FOSTERING TEACHER COLLABORATION THROUGH ONLINE COMMUNITIES OF PRACTICE IN TEACHER EDUCATION

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Abstract: A substantial body of research broadly affirms that teacher collaboration fosters the sharing of knowledge, resources, and experiences, significantly contributing to professional development. Recently, as virtual environments have supported pedagogical practices, many Algerian universities have embraced online teaching communities to promote collaborative engagement among teachers. This study employs a descriptive–exploratory research design to investigate Algerian EFL teachers' engagement in online communities as platforms for sharing professional knowledge and experiences to foster teaching practices and collaboration. It examines the extent to which these online communities facilitate the sharing of experiences and professional knowledge among like-minded peers, thereby enhancing their teaching practices and supporting professional growth. Using an online questionnaire addressed to a convenient sample of 78 EFL teachers across 10 Algerian universities, this study explores effective practices for creating online teaching communities of practice in teacher education. The findings reveal that EFL teachers are aware of the potential of such communities in supporting teaching practices and ongoing professional development, as well as fostering knowledge-sharing among their members. The results also disclose that the use of digital tools and platforms, such as forums, social media groups, and video conferencing, was found to significantly foster collaboration and community-building. Additionally, many EFL teachers reported that online communities foster support, guidance, and inspiration, which are essential for meaningful professional engagement and development. Ultimately, carefully structured online teaching communities, coupled with effective collaboration, have the potential to strengthen EFL teachers' professional efficacy, enhance student learning outcomes, and contribute positively to the overall quality of teacher education. At the end, this study suggests a comprehensive model illustrating the mechanisms through which online CoPs can be strategically designed to support Algerian EFL teacher development. It also provides a foundation for further research into how communities of practice supported by digital technologies can foster Algerian EFL teachers' engagement and collaboration.

Keywords: Algerian EFL teachers; collaboration; digital tools; knowledge-sharing; online communities of practice; professional development; teacher education.

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Introduction

The internet has become an essential platform for social and professional interaction, providing individuals with diverse opportunities to connect, collaborate and fulfil both personal and professional needs. This trend is particularly evident in education, where the widespread adoption of online platforms, including social media networks, professional networking sites, and virtual communities, has transformed and redefined the ways in which teachers interact with one another, encouraging collaboration beyond the limits of physical space. These platforms now provide supportive and collaborative environments for teachers to connect with colleagues from around the world, share resources, exchange ideas, and learn from each other's experiences (Fontaine & Millen, 2004).

Teacher collaboration has long been recognised as a significant area of focus in effective educational practice, as teachers' collaborative practices have been shown to consistently enhance teaching strategies, which in turn lead to improve student outcomes. However, traditional opportunities for collaboration are often limited by time constraints and departmental boundaries, restricting teachers' ability to reflect on and develop their practices with colleagues outside their immediate circles. In such contexts, online communities of practice (CoPs) offer a flexible alternative, reducing barriers such as scheduling conflicts and geographic distance and sometimes removing them completely. Teachers are more likely to feel connected to their colleagues and to "access academic discussion for in-service teachers and enable pre-service teachers to learn from the experience of practicing teachers." (Kennedy, 2021, p. 12-13)

A growing body of research has shown the potential of blended and virtual learning environments to create opportunities for communication, community-building and a sense of belonging among educators. Online CoPs, in particular, reinforce these practices by providing informal spaces where teachers worldwide can connect, share experiences, and support each other's professional growth. Despite the growing global interest in these communities since Lave and Wegner (1991) first introduced them, and despite the emerging area of research on online CoPs (Beres & Janes, 2023), there remains limited research on their role and impact within the context of Algerian teacher education. Addressing this gap, the present study investigates Algerian EFL teachers' perceptions of online communities as venues for sharing professional knowledge and experiences to foster their teaching practices and collaboration. Specifically, the study seeks to answer the following research questions:

1. To what extent do Algerian EFL teachers participate in online CoPs, and why do they engage in these platforms?

2. How do Algerian EFL teachers perceive the effectiveness of these CoPs in supporting their professional development and promoting collaboration?

3. What impact do these platforms have on the instructors' teaching practices and professional skills?

Systematic research has grown recently on the role of CoPs in teacher education, yet there remains a need to understand how online communities provide opportunities for Algerian EFL teachers to engage and interact with peers, access new research-based best practices, reflect on their teaching and develop as professionals. By exploring their experiences and perceptions, this study seeks to unveil how these online spaces support meaningful collaboration, mutual support, and ongoing professional development in their everyday teaching. It further offers relevant insights and practical implications for teachers and policymakers, as the paradigm shift is placing more emphasis on virtual networks in different educational settings.

2. Literature Review

2.1. Community of Practice Theory

The theory of community of practice (CoP) views society as a network of countless communities, each characterised by varying levels of member participation ranging from peripheral involvement to central engagement (Wenger, 1998). CoP theory allows viewing the transition to the virtual classroom as an entrance into a new community of practice, where modes of belonging might not be aligned with those of a traditional teaching community. A CoP is defined as a social entity comprised of people who share common interests or goals, fostering interaction and collaborative learning through ongoing knowledge exchange. Lave and Wenger (1991) introduced the term to emphasize the social aspect of group learning, particularly among teachers.

The traits that distinguish a CoP from other social entities include the mutual engagement of its members towards a joint enterprise and the establishment of a shared repertoire of resources, language, and practices that support their collective identity (Wenger, 1998). According to Abbot and Lee (2022), a community of practice is typically defined by three key features: members who share expertise in a specific field; members who regularly engage in collaborative activities to learn from one another; and members who gradually build a common repertoire for addressing the challenges they face in their professional practice.

There is general consensus among scholars and practitioners that effective professional development for teachers is essential to building a strong sense of community. To develop as professionals, teachers are expected to engage in clinical aspects of practice, such as modelling effective teaching behaviour, bridging theory and classroom practice, and reflecting on teaching experiences (Gallagher et al.,2011; Hou, 2015; Benosmane, 2021). Within teaching-focused CoPs, members have established modes of belonging that include commonly agreed-upon understandings of what it means to be a good teacher, what constitutes good teaching, and even what a teacher should exemplify (Weber & Mitchell, 1995; Wang & Zhang, 2023). Effective teaching practices are applicable in a wide range of learning environments (Hutchins, 2003). These spaces provide an engaging and dynamic learning atmosphere where teachers can engage in meaningful discussions, share experiences, and collaboratively explore new ideas, thereby enhancing both individual and collective professional growth. Thus, CoPs are recognised as valuable resources for teacher professional development.

2.2. Online Communities of Practice

Online CoPs take the core idea of traditional CoPs and move them to the virtual world. An online CoP is defined as a group of individuals who engage in ongoing, technology-supported interactions to exchange and construct shared knowledge, values, beliefs and experiences related to a certain area of practice (Liu, 2012). Generally, these communities use a variety of digital tools and platforms, such as blogs, social media groups (e.g., Messenger, Facebook, and LinkedIn), and video conferencing platforms like Zoom, to facilitate interaction, collaboration, and knowledge-sharing among members. Although online communities of practice can be used alongside face-to-face interactions to enrich professional learning, they are especially valuable for cases where teachers cannot meet in person, such as teachers working in distance education (McConnell et al., 2013; Bond & Lockee, 2014, as cited in Xue et al., 2019).

The concept of the CoP has been widely adopted into research on online communities, with many recurring themes of interest, such as knowledge exchange and collaborative

learning. However, sparse research addresses whether online CoPs support collaborative mentoring and relationship-building, both of which are critical elements of traditional CoPs (Trust, 2015). Online CoPs offer a valuable space for educators to "share a passion for something that they know how to do and who interact regularly to learn how to do it better" (Wenger, 1998, p. 4). These virtual environments support ongoing professional development by enabling teachers to connect, collaborate and refine their practices beyond geographical barriers. Since this research examines the digital contexts that teachers use to collaborate, the terms 'online teaching communities', 'online communities of practice', and 'virtual CoPs' will be used interchangeably in this paper to refer to the digital spaces, be it formal or informal, where teacher professionally learn and collaborate.

COVID-19 significantly accelerated the adoption of online learning and collaborative technologies globally. Many Algerian universities rapidly transitioned to remote and blended teaching modalities during lock-downs, necessitating urgent development of digital competences and online collaboration practices among educators. The present study was conducted post-pandemic, capturing teachers' perspectives at a critical juncture when online communities have transitioned from emergency response to potentially sustainable professional development infrastructure. The European VALIANT Erasmus+ project exemplifies international efforts to leverage virtual exchange for teacher development, providing a comprehensive framework for examining how Algerian EFL teachers similarly utilise online CoPs for professional learning.

To recapitulate, Knight (2020, pp. 300-301) suggested four key ideas for determining how online collaboration can be used successfully in teacher education and professional development: (1) practitioners must participate in professional communities to develop their careers; (2) practitioners need sufficient time for development to occur; (3) mediators (both technical platforms and community leaders) must provide ongoing support to practitioners; (4) relationships among practitioners, regardless of their relative experience, must be both collaborative and mutually beneficial.

2.3. Teachers Collaboration and Development

Nurturing a sense of community among teachers aligns closely with the principles of Vygotsky's social constructivism, which holds that knowledge is not absolute but rather constructed through social interaction (Vygotsky, 1978). An effective learning environment fosters autonomy and self-motivation while offering mechanisms for both synchronous and asynchronous communication, thereby supporting constructivist and collaborative pedagogy (Hiltz & Turoff, 2005). Human social and cognitive development is fundamentally a collaborative process that occurs through participation in cultural activities and practices (Rogoff, 2003). Identities and understandings of the world are shaped by the ways through which we actively participate and engage with others within communities of practice (Wenger & Lave, 2001).

Furthermore, Wenger's (1998) socio-cultural framework highlights the mutual influence between a CoP and the identity of its members. In this context, teacher identity is crucial in teaching communities; professional identity is deeply linked to personal identity. That is, teaching is not merely a set of practices or behaviors but is genuinely connected to a teacher's sense of self, which shapes the way they approach teaching. Danielewicz (2001, p. 3) argued that "What makes someone a good teacher is not methodology, or even ideology. It requires engagement with identity, the way individuals conceive of themselves so that teaching is a state of being, not merely ways of acting or behaving". This perspective highlights the value of critical self-reflection and self-awareness in the teaching process, which can be facilitated by engaging in meaningful conversations that promote critical reflection.

Jimenez-Silva and Olson (2012) conducted a study to understand how pre-service teachers' participation in teacher/learner communities enabled them to use the theories learned in the teacher education programme in their thinking about their future classroom practice with English Language Learners in the US. They assumed that the community "serves as a group of critical friends that provides the pre-service teachers with the social, emotional, and scholarly assistance needed to be successful in the course." (2012, p. 343). It is a place for educators to come together in real time and ask questions, share resources, remain plugged into current best practices, and collaborate.

Communities of practice create environments that promote social interaction and engagement, enabling members to share information, generate new knowledge, and achieve common objectives (Smith et al., 2017). Cifuentes et al.'s (2011) empirical study provides evidence that continuous involvement in online CoPs can foster a gradual shift in teachers' attitudes toward technology integration. When teachers learn and work in a collaborative mode, professional development becomes more efficient (Sims & Fletcher-Wood, 2021; Azzioui, 2024). Generally, building teaching communities or peer groups enhances teachers' learning experiences by providing opportunities and training that offer unique insights into issues relevant to the community (Zhang & Yuan, 2020). As a valuable tool for professional development, online CoPs empower teachers to collaborate on curriculum design, peer interaction, assessment, problem-solving, and reflection, thus enhancing their participation in supporting others and sharing knowledge effectively (Hou, 2015). In this respect, CoPs have been found to possess significant potential to change how teachers learn and how they gain professional development throughout their careers.

3. Methodology

3.1. Research Design

To gain insight into teachers' perceptions of Communities of Practice (CoPs) in fostering collaboration and enhancing teaching practices, this descriptive−exploratory study adopted a quantitative research design. This approach was chosen to address the research questions and guide both data collection and analysis. As outlined by Lim (2024), quantitative research is conducted to extract patterns, identify problems, make predictions and suggest solutions. The current study aimed to explore and describe the current state of Algerian EFL university teachers' engagement and perceptions of collaboration within online CoPs, identify the influence of such engagement on their teaching practices, and diagnose the key issues they encounter within these platforms.

A structured survey was used to collect data, which included sections on: participants' demographics, their levels and types of participation in online teaching communities, their perceptions of benefits and challenges associated with these communities, and their insights into how online platforms foster collaboration among educators with shared interests and goals. The survey method enabled the collection of standardized data from a broad sample. Data were analyzed using descriptive statistics (frequencies and percentages) to summarize participation patterns and perceptions. To examine associations between teaching experience and perceived effectiveness of online CoPs, chi-square test of independence was conducted.

3.2. Data Collection

For this study, data were collected through a structured survey questionnaire designed to assess teachers' perceptions of online teaching communities of practice (CoPs), the nature of online collaboration, and the perceived impact on teaching practices and professional development. As Creswell (2005) explains, surveys are recognized as valuable tools for

describing trends, capturing individual opinions, and uncovering important beliefs and attitudes within a target population.

The questionnaire was divided into five distinct sections: (1) respondents' profile (gender, affiliation, academic rank and years of teaching experience at the university); (2) participants' perceptions regarding online CoPs; (3) the nature and extent of collaborative practices among teachers; (4) how involvement in CoPs influences teaching practices; and (5) six statements related to professional development, each rated on a 4-point Likert scale (Agree, Neutral, Disagree, Don't know).

An invitation to participate in the study was distributed via social media platforms and institutional e-mail lists to Algerian EFL university teachers. The survey link, created using Google Forms, was shared through these digital channels to facilitate easy access and participation. The data collection period spanned one week, providing ample time for participants to respond.

3.3. Sampling and Participants

Participants were selected using a convenience sampling approach. This approach was selected as the most practical given the geographical dispersion of participants across Algerian universities. Invitations were distributed via both institutional e-mail lists and social media platforms (Facebook and LinkedIn groups) to Algerian university teachers. It is true this approach provides access to diverse pool of participants, it introduces the possibility of self-selection bias, as only actively engaged teachers in digital communities were reached.

Because the total number of EFL teachers who received or viewed the survey invitation could not be determined, a conventional response rate cannot be calculated. The sample therefore comprises the 78 completed questionnaires received within the data collection period. It consists of 08 male and 70 female teachers, with teaching experience at the university ranging from as little as one year to more than fifteen years, capturing a wide spectrum of professional backgrounds and perspectives within the Algerian EFL teaching community.

The sample size of 78 participants represents a modest proportion of the broader EFL teaching population in Algeria. Consequently, findings should be interpreted as indicative of trends within our surveyed institutions rather than exhaustive generalizations applicable to all Algerian EFL teachers. This limitation should be considered when applying results to policy decisions affecting the entire EFL teaching community.

Table 1.

Participant Demographics and Professional Profile

Background information		N°	Percentage
Gender	Male	8	10.3%
	Female	70	89.7%
Academic title	MA (Maître Assistant)	20	25.6%
	MC (Maître de Conférence)	54	69.3%
	Professor	4	5.1%
Teaching experience	1-5 years	8	10.3%
	6-10 years	14	17.9%
	11-15 years	22	28.2%
	More than 15 years	34	43.6%
Affiliation	Eastern region universities	39	50%
	Central universities	21	27%
	Western region universities	18	23%

As seen in the table, gender distribution section shows that the vast majority of surveyed teachers are female (89.7%), indicating a strong female representation within Algerian EFL university teaching communities. This dramatic gender imbalance (10.3% male, 89.7% female) deserves discussion. While this gender composition may reflect broader patterns in language teaching internationally and in Algeria specifically, it may also indicate differential participation rates in online CoPs, with female teachers showing greater engagement with digital platforms for professional development. The gender composition of EFL teachers in Algerian universities may naturally tend toward female representation; however, if male teachers are underrepresented in online CoPs generally, the findings may not fully capture male teachers' perspectives and experiences.

The academic title distribution shows that the largest segment, (69.3%) of the participants is MC (Maître de Conference) teachers, comprising of both those who are accredited and not yet accredited. The teaching experience distribution shows that the majority of teachers (43.6%) have more than 15 years of teaching experience, highlighting a predominance of highly experienced professionals in English language teaching. All participants are affiliated with 10 different university institutions across Algeria, representing diverse geographic regions (east 50%, centre27%, and west 23%). This geographic diversity strengthens the representativeness of findings across different socioeconomic and technological contexts within the country.

4. Results and Discussion

4.1. Engagement in Online Communities of Practice

Of the 78 total respondents, 53 participants (68.2%) reported having been members of online teaching communities of practice. The data suggests that online CoPs are a popular and well-established form of professional development among Algerian EFL university teachers. CoPs are commonly embraced by teachers worldwide as effective platforms for enhancing professional learning and collaboration, offering opportunities for reflective practice and innovation in teaching and increasing access to shared resources and peer-support. Multiple

studies report that online CoPs contribute positively to the learning of teachers (Hall, 2009; Trust, 2016).

Notably, 24 participants (30.8%) indicated they had not participated in such communities. The survey did not specifically target barriers to participation, yet this number may suggest important contextual issues related to: (1) institutional and infrastructural barriers; (2) digital literacy, especially those with longer teaching careers; (3) awareness of existing communities; and (4) teaching load and time constraints, which may significantly impact teachers' ability to participate in and benefit from online communities.

When asked to list the specific online communities they have been part of, the 53 the participants reported to be part in one of the three groups: social media platforms (Facebook, Messenger, WhatsApp), video conferencing platforms (Zoom, Google Meet), or learning platforms (Google Classroom, MOOC, Moodle). The use of a variety of platforms demonstrates a blended approach to professional engagement. Teachers are leveraging both informal social networks (such as Facebook and WhatsApp) and formal learning environments (like MOOC and Moodle) to support their professional development and collaboration. This diversity aligns with research findings that teachers tend to connect to different types of CoPs and around similar topics, passions, and areas of expertise (Sauro et al., 2021; Wang & Zhang, 2023). Beres and Janes (2023) emphasized that when choosing digital platforms for online CoPs, participants opt for tools that support both synchronous and asynchronous ways of interaction. Synchronous functionalities like real-time discussions, live meetings, and collaborative sessions allow members to participate in dynamic exchanges. At the same time asynchronous functionalities allow them to contribute at their convenience and navigate their busy schedules. The combination of informal and formal communities enables educators to balance peer interaction with structured professional development opportunities.

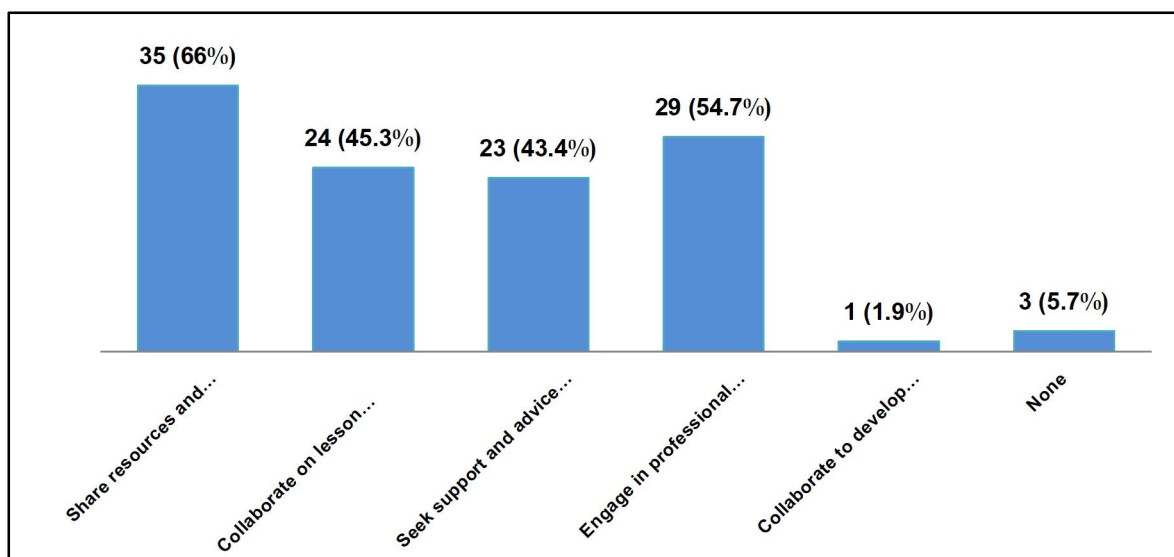*4.2. Reasons for Participation in Online Communities of Practice*

Figure 1: Primary Reasons of Participation in Online CoPs

Survey results reveal several key motivations driving teachers to engage in online CoPs. The top reasons teachers participated in CoPs were to share resources and teaching ideas, to engage in professional development opportunities, and to collaborate on lesson plans and curriculum development. These results suggest that the strong emphasis on resource sharing and collaboration underscores the value teachers place on collective knowledge and mutual support. This pattern is consistent with existing research, which highlights the role of online

CoPs in fostering teachers' professional development and learning, collaborative problem-solving, and innovative teaching practices (Barnett & O'Mahony, 2006; Zhang et al. 2017).
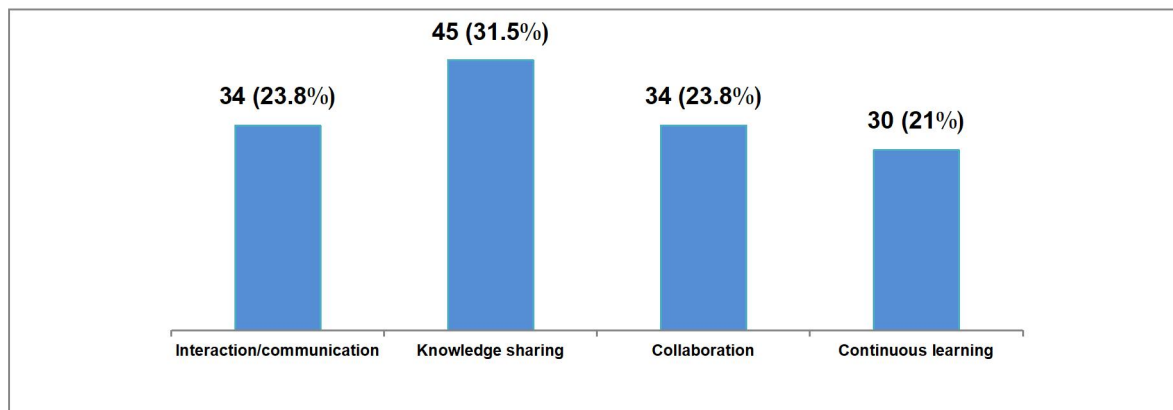

Figure 2: Aspects of Online CoPs

The graph illustrates the key aspects of online communities of practice (CoPs) that active CoP members (53) found most valuable. Most teachers (45) found knowledge-sharing as the most valuable feature of online CoPs. These communities provide a platform for exchanging ideas, resources, and best practices, enabling teachers to stay informed and knowledgeable. For collaboration and interaction with colleagues, (34) of teachers emphasize that online CoPs facilitate meaningful communication, peer-support, allowing them to learn from each other's experiences. Last, (30) teachers highlight continuous learning opportunities offered by online CoPs. These communities support ongoing professional development by facilitating access to training and reflective practices.

Teachers value CoPs primarily for their ability to foster knowledge-sharing, collaboration, and continuous learning. Prior research has shown that online CoPs can support many aspects of teacher learning, including technological and intercultural knowledge, pedagogical growth, self-efficacy, and peer communication (Xue et al., 2019). They also support the development of the teachers by providing an environment, in which they can learn together, enhancing their content knowledge and pedagogical skills (Boling & Martin, 2005).

4.3. Perceived Benefits of Online Communities of Practice
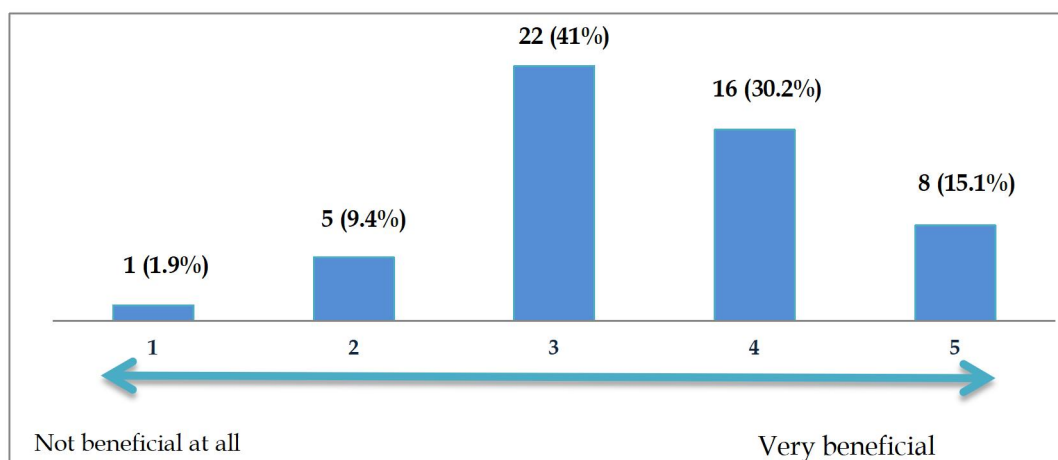

Figure 3: Perceived Benefits of Online CoPs Participation

Teachers were asked to evaluate the benefit of their participation in online CoPs. Among the 53 active CoP members, most teachers evaluated their participation in CoPs as beneficial (24), whereas a significant minority of teachers (22) remained neutral. Only 6 teachers held negative views. This discrepancy reflects that respondents may either view CoPs as theoretically beneficial while experiencing barriers or have unmet expectations regarding benefits in online settings. This distinction implies that teachers may value CoPs, but implementation challenges can limit their perceived benefits.

Overall, these findings indicate that most teachers perceive online CoPs as valuable resources. The positive perceptions corroborate with previous research findings of Wenger (1998), who emphasized the importance of mutual engagement and shared practice in CoPs, as well as more recent studies by Wang and Zhang (2023), which underscore the effectiveness of online CoPs in supporting teacher collaboration and professional development. Also, findings from Iyer and Martin (2013) reported that participation in online communities of practice positively influences teacher learning and professional growth. However, it is important to consider the specific design and context of these platforms to ensure they meet teachers' needs, fostering collaborative environments, and address potential barriers to participation such as technology anxiety, platform user-friendliness, and technical support availability (Ghamrawi, 2022).

4.4. Collaboration in Online Communities of Practice

When asked about their attitudes towards online CoPs, all teachers agreed that CoPs help them collaborate with other teachers. This finding is significant, indicating strong consensus among respondents who found these communities to be valuable tools for fostering professional collaboration. However, this belief exists with a practical gap. All teachers agree that CoPs help collaboration, but 10 teachers reported them as not beneficial (Figure 3). This suggests the existence of unmet expectations in reality and barriers for some users. This may include the workload, challenges related to technology, engagement or trust.

When asked to explain how online CoPs help collaboration, some teachers stated the following:

Table 2.
How online CoPs Help Collaboration According to the Participants

Themes	Examples from Teachers' Responses
Challenging Space	- *"Online CoPs extend the sphere of collaboration as you don't have to rely solely on the collaboration with the teachers you know or in your immediate environment."* - *"They create spaces where teachers from diverse backgrounds, locations, and experiences can come together to share ideas, resources, and best practices."*
Reflection	- *"It is an opportunity to reflect upon one's own teaching/research practice and an opportunity to share resources."*

These findings extend existing literature by confirming teachers' awareness of the benefits of CoPs in promoting collaboration (Kuznetsova, et al., 2023; Hesen et al., 2022; Ghamrawi, 2022; Patton & Parker, 2017; Horrocks & Trust, 2016). As their responses demonstrate, they use online CoPs to expand their professional networks, challenge the confines of space to access global experience, engage in meaningful dialogue, co-create

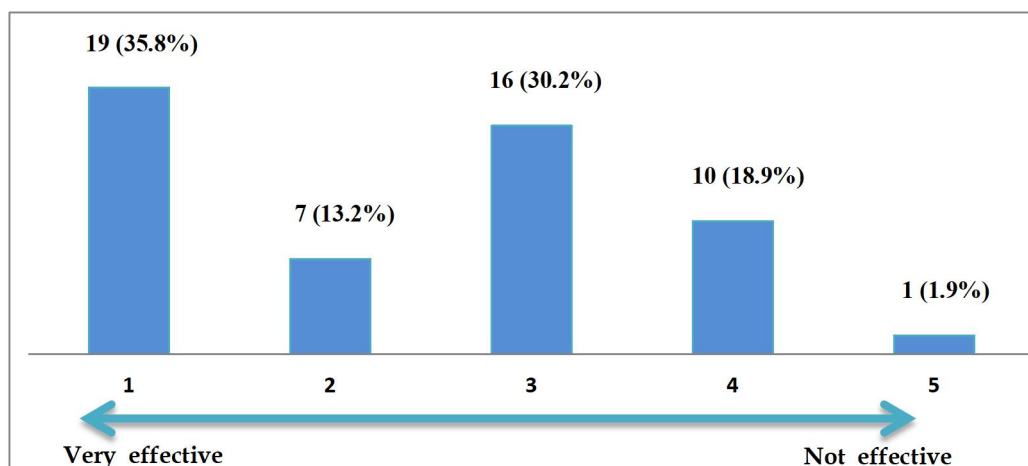knowledge, and reflect on their practices, all of which contribute to their ongoing professional development.

Figure 4: Effectiveness of CoPs in Promoting Collaboration

When asked about the extent to which online CoPs are effective in promoting collaboration, most active members (26) believed that they are effective or very effective in promoting collaboration among teachers, underscoring the value many teachers place on these platforms for professional interaction and cooperative learning. A notable group of (16) teachers expressed a neutral stance, indicating that while CoPs are generally perceived as beneficial, some teachers may have limited experience, face challenges in engagement, or may not have formed strong opinion about their effectiveness. Only (1) teacher held negative views about their effectiveness.

To examine whether the teachers' career stage affects their perceptions of the effectiveness of CoPs, a Chi-Square Test of Independence was performed between the four levels of teaching experience and perceived effectiveness (categorized into "very effective/ effective" and "neutral/ not effective"). The contingency table is presented in Table 2.

Table 3.
Chi-Square Test for Association between Teaching Experience and Perceived CoP Effectiveness

Variables	χ^2 Value	df	Asymp. Sig. (p-value)	Result
Teaching Experience × Perceived Effectiveness	4.37	3	p> 0.05	Not Significant

The chi-square test revealed a non-significant association between the two variables: χ^2 (3, N=53) = 4.37, p > .05. The data suggests that novice teachers were most likely to rate CoPs as very effective as experienced teachers. In other words, the perceived effectiveness of such platforms is independent of longevity in one's career, though the relationship requires larger sample size to establish statistical significance. While experience level did not significantly predict effectiveness perception, this finding supports the view that CoPs are important source of support and development across all stages of a teacher's career.

This positive perception aligns with Wenger's (1988) conceptualization of CoPs as spaces where knowledge is constructed through social interaction and shared practice. The strong consensus that online CoPs facilitate collaboration substantiates Wenger's assertion that participation in authentic communities promotes learning and professional development.

In addition, teachers' emphasis on knowledge-sharing and peer support reflects the principles of social constructivism articulated by Vygotsky (1978), wherein learning emerges through *collaborative interaction and cultural participation.*

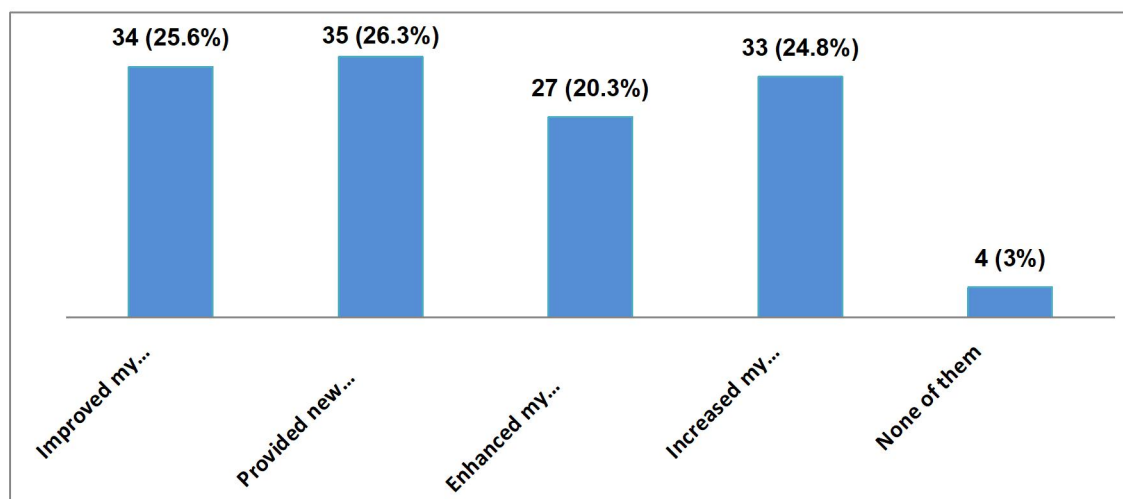*4.5. Impact on the Teaching Practice and Professional Development*

Figure 5: Aspects Impacted by Participation in Online CoPs

This graph presents (53) teachers' perceptions of the influence that engagement in online CoPs has on their teaching practices and professional development. (35) Teachers reported that CoPs have inspired fresh approaches to lesson design and classroom activities. (34) Teachers noted that participation in online communities has enhanced their knowledge of effective instructional techniques. (27)Teachers indicated that online CoPs have helped them develop skills to better address the needs of varied student populations.

Overall, a clear majority of teachers reported that their participation in online CoPs had an impact on multiple dimensions of their teaching practice. This suggests that CoPs can serve as valuable platforms for supporting teachers' professional development, offering resources, ideas, and improving their teaching practices. Eventually, the positive impact reported by most participants highlights the potential of online CoPs to enrich teaching practice and contribute to ongoing professional learning.

Teachers in Algerian universities reported strong positive attitudes towards online CoPs, as illustrated in the table below. The data reveal widespread agreement that these platforms provide valuable benefits across several professional dimensions.

Table 4.

Impact of Online CoPs on Teaching Practices & Development

N°	Statements	Agree	Neutral	Disagree	Don't know	M	SD
1	Online teaching communities provide teachers with pedagogical skills and soft skills.	79.4%	10.3%	0	10,3%	3.59	**0.93**
2	Online teaching communities provide teachers with opportunities for training and certification	64.1%	23%	2.6%	10.3%	3.41	**0.95**
3	Online teaching communities provide teachers with opportunities for ongoing learning.	94.9%	5.1%	0	0	3.95	**0.22**
4	Online teaching communities provide teachers with more opportunities to participate in conferences, seminars, and webinars inside and outside Algeria.	87.1%	7.7%	5.2%	0	3.82	**0.50**
5	Online teaching communities support online education.	76.9%	12.8%	0	10.3%	3.56	**0.93**
6	Online teaching communities provide teachers with opportunities to develop their cultural and intercultural competence	76.9%	17.9%	2.6%	2.6%	3.69	**0.65**
Note: Values on 4-point Likert scale: Agree = 4, Neutral = 3, Disagree = 2, Don't know = 1							

The analysis of the Likert scale indicates a general positive perception across all dimensions with the mean scores ranging from x̄= 3.41 to x̄= 3.95.This indicates a strong agreement among Algerian teachers that CoPs are valuable resources for ongoing professional development, skill enhancement (both pedagogical and soft skills), access to diverse learning opportunities beyond traditional methods (including conferences, seminars, and webinars),and support for online education. These findings are consistent with prior studies reporting that participation in online CoPs offers convenient platforms for pre-service teachers for sharing instructional techniques and methods (Yang, 2009).

Throughout the collected data, many teachers noted that online communities foster a sense of safety, trust, and connection, which are essential for effective professional engagement. Through online CoPs, teachers develop relationships, provide empathy and support, share stories, scaffold work, and provide feedback to each other. The participants expressed greater satisfaction with the type of supportive and open atmosphere that CoPs provided, and they liked the open communication and relationships that are developed in the communities (Hou, 2015). The teachers believed that this organization helped to create safe and collaborative teaching communities. These characteristics align with a study conducted by Iaquinto et al. (2011), who demonstrated that intentionally creating CoPs is feasible and beneficial for professionals seeking to collaborate and share knowledge across disciplinary and divisional boundaries. They continue to say that:

A successful CoP to be one whose members: demonstrated a sense of stake-holding or ownership of their CoP topic; demonstrated a willingness to participate in meetings and to collaborate and share expertise; communicate, collaborate and share expertise outside of meetings; and identified gaps in their knowledge and attempted to fill those gaps by, for example, suggesting new topics for meetings. (2011, pp. 8-9)

In summary, online CoPs are widely recognized by Algerian EFL teachers as valuable platforms for professional development, offering not only skill-building and diverse learning opportunities but also a collaborative community that enhances teaching practice and fosters ongoing growth. Addressing areas of lower agreement and building on existing strengths can further increase the impact of online CoPs in teacher education.

5. Recommendations

The research findings show that there are several steps to be taken to further improve online CoPs for Algerian EFL teachers. It is important for online communities of practice to represent the unique needs of the Algerian context. In order to accomplish this, they must be collaboratively designed and allow teachers to be part of the process. When teachers are active stakeholders, the content and the purposes of online CoPs will always remain relevant to their lived professional experiences. Institutional support can also sustain these networks. There is a pressing need to orient less digital teachers and provide proper mentorship. Regular cycles of evaluation to assess their impact on teachers and classrooms can transform such digital spaces into active tools for professional development.

The literature clearly shows the benefits of online CoPs for teacher professional development, yet a comprehensive understanding of how these benefits take place necessitates a conceptual model that integrates both theory and empirical findings. Drawing on Wenger's (1998) Community of Practice theory and Vygotsky's (1978) social constructivism, this study suggests a model implication illustrating the mechanisms through which online CoPs support Algerian EFL teacher development (see figure 6 below).

Teachers' participation in online CoPs activates four primary mechanisms (knowledge-sharing, collaboration & peer support, access to resources & best practices, and technology-mediated interaction), which collectively produce intermediate professional outcomes (professional skills development, enhanced teaching strategies, increased technology confidence, and ongoing learning). These intermediate outcomes synergistically contribute to three ultimate outcomes: improved teaching practices, enhanced professional efficacy, and positive student learning outcomes.
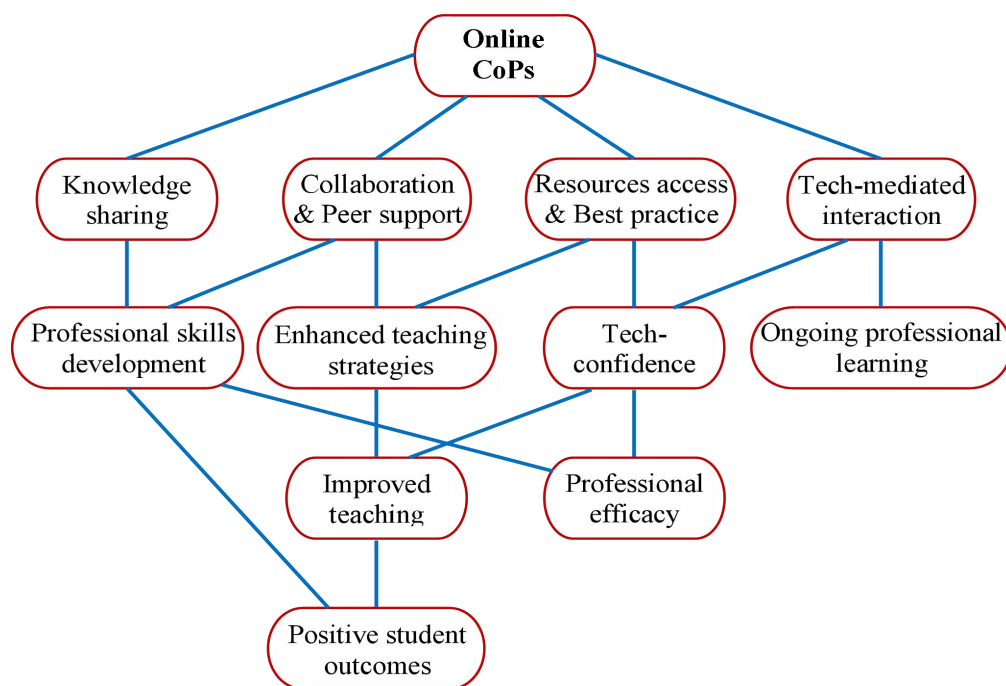
Figure 6: Conceptual Model of Online CoPs Support for EFL Teacher Development

For Algerian EFL teachers, the above model suggests several implementation priorities:

1. Platform Design: Platforms should support both synchronous and asynchronous functionality, accommodating variable internet connectivity and teaching schedules.

2. Asset Generation: Given the knowledge-access mechanism, intentional administration of evidence-based EFL instructional materials and assessment tools would enhance CoP value, particularly for teachers in institutions with limited resources.

3. Peer Mentoring infrastructure: Explicit roles and training for experienced teachers serving as mentors, facilitators, and advisors would leverage the peer-support mechanism and model professional practices.

4. Technology Support: Given findings that technology confidence increases through CoP participation, providing technical assistance, and platform training would lower barriers to participation.

5. Institutional Support: Incorporating CoP participation into workload assessments, promoting CoP platforms institutionally would strengthen participation and appreciation.

Implementing these ideas would enhance the effectiveness and relevance of online CoPs as platforms for Algerian EFL teacher collaboration, professional development, and ongoing learning.

6. Conclusion

Despite the challenges hindering online communication, research indicates that these hurdles can progressively be overcome. Satisfaction with online collaboration has increased in conjunction with advancing technologies. Creating collaborative online teaching communities

involves intricate interrelationships between members and technology. Online communities have become increasingly popular among teachers as valuable sources of professional support, guidance, and inspiration. These online platforms provide supportive and collaborative environments where teachers can connect with colleagues around the world, share resources, exchange innovative ideas, and learn from each other's experiences.

We believe that communities of practice (CoPs) among Algerian EFL teachers emerge as effective pedagogical tools for helping teachers connect, collaborate, and critically reflect on their own educational beliefs and assumptions. Finally, employing the CoPs pedagogy in teacher education courses may help establish improved norms and practices for teaching and learning.

Although this study gives important insights into online CoPs in Algeria, it was subject to few limitations that may have influenced the results but remained beyond the researchers' control. First, prior online experiences of the participants with online platforms may have an impact on their participation behaviours and perceptions. Second, the 78-participant sample, though diverse across institutions, represents a modest proportion of Algeria's total EFL teaching population. Third, convenience sampling via social media and emails introduces self-selection bias. Fourth, while surveys aim to elicit truthful responses, there is no absolute assurance that provided information is entirely accurate. Varying interpretations of survey questions can, in some instances, impact responses given to specific items and introduce bias. Last, it is important to consider that the findings are specific the study's context and may not be generalized to other populations or international contexts.

These limitations highlight the need for further research employing mixed methods designs integrating qualitative interviews and focus groups would provide rich and nuanced insights into teachers' experiences and perceived barriers to online CoPs participation. Longitudinal research following teachers over extended periods would clarify how CoP participation impacts professional development and long-term teaching practices. Also, nationally representative samples spanning Algeria's institutions would enhance the generalisability of findings across the EFL teaching sector. International comparative research would contextualise Algerian experiences within global patterns of online teacher collaboration. Finally, focused study of non-participants would elucidate structural, technological, and personal barriers to online CoPs engagement.

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