788–805. <https://doi.org/10.1080/09500782.2023.2240571>
- Soruç, A., Altay, M., Curle, S., & Yuksel, D. (2021). Students' academic language-related challenges in English Medium Instruction: The role of English proficiency and language gain. *System*, 103. <https://doi.org/10.1016/j.system.2021.102651>
- Suzuki, S., Harada, T., Eguchi, M., Kudo, S., & Moriya, R. (2017). Investigating the relationship between students' attitudes toward English-medium instruction and L2 speaking. *Essays on English Language and Literature*, 46, 25–41.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17(2001), 783–805.
- Tschannen-Moran, M., & Hoy, A. W. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23(6), 944–956. <https://doi.org/10.1016/j.tate.2006.05.003>
- Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202–248.
- Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education*, 27(4), 751–761.
- Tsui, C. (2018). Teacher efficacy: A case study of faculty beliefs in an English-medium instruction teacher training program. *Taiwan Journal of TESOL*, 15(1), 101–128.
- West African Examination Council. (2020). *Resume of languages*. <https://www.waecgh.org/examiners-report>.
- Wyatt, M. (2018). Language teachers' self-efficacy beliefs: A review of the literature (2005-2016). *Australian Journal of Teacher Education (Online)*, 43(4), 92–120.
- Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 202–231).