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| RESEARCH ARTICLE

Novice vs. Experienced Teachers: A Quantitative Analysis of Attitudes Toward MOOCs for Professional Development Among Moroccan EFL Educators

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| ABSTRACT

The rise of Massive Open Online Courses (MOOCs) has transformed how teachers approach professional development worldwide. Yet in Morocco's English as a Foreign Language (EFL) context, their adoption and effectiveness remain understudied. This study examines EFL teachers' attitudes toward using MOOCs for continuous professional development, specifically comparing the perspectives of novice teachers versus veterans. Going into this research, it was assumed that there would be a clear distinction. To test this, an independent samples t-test was used to compare attitudes between the two groups. Surprisingly, the findings challenged these assumptions. The data showed no meaningful statistical differences in how the two groups perceived MOOCs for professional growth. This unexpected result suggests that factors beyond teaching experience influence teachers' willingness to use these online learning platforms. These findings indicate that one-size-fits-all approach to professional development may not work. Instead, the results offer valuable guidance for administrators, policymakers, and teacher educators working to integrate digital learning tools into professional development strategies in Morocco and similar contexts.

| KEYWORDS

MOOCs, Continuous Professional Development, Teacher Attitudes, Novice Teachers, Experienced Teachers, Educational Technology.

1. Introduction

Continuous professional development (CPD) is no longer optional for educators. In today's dynamic educational landscape, it is of paramount importance for educators to stay abreast of changing pedagogical practices and breakthroughs in educational technologies. Among recent innovations in professional development, Massive Open Online Courses (MOOCs) have long been a question of great interest in wide range of fields. They have rapidly grown in popularity in recent years as versatile, affordable and readily available professional development platforms. In the educational sphere, the uptake among teachers varies. According to research, teachers' attitudes are influenced by a myriad of criteria such as technological competency, past experiences with online learning, and overall beliefs about professional development. Evaluating teachers' attitudes about the adoption of MOOCs in CPD is vital for effective and successful use and implementation of these online learning tools. Consequently, this research study fills a significant gap by examining novice and experienced teachers' attitudinal variances towards MOOC adoption for CPD within the field of English as a Foreign Language in Morocco. By delving into how teachers at different stages in their careers perceive MOOCs for professional development, this research seeks to unearth insights that could inform the integration of these online paradigms into Moroccan EFL teacher training programs. This study's ultimate goal is to contribute to a better understanding of how MOOCs are perceived in the constantly evolving landscape of teacher development. These insights can help policy-makers customize Continuous Professional Development programs better meet the needs of educators at various phases of their careers.

1.1 Research Objectives

This study holds substantial implications for the advancement of professional development (PD) opportunities within the Moroccan educational sector. The findings shed light on the potential of MOOCs to bridge existing gaps in professional development, especially in the realm of English as a Foreign Language instruction. Hence, this integration has the potential to enhance instructional abilities teachers at all stages of their careers. Furthermore, this research may unveil distinct preferences within each teacher group by assessing the differences in impact on new and seasoned instructors regarding specific MOOC features or learning styles. These insights can be valuable for tailoring MOOC offers and professional development programs to better meet the different demands of Moroccan EFL instructors. Another main objective lays in informing policy makers about effective techniques for leveraging online resources such as MOOCs into conventional training programs. This integration may expand access to free, high quality and easily accessible professional development activities for a broader spectrum of Moroccan EFL teachers. Ultimately, by addressing teacher demands and harnessing the potential of MOOCs, this study contributes to practical techniques regarding enhancing the quality of Moroccan EFL instruction, leading to a more skilled and effective teaching corps

1.2 Research questions

1. What are the perspectives of novice and experienced Moroccan EFL teachers on the value of MOOCs for professional development?
2. How do novice and experienced Moroccan EFL instructors' attitudes about MOOCs fluctuate during their professional development?

2. Literature Review

As the heart of classroom instruction, teachers' effectiveness depends on their continuous competence and efficiency. Teacher professional development programs provide opportunities for professional growth through formal and informal experiences. Formal Professional development contains participating in workshops, mentoring and attending professional meetings with supervisors. As for informal professional development activities, they include reading the literature, attending conferences and reflective writing.

Previous research has established the effectiveness of professional development in the English Language Teaching (ELT) sphere. According to Komba and Nkumbi (2008), most teachers value professional development as it enhances their skills. In another research, Yadav (2011), blogging as professional development activity can enhance English language teachers and learners' abilities. As stated by Lier (2002), there is a relationship between reflective professional development, teachers' knowledge and practice, and learners' learning, as well as their participation in this process. In the words of Knapp (2003), professional development is essential for enhancing teaching skills. In essence, teachers must navigate diverse leaner groups, programs, curricula and policies throughout their employment, there is an inevitable process of complying with professional development programs to triumph over these challenges.

Professional development programs can help maintain excellent teaching standards and retain qualified teacher staff, whether novice or experienced. As beliefs and needs of teachers differ, their professional development could also vary. Novice teachers have been defined as having little to no mastery experience, while experienced ones are those who have acquired 5 years or more of classroom experience. Novice teachers are usually defined as educators who have just started their teaching journey, whereas experienced teachers are distinguished as teachers with a rich and adequate teaching experience. Novice and experienced teachers are identifiable because they represent opposite extremes of the teacher professional development continuum. Novice teachers are at the beginning of the continuum, followed by experienced instructors at the end. It is widely assumed that experienced teachers' classroom decisions are superior due to their attendance to a number of teacher training programs. They are also able to incorporate pedagogical knowledge acquired to their teaching practices. Conversely, novice teachers are still acquiring knowledge as they are in their initial stage of their teaching journeys. (Zhang, L.J; Zhang, D, 2020) (As cited in: Sun & Zhang, 2022)

The introduction of digital technologies has generated discussions regarding novel approaches to professional development in the educational sector, especially in the English Language Teaching setting. Massive Open Online Courses (MOOCs) garnered a lot of interest from teachers as a flexible and accessible way of continuing their professional development. As cited in Misra (2008), a study by MIT- Harvard concluded that approximately 40% of open online courses participants are teachers. The term MOOCs was used in 2008 to refer to a teaching method based on "connectivism" which incorporates many aspects of the WEB. (Siemens, 2005) Based on Anders (2015), MOOCs are an innovative platform that encourage learners to explore online communities. They are open educational platforms that provide freely available digital materials for teaching. (Tseng et al. 2019) While, Schultz (2014) explains that "Massive Open Online Courses (MOOCs) are digital teaching formats which offer stimuli for developing the concepts of e-learning, Web 2.0 and open educational resources." MOOCs are designed to facilitate affordable education through the flexibility of time and location. While learners do not have to be registered with the institutions to access

the platforms, a small fee will be charged for the credentials. Platforms such as Coursera and EdX do charge around 50$ to obtain certifications like identity-verified certificate or honor code certificate. However, for the purpose of using MOOCs for professional development in the Moroccan educational sphere, these certifications are not needed. The provision of a simple participation certificate upon the successful completion of the MOOC largely suffice.

In the last decade, the rise of online learning platforms began to show promising results with regards to teacher professional development. MOOCs are ideal for professional development and complementing higher education courses. (Neto ,2017) According to Koutsodimou & Jimoyiannis (2015), they developed a MOOC for primary school teachers. The course had a high completion rate of 82% and a post-course questionnaire found that most teachers were satisfies with the course as it positively impacted their professional development. In another study, Koukis & Jimoyiannis (2017) focused on secondary education teachers when designing a MOOC where they can use Web 2.0 tools in language instruction. The MOOC had a good completion rate of 62.5% and teacher interviews revealed instructors' reasons behind completing the online course as related to its flexibility and openness. These studies found out that MOOCs offer numerous opportunities for teacher professional development.

The use of MOOCs in professional development is a relatively novel conception. According to Jobe, Östlund and Svensson (2014) "The utilization of MOOCs for professional teacher development is relatively novel and uncharted. The combination of MOOCs and teacher development seems to offer an obvious win-win situation. Teachers can receive high quality professional development for free, and MOOC providers can expand their user base with motivated, educated learners". MOOCs can be a catalyst for change in emerging countries because teachers often lack access to high-quality effective professional development opportunities. (Lawrie and Burns, 2013) A study conducted by Laurillard (2016) revealed the efficacy of such courses for teachers lacking high-quality professional development.

> "...there is genuine potential for this technology to engage adults in the emerging economies in a form of professional development that would be commensurate with the immense challenge of capacity building on this scale for the teaching profession across the range of skills they need" (Laurillard, 2016)

Moreover, MOOC courses offer teacher diverse learning opportunities tailored to their specific needs. They can encourage self-reflection and professional autonomy. Kumari (2016) suggests that MOOCs can help teachers advance professionally by making certified courses more accessible, flexible and time-efficient. Another study indicated that "MOOCs have the instructional design and technology necessary to offer a high-quality education-and they're clearly attracting smart people who want to advance their professional development" (Coffman, 2015). All in all, MOOCs are seen to be a highly valuable tool to enhance teachers' skill, knowledge and competencies.

While MOOCs are seen as excellent instruments for instructors' professional development, research has revealed a number of concerns, mainly related to the learner and his or her motivation, the content and resources, as well as technological barriers. According to Shapiro et al. (2017), MOOC participants encounter difficulties such as time constraints and limited access to resources including internet connection. Another frequent challenge is the dropout rate for most MOOC learners. A research by Hew & Chung (2014) revealed that 90% of MOOC participants drop out of courses. Reasons can include lack of motivation, support and incentives to comprehend the material. Dropping out of the course has no consequences, making participants feel less obliged to complete it.

Understanding teachers' attitudes towards MOOCs for CPD is critical for developing effective strategies in this digital era. Studies over the past decades have established critical information on the fluctuation of attitudes towards online learning tools among instructors due to factors like prior experiences, views and beliefs. (Baran & Correia, 2014) Studies view teachers' attitudes on the use of MOOCs for professional development as largely positive, due to the accessibility and diversity of learning opportunities provided. Educators value the flexibility of learning at their own pace and having access to a large selection of courses from regarded establishments throughout the world. MOOCs effectiveness as a professional development tool in tertiary education is confirmed by data indicating improved involvement and satisfaction among staff who chose MOOCs instead of traditional ways. (Mori & Ractliffe, 2016). Additionally, MOOCs are recognized for providing rich pedagogical techniques that allow teachers to immediately apply newly acquired knowledge to their teaching practices. (Phan & Zhu, 2020). A study by Vlachou et al. (2020) on secondary education ICT teachers' experiences and perceptions found that they MOOCs were seen as a professional development opportunity and were quite satisfied with them. Although acknowledging the value of direct face to face contact, these teachers use MOOCs to broaden their knowledge and attain their professional development objectives. Furthermore, professional development in MOOCs is perceived to encourage instructors because of the opportunities to improve their abilities, meet their diverse needs, and participate in collaborative interactions with fellow teachers from all over the world (Gonçalves & Gonçalves, 2019). In conclusion, MOOCs have emerged as a valuable resource for teachers' continuous professional development. While there is an array of different attitudes, a substantial portion of teachers support MOOCs

because of its high quality information sourced from credible higher institution, flexibility, and accessibility. Instructors are drawn to MOOCs because of the opportunity for professional development, collaboration opportunities with learning communities, and the ease with which learning may be integrated to their schedules. MOOCs have the potential to play a significant role in altering the future of the teacher professional development and educational landscape, provided that barriers are dealt with carefully.

The exploration of attitudes towards MOOCs amongst novice and experienced Moroccan EFL teacher may reveal substantial differences based on their respective professional stages. Novice teachers may embrace MOOCs in their professional development maybe due to their digital nativism and desire to incorporate cutting-edge ideas into their teaching capabilities. These teachers' adaptability and desire for professional development reinforce the flexibility and diversity MOOCs offer. Novice teachers, who are frequently characterized by enthusiasm and openness to novel educational approaches, are more likely to exhibit positive attitudes towards the adoption of MOOCs due to their experience with digital technologies and desire for professional development. In contrast, experienced teachers may be skeptical about online CPD due to worries about the quality and usefulness of these. They are maybe hesitant because they prefer conventional CPD approaches and are concerned about the efficacy and application of MOOC based learning outcomes in their daily work.

Building on this diverse theoretical foundation, this study aims at examining whether or not attitudes differ between novice and experienced Moroccan EFL teachers. A hypothesis was formulated that suggests significant disparities in attitudes towards MOOC adoption between Moroccan novice and experienced EFL teachers. Given the inequalities in exposure, skill, and reliance on digital learning platforms, as well as differing demands of professional development, the hypothesized disparities may reflect a broader evidence about educational technologies innovation and conventional practices. This hypothesis is grounded on the divergent beliefs, experiences and needs concerning professional development possibilities. This study aims not only to test the hypothesis but also understand the underlying causes of any such variations, with the ultimate goal of shaping CPD programs to better meet the requirements and preferences of both novice and experienced teachers.

2.1 Theoretical framework
The online learning continuous professional development model, MOOCs, can be evaluated via the lens of multiple theoretical frameworks, namely adult learning theory, professional development continuum, and unified theory of acceptance and use of technology. The intersection between these theories offer a robust framework for examining the disparities in MOOC adoption between novice and experienced teachers. According to the professional development continuum, teachers' needs evolve throughout their careers, with novice instructors seeking fundamental knowledge and core skills and experienced teachers seeking more advanced and specialized learning opportunities. Adult learning theory, andragogy, posits that educators, like adult learners, have distinct self-directed learning affected by previous knowledge and life experiences. According to this theory, while novice teachers may favor directed learning opportunities provided by MOOCs, experienced teachers may seek MOOCs that allow for more autonomy and the capacity scaffold their previous professional experiences into their learning. Finally, unified theory of acceptance and use of technology focuses on a lens through which to assess how both groups perceive and engage with MOOC platform for CPD. Novice teachers may prioritize simplicity of use and the potential for MOOCs to improve job performance, but experienced instructors may be swayed by the efficacy of the learning process and the credibility of the content supplied via MOOCs. The combination of these theories allows for a more nuanced research into how teachers at different career phases adopt and use MOOCs for professional development, taking into account aspects such as career needs, learning preferences and technological adoption.

3. Methodology
The purpose of this study was to investigate the disparities in novice and experienced teachers' attitudes regarding using Massive Open Online Courses for continuous professional development in the Moroccan English as a Foreign Language context (EFL). To accomplish this goal, a quantitative research design was implemented, utilizing an independent samples t-test to compare attitudes towards MOOC adoption amongst novice and experienced teachers. First, a quantitative survey was conducted to gather data about the attitudes of both novice and experienced teachers concerning MOOCs in CPD. The survey included Likert-scale questions through the lenses of an adapted version of the Technology Acceptance Model to collect quantitative data. The survey will be distributed to a sample of participants that include both novice and experienced teachers in Moroccan EFL context.

3.1 Study population
This study's population consisted of Moroccan English teachers who taught in various educational institutions across Morocco during the academic year 2023/2024. Convenience sampling was employed, and 142 EFL teachers representing different educational institutions and regions volunteered to participate in this study. While the findings of this sample may not be generalizable, data provided would unlikely be obtained in any other way.

3.2 Data collection tools and procedure

A validated survey instrument was utilized to collect data on the participants. The questionnaire consisted of 17 items, modified from Davis' (1989) Technology Acceptance Model (TAM), designed to assess different aspects. It was divided into five sections, each targeted at uncovering a specific element. The first part attempted to expose the participants' demographic information such as age, gender, education and years of teaching experience. The remainder consisted of Likert scale responses with five points ranging from Strongly Disagree to Strongly Agree. Respondents were prompted to provide feedback on their preferences for perceived usefulness, perceived ease of use, behavioral intention to use MOOCs, Attitudes towards using MOOCs, social influence, facilitating conditions, and trust in MOOC platforms. The questionnaire was administered online using Google Forms, ensuring convenience and accessibility, and responses were sought from a variety of sources dedicated to Moroccan English teachers. Measures were also taken to ensure confidentiality of participants' data. The data was then exported to SPSS for statistical analysis.

3.3 Reliability
The reliability of this scale was established using the Cronbach alpha coefficient. As a whole the internal consistency varied from .721 to .925. The analysis for each element was as follows: .851 for perceived usefulness,.721 for perceived ease of use,.891 for behavioral intention to use MOOCs,.925 for attitudes toward MOOCs,.773 for social influence,.758 for facilitating conditions, and.847 for confidence in MOOC platforms. (Masbah & Sakale, 2023)

3.4 Data analysis
Upon completion of data collection, the responses were then analyzed using suitable statistical measures. Descriptive statistics, such as mean scores and standard deviations, were used to summarize respondents' attitudes toward MOOC adoption for CPD. Additionally, an independent samples t-test was conducted to compare attitudes between novice and experienced teachers. In this section, we delve into the examination of the hypotheses formulated to investigate the attitudes of the two groups towards the adoption of MOOCs for CPD.

3.5 Hypotheses
Two hypotheses were formulated to guide the investigation:

Null Hypothesis (H0): Novice and experienced teachers do not have completely different attitudes towards MOOC adoption for CPD.

Alternative Hypothesis (H1) 2tailed: Novice and experienced teachers have completely different attitudes towards MOOC adoption for CPD.

To test the hypothesis of significant differences between novice and experienced teachers, an independent samples t-test was carried out. The statistical analysis allowed us to compare the mean attitude scores of the two groups.

Group Statistics

	Teaching Experience	N	Mean	Std. Deviation	Std. Error Mean
ATTITUDES	Novice	48	2,4534	,66732	,09632
	Experienced	94	2,4818	,59225	,06109

3.5.1 Attitudinal Differences Between Novice and Experienced Teachers
We fail to reject the null hypothesis (H0) because the statistical test yielded, p > 0,05, a p-value greater than 0.05. This suggests that there is no statistically significant difference in attitudes about MOOC adoption between novice and experienced teachers. Furthermore, because the variances of attitudes across the two groups were not significantly different, we can assume both groups held comparable attitudes on MOOC-based CPD programs.

An independent samples t-test was conducted to compare the attitudes towards the adoption of MOOCs in CPD for novice and experienced EFL teachers. There were no significant differences (t(140)= -0,259 , p=0,796) in scores for novice teachers (M=2,4534 , SD=,66732) and experienced teachers (M=2,4818 , SD=,59225).The magnitude of differences in the means (mean difference =-,02839 , 95% CI -,24531 to ,18853) was very small. Hence, the alternative hypothesis (H1) was not supported.

3.5.2. Comparison of Teacher Attitudes Between Novice and Experienced Instructors: Independent Samples t-Test
Further analysis of mean attitudes score, standard deviations and confidence intervals revealed more about the nuanced nature of teacher attitudes about online CPD. Despite disparities in teaching experience, both novice and experienced teachers showed similar levels of interest and readiness to participate in MOOCs for professional development purposes.

4. Discussion

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ATTITUDES	Equal variances assumed	,002	,965	-,259	140	,796	-,02839	,10972	-,24531	,18853
	Equal variances not assumed			-,249	85,427	,804	-,02839	,11406	-,25515	,19837

This research investigated teacher attitudes and perceptions regarding the use of MOOCs for professional development. The findings revealed a generally optimistic outlook, with a significant portion of teachers recognizing the potential benefits of MOOCs for improving teaching skills (78% Agree/Strongly Agree) and effectiveness (73% Agree/Strongly Agree). Furthermore, an overwhelming majority (88%) expressed trust in the quality and reliability of instructional contents provided by MOOC platforms. These findings are consistent with previous studies emphasizing the perceived usefulness of MOOCs for instructors wanting to expand their knowledge. For instance, Ji & Cao (2016) found that "MOOC has become an important tool for some teachers to gain professional development after getting their degrees." Still, the research revealed several potential barriers to widespread adoption of MOOCs. While 83% of teachers reported having the requisite tills (internet, computer) to access MOOCs, the lack of time for participation surfaced as a major issue (only 58% felt they had sufficient time). Asyhari et al. (2023) unveiled that "Institutional problems include ... large teacher workloads". This outcome imply that policymakers should examine measures to encourage teacher participation in MOOCs such as establishing an allocated time for MOOC engagement and establishing a reward system tailored to Moroccan educational sphere.

Additionally, a sizable number of teachers voiced concern about the ease of use and learning curve regarding MOOC platforms. For instance, 43% of the sample were unsure about platform navigation and 23% were unsure of their ability to use them. To reduce technical hurdles, MOOC developers ought to emphasize user-friendliness and provide explicit introductions to platforms. Priyadarshini, (2024) underlined the importance of "clear and intuitive navigation" to enhance "user engagement". Wang et al. (2014) conducted a questionnaire survey on 380 students, and the results showed that the more user-friendly the platform interface design was, the more satisfied learners felt about online learning. (Yu, 2022) Similarly, Cole et al. (2014) discovered that an online learning platform, including important variables such as online delivery of learning materials, timely support services, and user-friendly interface design, was a key reason for satisfaction or unhappiness with online learning. (Yu, 2022)

Surprisingly enough, teacher attitudes on potential peer support for MOOC use differed. Whereas 38% expected good reactions from their coworkers, 23% were unsure. This could be a prospective opportunity for stakeholders to enhance or create a more supportive environment, promoting cooperation and collaborative work among educators participating in MOOC based learning. Peer engagement in MOOC platforms improve the overall experience for instructors. Lin et al. (2017) have found that peer interaction allows for better learning achievements.

> "The experiment results show that the students who tended to actively contribute knowledge to peers on the social learning platform had better learning achievements than the students who were used to the passive reception of knowledge. Besides, the knowledge transmitters and intermediaries performed better in learning achievement as well, and the knowledge contributors had closer interactions with their peers." (Lin et al. 2017)

Adult learning is ongoing and inevitable arising from their job practices. For teachers, a workplace has the potential to foster a community of learners and provide them with valuable professional development When applied to a virtual context, such as online communities, the targeted audience becomes more diverse than a physical workplace. Online communities are collaborative ecosystems. Richardson (1990), Richardson (1992), and Richardson & Placier (2001) all emphasize the importance of collaboration in promoting teacher learning. (Duncan-Howell, 2009)

This study's investigation into Moroccan EFL teachers' perspectives on MOOCs for professional development aligns with research highlighting their value. Yet, findings shared by both novice and experienced Moroccan EFL teachers in this sample had pointed out concerns regarding user experience, time management, and the development of a supportive learning environment. To improve MOOC adoption rates and enhance their use, collaborative efforts are necessary. MOOC developers and stakeholders in Moroccan educational domain can collaborate to harness the full potential of MOOCs for improving teachers' growth and ultimately their students' leaning outcomes by using MOOCs in PD programs. In sum, by addressing teachers' needs, MOOCs can be successfully integrated into Moroccan EFL teacher PD programs.

This study's findings call into question ideas regarding the impact of teaching experience on attitudes toward online Continuous Professional Development (CPD). Previous literature indicated a high significance for teaching experience in relation to professional development. According to Torff, B., & Sessions, D. (2008), "results indicate that teaching experience was the best predictor of teachers' attitudes about PD. These attitudes were meaningfully different in the first ten years compared to later years in the teaching profession." However, the current research implies that differences between novice and experienced teachers in their attitudes toward Massive Open Online Courses (MOOC) adoption for CPD may not be as significant. This outcome directly tackled the question of how novice and experienced Moroccan EFL teachers' attitudes toward MOOCs fluctuate during their professional development.

These findings have significant implications for educational stakeholders, emphasizing the importance of personalized approaches to professional development rather than the uniform ones the Moroccan education sphere abides by. Instead of focusing exclusively on teaching experience, initiatives should take into account individual traits, contextual factors, and the ever-changing educational landscape in Morocco. This could entail customizing programs to include factors such as teaching styles and technological proficiency. The lack of significant change in attitudes towards online CPD revealed that a "one-size-fits-all" approach to professional development may not be suitable. This is especially relevant when talking about Morocco where access to professional development is still deemed traditional and vary according to educational settings. Additionally, this study ought to confirm the significance of digital literacy and equitable access to online resources to foster effective professional development. Moving forward, educational stakeholders ought to prioritize the development and implementation of individualized CPD initiatives that serve the unique needs of teachers across all experience levels and from different locations.

Overall, the study contributes to the nuanced understanding of teacher attitudes regarding MOOC adoption for CPD in the Moroccan EFL sphere. These findings can guide policy decisions, PD curriculum design, and inform pedagogical practices in this digital age. By leveraging these insights, stakeholders can also to design and implement effective CPD initiatives that promote teacher growth and ultimately enhance student learning outcomes in the Moroccan EFL classrooms. Furthermore, they suggest that effective MOOC integration in Moroccan EFL teacher PD programs require a focus on addressing concerns regarding user experience, time management, and a supportive learning environment, regardless of teacher experience.

4.1 Limitations
The current study garnered valuable insights into Moroccan EFL teachers' attitudes towards MOOC adoption for Continuous Professional Development (CPD). However, certain limitations warrant consideration when interpreting the findings. First of all, the study employed a relatively small sample size and relied on convenience sampling techniques. This approach may limit the findings' generalizability to the larger population of Moroccan EFL teachers. Future studies can address this constraint by using more robust sampling procedures, such as stratified or random sampling, to include a wider spectrum of participants and a more representative sample of teachers across geographical locations, experience levels, and technological expertise.

Furthermore, the study's reliance solely on self-reported data from questionnaires can weaken the data's validity and raises the possibility of response bias. Participants may have been inclined to produce socially desirable responses or exaggerated their level of comfort with technology. To address this limitation, future research should use a mixed-methods strategy that incorporates a variety of other methods such as in-depth interviews or classroom observations. These additional methodologies would enable to a more comprehensive understanding of teachers' attitudes about MOOC adoption and their perceived impact on their professional development journey. Overall, acknowledging these limitations emphasizes the need for additional research in this field. Future research directions which include a more representative sample and a mixed method data collection procedure can provide more comprehensive insights into how MOOCs can be effectively integrated into Moroccan EFL teachers' professional development programs.

4.2 Recommendations
Based on these results, moving forward, there are numerous research directions that could help gain a better understanding of Moroccan EFL educators' attitudes about the adoption of MOOCs for CPD. For starters, longitudinal studies could shed light on the long-term trajectories of attitudes. By tracking participants' perceptions over extended periods, such studies could detect possible disparities in perceptions on MOOCs over time. Moreover, supplementing the quantitative analysis employed in this

study with qualitative inquiry could help us better understand the motives, experiences, and barriers that Moroccan EFL instructors confront when using MOOCs for CPD. These qualitative data could reveal deeper details about how teachers perceive the potential and challenges of MOOC use in their professional development journey. Another recommendation involves researching the usefulness of MOOCs and evaluating their integration in teacher training programs. Thus line of inquiry can help discover the special needs of Moroccan EFL educators when it comes to using MOOCs for continuous professional development. Overall, future research in this area provides a good opportunity to improve the integration of MOOCs into the professional development landscape for Moroccan EFL educators.

5. Conclusions

This study had provided useful insights on the attitudes of Moroccan EFL novice and experienced teachers about the use of MOOCs for CPD. Conclusions had arisen from a comprehensive assessment of the current literature changing the understanding of MOOC adoption in the Moroccan EFL sphere. The study's findings call into question the notions about variations in attitudes between these two groups. Contrary to initial predictions, no significant changes in attitudes were discovered, highlighting the necessity of PD activities that take into account teachers' individual needs and preferences. Additionally, this research emphasizes MOOCs potential to increase access to high-quality CPD opportunities, particularly in instances where professional development options may be limited. In essence, this study is a first step toward unlocking the potentially transformative impact of MOOCs in the professional development landscape of Moroccan EFL education, paving the way for future research aimed at empowering teachers and enhancing educational experiences for instructors and learners alike across the country.

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