

The Incorporation of AI in Cameroon ELT: Attitudes and Responses

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Abstract

The incorporation of Artificial Intelligence (AI) in Cameroon English Language Teaching (ELT) observably elicits mixed attitudes from policy makers, teachers and learners. While AI offers multiple opportunities for self-learning, assessments and improved language acquisition, concerns about accessibility, cost, teacher preparedness and the relevance of AI tools in a post-colonial multilingual Cameroon persist. This study was designed to explore some key stakeholders' awareness and perceptions towards the incorporation of AI in Cameroon ELT as well as highlight perceived benefits and challenges. Anchoring on Davis' (1989) Technology Acceptance Model (TAM) and an attitudinal data from 180 informants (30 inspectors, 50 ELT teachers and 100 ESL and EFL learners), it was realized that there is a certain level of AI awareness among the informants even though there are varied opinions on whether it should be incorporated in ELT or not. The findings also revealed a high absolute emotional response, though professional responses were more significant in relation to the total score. This led us to the conclusion that while AI generously offers a new method of pedagogic practices with multiple benefits, its reception in Cameroon ELT is not proportionate.

Keywords: Artificial Intelligence, Cameroon English Language Teaching Industry

Introduction

AI is one of the greatest inventions of the 21st century that has affected almost every aspect of human life including education. It offers multiple opportunities to personalize learning experiences and its incorporation into English language teaching has drawn unprecedented global attention (Baker, 2019). However, the integration of AI in English Language education especially in post-colonial multilingual Cameroon projects interesting peculiarities and complexities. In Cameroon, English co-exists with French and numerous indigenous languages, and this unique sociolinguistic reality has inspired what is today understood as Cameroon English (Bamgbose, 1991; Ngefacs, 2010). Scholars and researchers (Simo Bobda, 1992; Sala, 2005) have taken turns to describe the phonological, morphological and syntactic features of the language vis-à-vis such traditional standards as Standard British English (SBE) and Standard American English (SAE). With the increasing global influence of AI and the complexities of Cameroon linguistic landscape, the extent to which it could be used in ELT evokes more questions than answers. Questions related to infrastructure, effectiveness, adaptability, applicability and impact on the educational landscape cannot be overlooked.

Recent studies (Njoya, 2017 and Foster, 2020) have revealed that AI-based learning tools such as chatbots, automated feedback systems and intelligent tutoring platforms show significant hope of enhancing language learning through personalized and scalable learning experiences. These tools have the capacity to adapt to individual learner needs, offer immediate feedback, and foster engagement through interactive features. However, while AI has the potential to revolutionize language learning in developed educational contexts, its application in countries like Cameroon faces specific barriers. These include infrastructural challenges such as limited access to high-speed internet, lack of digital literacy among educators

and students, and the need for AI tools to be culturally and linguistically appropriate to the context (Njoya, 2017). In addition, the role of AI in addressing the complexities of Cameroon English, which is not always adequately represented in conventional language teaching materials, presents a unique opportunity for AI to bridge the gap between standardized educational practices and local linguistic realities.

Despite the potential benefits, the successful integration of AI in Cameroon's English language classrooms hinges on the attitudes and perceptions of key stakeholders, including policymakers, educators, and students. Policymakers' ability to implement relevant policies and provide necessary resources, teachers' willingness to adopt AI tools in teaching and students' openness to use technology for language learning are quite crucial in determining its successful integration in Cameroon's ELT practices. Previous studies (Joubert, 2021; Baker, 2019) in the United States have indicated mixed reactions to the use of AI in education, with some educators and learners expressing enthusiasm about the technological advantages, while others remaining skeptical due to concerns about the replacement of traditional pedagogical methods, the potential for cultural insensitivity, and the accessibility of technology.

The situation in Cameroon might even be worst considering that the country is still grappling with a steady electricity supply even in key urban areas. The lack of necessary facilities may conceal the urgency of incorporating this technology in the classroom. The Cameroon Ministry of Secondary Education has, in the recent years, been encouraging the incorporation of technology in ELT; and most recently, the Minister donated one hundred electronic boards to some secondary schools in Yaoundé. While this is an important debut, it suggests the enormous work that still needs to be done mindful of the numerous classrooms in almost every community in every region of the country. In such a context, a positive attitude towards the adoption and adaptation of AI in ELT is an important prerequisite. This explains in this study I took interest

in some key stakeholders' levels of awareness and perceptions of as well as responses to the incorporation of AI in Cameroon ELT.

AI in Language Teaching: Global Trends and Innovations

With the rapid development of AI and its promising future in facilitating and enhancing personal development, its integration in education has gained considerable attention in recent years. It is particularly promising in such linguistically diverse settings as Cameroon which boasts of approximately 280 indigenous languages besides English and French that serve in official communication. Within such a linguistically dense setting which also battles with digital development, the incorporation of AI in education in general is likely to face a major challenge. This is however not the first effort to explore the transformative potential of AI in language education. This concern has preoccupied scholars across world.

The diverse technicalities of AI in enhancing personal growth especially in language learning. Baker (2019) argues that AI technologies such as automated feedback systems, intelligent tutoring systems (ITS), and natural language processing (NLP) tools improve language acquisition through the provision of personalized and adaptive learning experiences. Such language learning platforms as Duolingo, Babbel and Grammarly offer elaborate opportunities for engaging, interactive and personal language improvement. Blin (2020) has also added that these tools allow for speech recognition, grammar correction and vocabulary building which makes language learning more engaging and efficient. Additionally, the potential of AI to offer instant feedback on various subjects is also quite remarkable. Hegelheimer and Fisher (2019) revealed that instant correction of errors can accelerate language acquisition through the reinforcement of correct usage which discourages bad habits in the learning process. In fact, Lee and Lee (2021) have argued that AI-powered chatbots have been developed to encourage conversational practice which offer learners the opportunity to practice language in actual real-life situations. There is no doubt that such developments have triggered interest in utilizing AI in language pedagogy, which is perhaps partly why Foster (2020) has advocated for its integration in both formal and informal language learning situations.

Even with the indisputable relevance of AI in language pedagogy, its adoption in post-colonial multilingual settings seems to introduce a new challenge. The unique linguistic realities in a post-colonial multilingual Cameroon which offers a unique pattern of English Language usage maybe not adequately find expression within AI. We may agree with Kukulska-Hulme (2012) who is of the opinion that the incorporation of AI in multilingual settings requires careful adjustments to accommodate linguistic and cultural differences. The multilingual nature of many post-colonial African communities requires a certain level of flexibility to support the uniqueness of Cameroonian English which has since had its mark as an acceptable variety of English in its own right. The diversity of the linguistic landscape means that AI would need to be adapted to the phonetic, lexical and syntactic features of the variety which does not always correspond with traditional standard norms.

The consideration of local languages and cultures in multilingual settings cannot be over emphasized. Mittelberg and Hart (2020) argue that AI-powered tools that incorporate local dialects, idiomatic expressions, and culturally relevant content

can significantly enhance the learning process. Even at that, most language learning tools tend to prioritize global English standards, neglecting the specific needs of learners in such foreign settings as Cameroon (Joubert, 2021). It is therefore important for AI to be carefully adapted to adequately meet the linguistic and culturally needs of post-colonial Africa in general and Cameroon in particular.

A critical observation of the Cameroonian educational system reveals both advantages and challenges. It offers an opportunity to manage the Cameroon infrastructural challenge through the adoption of AI learning platforms that allow access to relevant content for learners in remote communities (Njoya, 2017). Additionally, specific platforms could be used to serve a significant number of students which makes language learning more accessible and efficient in the country. Even at that, limited access to reliable internet and digital gadgets especially in rural areas presents a major obstacle. Bomah (2014) revealed that digital divide issues in Africa inhibit broad-based use of AI technology in education. Besides, it has also been argued that most teachers are not trained to adequately integrate AI tools in ways that facilitate learning and enhance learners' development. As a result, they resist efforts to incorporate AI in education and fear a possible erosion of traditional teaching methods (Koehler et al., 2013). Furthermore, at a time when contextual standards are celebrated, AI should be designed to concretely reflect the Cameroonian linguistic realities. This way, it serves both a pedagogic and a linguistic purpose in conserving and complementing the Cameroonian uniqueness.

There have been some efforts to explore teachers' and learners' perceptions towards the incorporation of AI in education in the global north and the results have revealed both optimism and skepticism. Blin (2020) reports that while teachers see it as a useful tool that could improve their teaching performances, providing personalized learning paths and automating administrative tasks, there are equally fears that it might replace or minimize human interaction in the classroom and consequently affect teacher-student relationship (Zawacki-Richter, 2020). Hegelheimer and Fisher (2019) argue that while students generally express enthusiasm about using AI tools for language learning, they may struggle with over-reliance on technology, particularly when it comes to speaking and pronunciation practices. Even with the growing interest in the domain, key stakeholders' attitudes towards the incorporation of AI in Cameroon pedagogic practices are unknown.

Theoretical Landscape

This study anchors on Davis' (1989) Technology Acceptance Model (TAM) which is designed to predict how users come to accept and use technology. The theory is built on two key beliefs that influence people's decision to adopt or reject technology. First, there is the perceived usefulness which allows individuals to believe that the technology would enhance their performances, and second, there is the perceived ease of use which allows the user to believe that a technology would not be complicated to use. The theory explores the attitudes, motivations and usages technology which makes it the right theory for this study. It allows us to adequately analyse some Cameroon Education key stakeholders' attitudes towards AI and highlight their motivations and challenges in the effective use of AI in Cameroon ELT.

Methodology

The data for this study came from 180 informants (30 inspectors, 50 ELT teachers and 100 ESL and EFL learners) in the city of Yaoundé. The students were randomly selected from different levels of high school¹. This was important considering an observable level of restriction of phone usages among students in lower classes in some of the institutions. Three institutions (Lycee Classique Nkolbisson, Lycee Technique Nkolbisson and Lycee Bilingue Etoug-Ebe) were randomly selected. A structured questionnaire was designed to elicit five categories of information from the informants. First, the questions required the informants to state their awareness or knowledge of AI, perceived benefits and challenges, emotional and professional responses and finally their thoughts on institutional and policy influences in the incorporation of AI in ELT. The quantitative results were qualitatively analyzed in relation to Davis’ TAM model.

Analysis

For the effective analysis of the data, this section is stratified into five sub-sections (awareness and knowledge, perceived benefits and challenges, emotional and professional response and institutional and policy influences) that allow for a better assessment of the informants’ attitudes. The first preoccupation was, therefore, to find out if the informants knew what AI was all about. This question was considered important especially for a context like Cameroon that is not technologically advanced compared to most contexts in the global North. The results were classified into “yes”, “no” and “not quite”. The last alternative was presented in different ways. Those who said they had heard about it but didn’t quite know what it meant or those who expressed a sense of doubt on the issue were classified under this category. The following table presents the informants’ responses.

Informants	Reactions	Freq.	%
Inspectors	Yes	30	100
Total		30	100
ELT teachers	Yes	29	58
	No	18	36
	Not quite	3	6
Total		50	100
Learners	Yes	33	33
	No	56	56
	Not Quite	11	11
Total		100	100

Table 1: Informants’ Awareness of AI

The above table reveals various levels of AI awareness among the three categories of informants, with inspectors relatively being the most informed followed by teachers and then the learners. The general statistics reveals a partial awareness of AI.

Notably, all those who expressed doubts on the issue were classified under unawareness as revealed on the following figure.

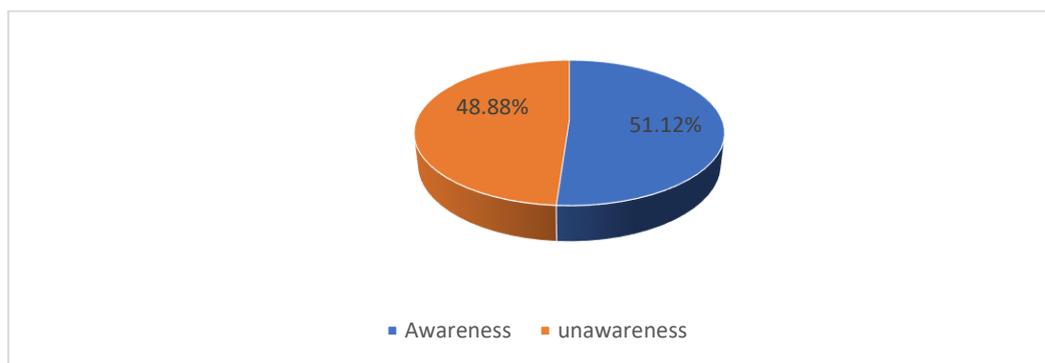


Figure 1: Informants’ Awareness of AI

The above statistics suggest a mixed readiness for integrating AI into English Language teaching. With just over half of the informants being aware of AI, efforts to incorporate AI in ELT may receive inconsistent support. While some schools may adopt and use it for language practices, feedback or assessment, and others may resist its adoption as a result of unfamiliarity and/or skepticism. Arguably, the level of unawareness is quite

significant and could constitute a major barrier to effective technology adoption in schools. Limited awareness among key stakeholders may also slow the conception and implementation of AI-friendly policies and curricula in ELT in particular and secondary education in general. However, 51.12% awareness suggests that there is a base for pilot projects. Early adopters can project the benefits of AI such as personalized learning,

¹ The student informants were either in Lower Sixth or Upper Sixth in the English system and Seconde, Premier or Terminal in the French system.

pronunciation and assessment tools which could inspire new interests among those who are unaware of the benefits.

Informants’ Perceived Benefits and Challenges

The informants who indicated that they were aware of AI were asked to state the benefits and challenges of incorporating AI in

English Language teaching. These follow-up questions allowed us to not only confirm their level of awareness but to also their opinions on the issue in Cameroon ELT. The following table presents the informants’ perceived benefits of implementing AI in Cameroon ELT.

Benefits	Challenges
Facilitates teaching	Poor infrastructure (internet and electricity)
Makes teaching/learning more interesting	Limited Real-life contextual content
Motivates learners	Digital Literacy gaps
Facilitates assessment	Resistance
Personalise learning	

Table 2: Informants’ Perceived Benefits and Challenges

In terms of benefits, while the students mentioned that it helps them learn more easily, considering the use of audio-visual materials that may come up from time to time, perhaps compared to the usual classroom interactions and practices that characterize most Cameroonian classrooms, the inspectors and teachers had more interesting responses. Their awareness that AI facilitates teaching and learning anchors on the fact that they can easily generate more personalized texts and exercises for different lessons, and the fact that marking could be more harmonized for a more effective outcome. These responses raise some pedagogic concerns related to cultural-authenticity or unimaginative text generation considering that most AI apps are not locally generated. However, the fact that it provides clues for more contextual consideration makes it an important resource for teachers. The harmonisation of marking also project another issue which was a prominent challenge the inspectors and teachers raised. Cameroon like most post-colonial African nations is grappling with infrastructural development in major sectors including technology. In fact, such digital tools as phones, computers and projectors are considered a luxury for a context that stills struggles with stable electricity supply in major cities and no electricity at all in most rural communities. Additionally, digital literacy gaps lead to resistance since

teachers and learners are already used to non-digitalized teaching and learning methods so much so that a digitalized methods would require extra efforts. This phenomenon is not new in the literature. Cuban (2001:134) reports that “many teachers, particularly veteran ones, do not find that computers make a substantial difference in their teaching or students’ learning”. Such beliefs undermine the much-needed Continuous Development Programme which is arguably a fundamental prerequisite for effective teaching outcomes. In addition, while technological application is context-specific, it must support and not disrupt learning. Consequently, it must be carefully analyzed in relations to types and relevance in specific contexts.

Emotional and Professional Responses

This part of the elicitation from the informants required opinions on a four-Likert scale. It was technically structured to explore their emotional and professional responses. Since the informants are all key stakeholders in English Language teaching in Cameroon, their responses and analyses were harmonized. “Strongly agree” and “agree” were considered positive and “strongly disagree” and “disagree” were considered negative. The following table presents the 120 informants’ emotional responses vis-à-vis their reactions to four statements.

Opinions	P.Freq.(%)²	N.Freq.(%)³
AI tools can finally level the ground for under-resource schools and learners in rural communities	143(79.44)	37(20.56)
I am worry that I won’t be able to keep up. It will be difficult to master and use them effectively.	138(76.66)	42(23.34)
This is a chance to show that Cameroon can technologically innovate English Language teaching too.	176(97.77)	4(2.23)
We’ve seen so many initiatives come and go and the incorporation of AI in ELT will be another f ailed effort.	167(92.77)	13(7.23)
Emotional Response Value	624(86.66)	96(13.34)

Table 3: Emotional Responses to AI Incorporation into Cameroon ELT

The above table shows the informants’ emotional excitement about the incorporation of AI in Cameroon ELT industry. The informants express excitement and hope, anxiety and uncertainty, pride and ambition as well as frustration and skepticism. Statistically, the informants’ feedback shows an emotional response value of 86.66% excitement about the incorporation of AI in ELT, even though 13.34% of them still have some anxiety, frustrations and reservations, which are perhaps rooted in the challenges we discussed in the earlier part of this section.

With regards to the professional demands or responses, the feedback was limited to inspectors and teachers. The informants were asked to react to five statements which allowed for a better appreciation of their professional thoughts or beliefs about the incorporation of AI in ELT. The following table presents their reactions to five statements that sought their opinions on the professional relevance of AI in ELT.

² Positive Frequency percentages

³ Negative Frequency percentages

Opinions	P.Freq.(%)	N.Freq.(%)
The integration of AI into Cameroon’s ELT presents a transformative opportunity	69(86.25)	11(13.75)
While AI is extremely important in the provision of real-time feedback and global resources to both teachers and learners, it must align with the sociolinguistic and cultural realities of Cameroon.	74 (92.5)	6(7.5)
To effectively incorporate AI in Cameroon ELT, the educational policy must prioritize teacher training, data privacy and equitable digital infrastructural access to stakeholders in both rural and urban settings	80 (100)	0(0.0)
AI tools should be adopted and adapted to avoid marginalizing local cultural norms and practices and to ensure that they support inclusive and context-sensitive language teaching pedagogies.	74 (92.5)	6(7.5)
The introduction of AI should be accompanied by teacher empowerment	80 (100)	0(0.0)
Professional Response Value	377(94.25)	23 (5.75)

Table 4: Professional Responses to AI Incorporation into Cameroon ELT

The above table shows that key secondary education stakeholders are convinced that the incorporation of AI in ELT can be successful if certain principles are well implemented. While they agreed that the integration of AI into Cameroon’s ELT presents a transformative opportunity, those who didn’t share this belief thought that digital technology is not a Cameroonian thing and cannot transform the educational system. This projects two thoughts. First, this could suggest that Cameroon is not ready given the perceived modus operandi which does not easily accept innovations. Second, it could rudimentarily suggest that Cameroon is dissociated to digitalization and so cannot conveniently fit in. However, digitalization presents a transformative development for Cameroon’s educational system whether it is a Cameroonian culture or not. On the alignment of AI with the sociolinguistic and cultural realities of Cameroon, in spite of its global relevance in the provision of real-time feedback and global resources, while a significant percentage (92.5%) of the informants agreed with the proposition, a few others (7.5%) felt that learners should be introduced to world culture and so formatting AI within the Cameroonian system to reflect the Cameroonian culture in a way create a gap in its originality considering that most of the intelligence are conceived in the west. These informants ignored the fact that AI is an intelligent

operational system that could be quite flexible with cultural inclusion which does not affect existing thought systems. Consequently, it does not only allow for a Cameroonian educational system but could also give the stakeholders ample opportunities of appreciating what exists in other parts of the world. The thoughts on adoptability and adaptability of AI tools to avoid the marginalization of local cultures and practices was considered quite vital for the majority of informants even though they had very little or no idea how this could be done. Those who did not share this opinion leaned on the belief that the technology is largely western and so no matter how they are Africanized, they will still remain western. While this is quite true, there is the need for a more thorough system education to ensure that the end approach mirrors and empowers the Cameroonian experience.

A comparative analysis of the informants’ emotional and professional responses to the incorporation of AI in Cameroon ELT was considered quite important. Since the emotional (624/720 = 86.67%) and professional responses (377/400 = 94.25%) presented different total score values, we used a Chi-Square Test of Independence on a contingency table and calculated the expected value which is row total × column total/ grand total as can be seen on the following table.

Type	Response	Remaining	Total
Professional	377	23	400
Emotional	624	6	720
Total	1001	119	1120

Table 5: Chi-Square Test of Independence on professional and emotional responses

From the above statistics, we calculated the following expected values and computed the Chi-Square as seen below using the value $X^2 = E (O-E)^2/E^4$,

Types	Expected Values	Computation
Professional Responses	$(400 \times 1001) / 1120 = 357.5$	1.056
Professional Remaining	$(400 \times 119) / 1120 = 42.5$	9.47
Emotional Responses	$(720 \times 1001) / 1120 = 643.5$	0.593
Emotional Remaining	$(720 \times 119) / 1120 = 76.5$	5.007
Chi-Square Total		16.126

Table 5: Chi-Square Total

⁴ O = Observed value, E = Expected value.

The above statistics allowed us to find out if there is a significant relationship between the informants' professional and emotional responses to the incorporation of AI in Cameroon's ELT. The Chi-Square test revealed a general value of 16.12, with a critical value for significance at 0.05 level of 3.84. Since the general value is much higher than 3.84, it means that there is statistically significant difference between the informants' professional and emotional responses to the incorporation of AI in Cameroon ELT. The differences are unlikely to be due to random chance. Consequently, even though emotional responses had higher absolute values, professional responses were more efficient or reliable in proportion to their total. This suggests that a professional awareness may deliver steadier and more consistent engagement to AI in ELT compared to an emotional awareness which, though potentially more attention-grabbing, may lead to a decline.

Conclusion

The integration of Artificial Intelligence into English Language Teaching (ELT) in Cameroon presents significant potential for enhancing pedagogical practices, promoting personalized learning, and addressing classroom challenges. The findings showed a 51% awareness and a generally positive attitude among pedagogic inspectors, teachers, and students, indicating a fertile ground for AI adoption. The findings also revealed that pedagogic inspectors and teachers are likely to respond professionally than emotionally to the incorporation of AI in ELT. However, the reservations that were expressed regarding infrastructure, training gaps, cultural alignment, and ethical concerns underscore the need for a cautious and context-sensitive approach. For AI to be effectively and sustainably integrated into Cameroon's ELT landscape, stakeholders must address awareness gaps through targeted capacity-building, ensure equitable access to digital resources, and promote the development of locally relevant AI tools. The collaborative efforts of key stakeholders, including high technology experts, government, teachers, inspectors and students will go a long way to ensure quality adoption and adaptation.

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