SOCIAL AND BEHAVIORAL SCIENCES. Education

ORIGINAL RESEARCH

A Digital Leap in the Evolution of Continuous Professional Development for Teachers

Authors' Contribution:
A – Study design;
B – Data collection;
C – Statistical analysis;
D – Data interpretation;
E – Manuscript preparation;
F – Literature search;
G – Funds collection

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Abstract

Background and Aim of Study:
The realm of education is in a constant state of evolution, necessitating that teachers at K-12 and tertiary levels continually update their practices through continuous professional development (CPD). The COVID-19 pandemic has significantly accelerated the adoption of online CPD, encompassing self-driven initiatives, government-led programs, and third-party offerings, notably those by the British Council in the MENA region, which is the emphasis of this study. This transition to online platforms initially involved leveraging Zoom, and subsequently, WhatsApp.
The aim of the study: to map the process of CPD-infused online training by analyzing meeting schedules, topics discussed, group dynamics, and interaction patterns. Additionally, it seeks to develop a CPD-based system that can be replicated or scaled for broader implementation.

Material and Methods:
This descriptive multi-case study is conducted on two WhatsApp groups dedicated to enhancing the skills and competencies of 990 and 780 MENA teachers, respectively. For data collection, the study employed two primary tools: participant observation, and analysis of archived data from CPD-based multimedia-focused discussions in both e-groups over a fixed period of 40 days.

Results:
The research provides a comprehensive overview of the CPD process and a cost-effective scalable CPD-centric system based on six key elements: e-platforms, e-meetings, archiving, certification, website and organization that orchestrates and streamlines the entire process. This CPD-driven system offers guidelines for institutions and policymakers looking to replicate this system in their educational contexts, with the goal of upgrading teachers' pedagogical expertise.

Conclusions:
This study contributes to understanding the effectiveness and scalability of online CPD initiatives using platforms like WhatsApp, particularly in regions like MENA, and offers insights for stakeholders aiming to implement similar strategies for enhancing teacher professional development.

Keywords: *education, system, social media, CPD, MENA, WhatsApp*

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Introduction

In these turbulent times, professional continuous development for teachers at all levels, including primary, middle, secondary, and tertiary, is becoming increasingly crucial. It enables them to sharpen their capabilities, broaden their pedagogical repertoire, and build upon existing knowledge to overall enhance the teaching profession. In this sense, the landscape of education is being fundamentally changed by technology, as digital advancements progressively integrate into the daily tasks of teachers in schools (Player-Koro et al., 2018; Pypenko, 2019). In fact, technology has been a proficient vessel through which continuous professional development (CPD) has transcended the physical confines of educational institutions, thereby becoming more widespread.

Accordingly, a consistent body of literature has been produced in term of using CPD online for teachers (e.g., Çelen & Seferoglu, 2020; Lantz-Andersson et al., 2018; Wong et al., 2023). Along these lines, the pandemic has significantly accelerated the proliferation of technologizing CPD programs because instructors worldwide were in need to upgrade their e-savoir-faire to be able to operate in online-only environment in the wide spectrum of pedagogical facets. During these times, different initiative be it self-initiated (Rahman et al., 2020), government-mandated (Mutiary & Ratnam-Lim, 2023) and/or third party-led as it is the case in this study.

In this respect, it's attested that teacher training encompass training instructors to hone different competences (Hossein et al., 2024) that ranges from creating educational tasks that cater to the specific needs of students (Simamora et al., 2020; Thumiki & Magd, 2022), utilizing precise, organized content and schedule to impart course requirements to learners (Jung et al., 2021; Li et al., 2017), devising online pedagogical materials in/for learning management system (LMS) (González et al., 2023; Martin et al., 2019), choosing suitable online technology that aligns with the desired content and learning objectives (Adi Badiozaman et al., 2022; Schalk et al., 2022), creating a well-structured course with supplementary tips, instructions, and criteria (Paliwal & Singh, 2021; Wang et al., 2021), to efficiently aligning learning goals, course tasks, assessment methods, and educational activities in online courses (Hung & Chou, 2015; Reader et al., 2020), and creating online study materials, methodologies, and resources to enhance learning effectiveness and organization (Metz & Bezuidenhout, 2018; Phelps & Vlachopoulos, 2019).

Additionally, these teacher training (e)-programs were conducted on educational platforms including Zoom (e.g., Anene & Idiedo, 2023; Lucovich, 2021) and Google meet (Noor et al., 2021) along with other informal arenas including social media (Acuyo, 2021; Maloney et al., 2017) such as twitter (e.g, Colwell & Hutchison, 2018), Facebook (e.g., Al-Jarf, 2021; Bett & Makewa, 2020) and more importantly WhatsApp (Kihwele & Mgata, 2022). These social media-facilitated professional development programs are especially useful for average to low-resourced contexts (Focho, 2023) where it become significantly cost-effective to deploy such e-trainings and to larger audience. As a result, it is recommended that social media tools like WhatsApp hold promise for fostering teacher development in similar under-privileged contexts (Motteram et al., 2020).

Further, another key advantage of professional development facilitated by social media is its flexibility to tailor to the specific needs of different teachers and accommodate an individual's changing requirements as they progress through various stages of their career (Anders, 2018). For this reason, Acuyo (2021) urges tutors to utilize the interactive functions of social media platforms to connect with fellow professionals and make a lasting impact in the community by actively participating in online discussions.

In a more angled standpoint, different studies that have been conducted on how to leverage WhatsApp for continuous professional developments ends. In this regard, Cansoy (2017) suggests that WhatsApp groups have the potential to facilitate professional growth by offering field expertise, pedagogical knowledge, practical teaching insights, and emotional encouragement among educators. With its wide range of functions, many social media-based features can be utilized for educational purposes in general and specifically for professional development.

Another investigation conducted by Motteram et al. (2020) suggests that WhatsApp groups enhanced teachers' proficiency in English language, offering a forum for sharing and discussing challenges specific to their context, facilitating the creation of teaching materials, and initiating meaningful discussions to address issues. It also highlights concerns regarding participation, access, equity, and sustainability highlighting the potential of online platforms in enhancing teacher professional growth and the associated advantages. In the same veins, Lee et al. (2023) found similar outcomes in a primary school situated in Hong Kong amidst the COVID-19 crisis, determining that WhatsApp can aid in fostering continual professional growth for teachers primarily that of English as a second language.

On the flip side, Mohr and Shelton (2017) reported that most of these training programs "typically focus on technology, pedagogy, and course content" (p. 134) yet are also one-size-fits-all, and thus may not adequately address the unique requirements of individual instructors (Leary et al., 2020). This calls for a personalized online CPD that can considerably improve the quality of the training and therefore augment the level of benefit that instructor should obtain from such initiatives. An additional key consideration is the common challenge of possessing adequate digital skills to confidently navigate social media platforms (Donelan, 2016; Zhu et al., 2018), which can be a barrier that obstructs an optimal CPD-based learning journey. These considerations should be taken into account when formulating such training programs.

Another noteworthy aspect is that much of the existing literature is theoretical, highlighting the need for more in-depth individual case studies to provide a more realistic portrayal of practice (Acuyo, 2021), akin to our study, which examines the entire process both within and outside the WhatsApp platform. This approach would enable researchers to gain a deeper understanding of the complexities of social media-enabled participation in professional development initiatives (De Laat, 2012).

The aim of the study. To extract a replicable CPD-centric system that can be applied for similar purposes by charting the process of CPD-integrated e-training, examining meeting schedules, discussed topics, group dynamics, and interaction patterns.

Materials and Methods

To conduct the study, a descriptive multiple case research design was utilized to examine the CPD processes in two distinct WhatsApp groups: "MENA English Teachers Community" and "Secondary Teachers", created by the British Embassy. The initiative initially involved grouping instructors for training in online seminars and workshops to adapt to the pandemic-affected environment. Invitations for CPD-focused seminars were sent via email, with a shift to a socially mediated WhatsApp platform by the end of 2023.

Two groups were selected for this study: the first is for all MENA teachers, while the second is exclusively for secondary English teachers. In essence, the former is more general, and the latter is more specific. The primary objective of this study is to create a detailed "picture" of how this process unfolds, enabling future replication. Therefore, the comparison made between the groups is not to highlight contrasts but to fill in any gaps that might arise from analyzing just one e-group. Indeed, descriptive studies aim "to describe or explain relationships among phenomena, situations, and events as they occur," as Thomlison (2001, p. 131) notes, aligning with the objectives of this scholarship. This study concentrates on two distinct case studies, qualifying it as a multiple case study. As Greene and David (1984, p. 75) explain, this approach is utilized "for generalizing to a target population of cases from the results of a purposefully selected sample of cases," which, in our situation, involves two cases.

The Sample Population

Regarding the sample population, the first WhatsApp group "MENA English Teachers Community" comprises 990 users, each identified by a unique phone number. Consideration was given to those who were either added to the group or active in CPD-focused discussions. Consequently, 92 users were identified as participants. These individuals come from 17 different countries, with varying representation (Figure 1): Egypt (38.04%), Iraq (9.78%), Saudi Arabia (7.61%), Algeria (6.52%), Oman (6.52%), Libya (5.43%), Jordan (5.43%), Yemen (4.35%), United Arab Emirates (4.35%), Qatar (3.26%), Lebanon (2.17%), Morocco (2.17%), India (2.17%), Kuwait (2.17%), Tunisia (1.09%), Sri Lanka (1.09%), and Iran (1.09%).

Figure 1

The Countries' Frequency of the Participants in Both WhatsApp Groups
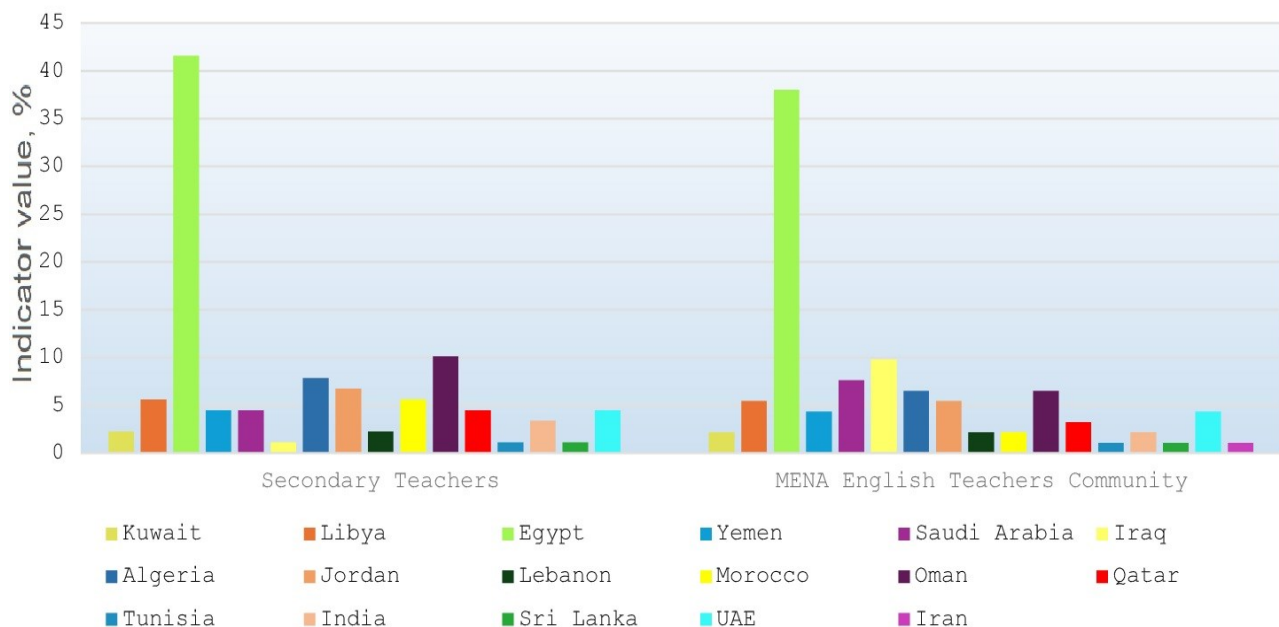
Meanwhile, the second WhatsApp group "Secondary Teachers" consists of 780 users. Those accounted for in the study include members who were invited and added to the group or those who actively participated in online discussions. Within this specific timeframe, 77 participants were identified, originating from 17 countries. The breakdown is as follows (Figure 1): Egypt (41.57%), Iraq (10.11%), Oman (10.11%), Saudi Arabia (8.99%), Algeria (7.87%), Jordan (6.74%), Morocco (5.62%), Libya (5.62%), Yemen (4.49%),

United Arab Emirates (4.49%), Qatar (4.49%), India (3.37%), Lebanon (2.25%), Kuwait (2.25%), Iran (1.12%), Sri Lanka (1.12%), Tunisia (1.12%).

One noticeable trend in both populations is the significant presence of Egyptian participants, accounting for 38.05% in the first WhatsApp group and 41.57% in the second. This can be attributed to the fact that the entity monitoring the CPD program is the British Embassy of Egypt. Therefore, it is logical that the majority of instructors taking part in these CPD trainings are Egyptians. Another point worth emphasizing is that a small fraction of instructors do not belong to the MENA region. This is understandable, as invitations sent to invite instructors can be referred to other colleagues outside the immediate region.

Procedure

After extracting chat-transcript from both WhatsApp groups "MENA English Teachers Community" and "Secondary teachers" over a 40-days period (10th of January to 20th of February 2024), a meticulous protocol of cleaning the data was followed to enhance the analysis on a later stage. Initially, we removed irrelevant information including automated messages from WhatsApp, greetings, and notifications about members joining or leaving the group. This was done both semi-automatically meaning the process was partly manual and partly automated. It was also essential to organize the conversational threads in certain themes that would ease up the analysis process. Additionally, non-English content was translated for future use. Because regular meetings were held, Key Discussions were highlighted along with their respective dates that aligned with the analysis goals. This step-by-step procedure prepared the data for a comprehensive thematic analysis which is "a method for identifying, analyzing, and interpreting patterns of meaning ("themes") within qualitative data" (Clarke & Braun, 2017, p. 297).

Data Collection Tools

This CPD-focused journey began with an email invitation to participate in a live ZOOM webinar during the COVID-19 crisis, which one of the researchers attended and received a certificate. In late 2023, an invitation from the British Embassy in Egypt was sent via email to join various WhatsApp groups, two of which were selected for an in-depth study using a descriptive multiple case study research design. To realize this research, participant observation was the initial data collection tool, as the researcher engaged in these groups and participated in WhatsApp-directed professional continuous development conversations. To thoroughly understand the dynamics of both WhatsApp groups, "Secondary Teachers ", and "MENA English Teachers Community", recorded transcripts were extracted into a file for careful analysis. This digital trace data, as defined by Howison et al. (2011), is automatically stored by the social media platform and encompasses records of activity often through online information systems. Ohme et al. (2024) assert that it enables the analysis of content usage at an individual level and those methods and tools are available to make content data accessible and analysable for social science scholars. The qualitative data from these e-groups permit a comprehensive mapping of how the CPD process is undertaken, identifying the interlinked elements that first, made this educational journey have such broad reach, and second, uncover the guidelines used to fulfil their mission.

Results

The results of the study revolve around three main elements namely the meeting schedules and topics, group dynamic and interaction in both WhatsApp groups and lastly, the overall process of CPD-infused WhatsApp-based e-training.

Meeting Schedules and Topics

The "Secondary Teachers" group appears to be targeted at educators operating with secondary-level students, discussing a wide variety of teaching techniques in this niche. During this 40-day period, they held about eight meetings, equating to two regular meetings per 10 days, to discuss a broad spectrum of topics ranging from social-emotional learning in education, developing speaking skills, role play strategy, teaching writing, to enhancing reading and writing skills. Conversely, the "MENA English Teachers Community" is more encompassing for English language teachers in the Middle East and North Africa (MENA) region, sharing the same vision as the former. This vision is equipping educators with pertinent language teaching techniques, regardless of the educational level they operate in, be it primary, secondary, or tertiary. It is noteworthy to mention that, despite serving the same goal, the meeting format is different as this e-space is used more for announcing CPD-oriented seminars via Zoom, for instance. In these 40 days, only two post webinar meetings were held. Similar to the Secondary Teachers WhatsApp group, many interesting topics were tackled, including how to efficiently use technology in language teaching, teach grammar more creatively, and how to practically implement group activities. Two post-webinar meetings were held, and this group seems to group mainly MENA educators to inform them about upcoming events that may be of interest to them. So, it is another way to reach a broader audience the same way one can send an email reminder, one can send a text via WhatsApp.

Group Dynamic and Interaction

Because there were eight online CPD-focused meeting in the secondary teachers WhatsApp group, a noticeable level of interaction has been noticed but both groups displayed an active participation and a considerable level of engagement through sharing their ideas and experiences on the discussed topic whilst upholding the group rules.

An emphasis has been put on sharing their best practices and savoir-faire on the domain, which means not only they discuss the theory but also the practice as well as the various case scenarios to which this pedagogical concept apply. This can immensely enlarge and extend teachers' repertoire of pedagogical methods and techniques.

Because the participants are from different countries, there was a context-bound layer that was added to these discussions because each member showcased their own perspective to the issue at hand. So, for many of the discussed elements, mani-fold culture-infused solutions were given which shows how enriching and enlightening the exchanges were.

The Process of CPD-Infused WhatsApp-Based E-Training

Both groups utilized direct messaging within WhatsApp among members, which can be regarded as an informal semi-structured online CPD session. In this setup, the moderator guided real-time discussions following specific prompts containing content-related instructions and ideas to be discussed by participants, employing various interactive modes. These included:

1. Polls: Used to gauge participants' understanding of a given concept or to survey the extent and manner in which a certain teaching method is employed in their respective classes. Instructors could use the responses to seek clarification, present problems, or share their thoughts on the subject matter.

2. Emojis: Moderately employed to express reactions as requested by the moderator. For example, members clicked 👍 to indicate agreement with a statement or to signal understanding of an instruction.

3. Videos: Moderators occasionally posted videos, prompting members to first view the pedagogical material, reflect on its content, and then share their opinions with others, fostering diversity and a multitude of perspectives.

4. Formal Online Webinars: These took place externally on platforms like Zoom, representing the other end of the spectrum from the informal WhatsApp External links are frequently shared in the groups, particularly the one catering to the MENA English teacher's community. These links invite users to participate in live formal webinars presented by professionals and teacher trainers. The aim is to refine instructors' skills, enabling them to deliver optimal learning experiences for their students.

Following the live sessions, recorded versions of the webinars are shared for those unable to attend. Additionally, post-webinar meetings are scheduled to discuss the webinar's content, sharing additional resources available on the official website of the British Embassy. This method effectively disseminates existing knowledge from the website to other e-platforms, maximizing outreach.

A CPD-oriented web-based practical system based on six elements, namely e-platforms, e-meetings, archiving, certification, website and the organization that orchestrates the whole process, is shown in Figure 2.

Figure 2
CPD-Oriented Web-Based Practical System
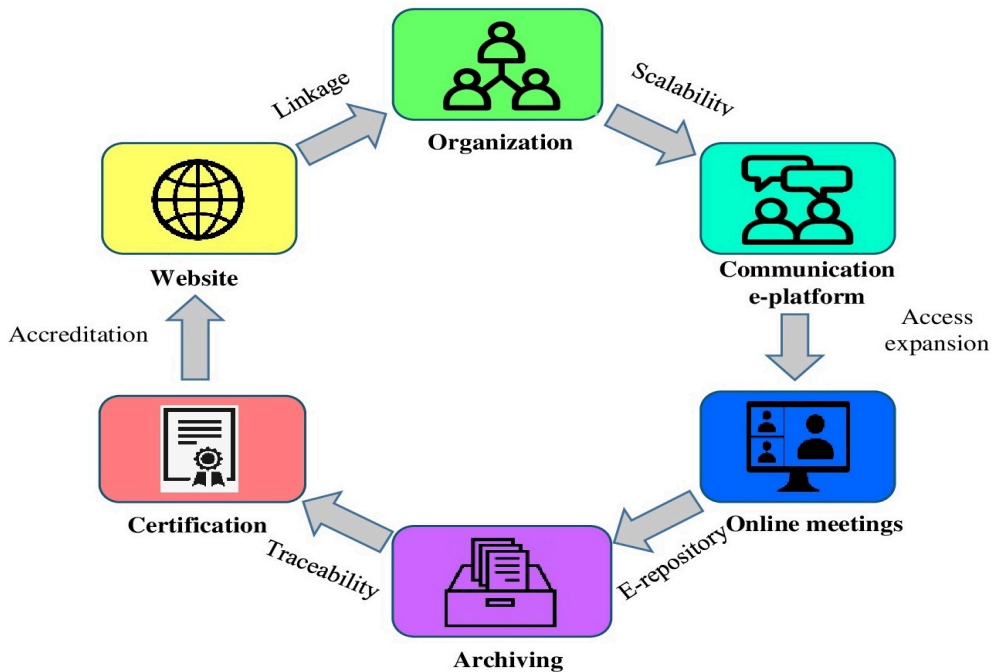
One notable example is the provision of online free training courses (as seen in Figure 2), open to any educator looking to enhance their competencies at their own pace. Participants receive certification upon completing the e-training. Each session concludes with a call to action for teachers and a brief summary of the key elements discussed, ensuring that members retain crucial information from the meeting.

Overall, group admins supervise, organize, and moderate these online meetings by posting a variety of audio-visual materials, reminders, and follow-up messages. These efforts serve to encourage further participation and ensure fruitful exchanges, efficient communication, and resource-sharing during these instructive sessions.

Discussion

After meticulously tracing the CPD journey of teachers in both WhatsApp groups created by the British Embassy in Egypt – the organization overseeing the CPD initiative – and thoroughly reviewing their regular pedagogical activities in these online spaces, a scalable, intensive, cost-effective, and practical system was developed for future replication (Figure 2).

The organization oversees the entire CPD process across various spaces, continuously inviting potential members to join the WhatsApp groups primarily via email, resulting in an ever-growing population benefiting from these e-trainings. This scalability enables the system to train a massive number of instructors. Furthermore, the communication platforms, specifically WhatsApp groups in this case, serve as venues for conducting CPD meetings with different members in closed groups. These meetings can occur several times a month, in this instance, six times, highlighting their cost-effectiveness compared to regular face-to-face CPD workshops.

Additionally, the WhatsApp groups are utilized to post announcements regarding virtual seminars conducted on external platforms like Zoom. These platforms serve not only for seminar attendance but also for post-seminar discussions, where participants can share their thoughts and provide feedback about the CPD presentations. This aligns with Niess's (2011) findings, which emphasize that the success of CPD programs depends not solely on attendance but also on the post-PD support teachers receive. Within this community, professional relationships can be cultivated, and instructors can seek assistance when needed.

CPD-driven and social media-based systems have the potential to alleviate the burden of time and temporal limitations (Cook et al., 2017; Trust et al., 2016) that traditional CPD formats impose. By removing these constraints, online CPD-centric systems offer more intensive training to instructors, as research indicates that single-session workshops are unlikely to significantly improve teachers' practices (Darling-Hammond, 2017).

Once a social media CPD-centered meeting takes place, it is automatically archived, allowing any member to review the content at any time or retrieve shared pedagogical materials. This digital repository facilitates revisiting past meetings, seeking help from other members, and evaluating CPD programs to potentially improve design and delivery (Nicolaidou & Petridou, 2011).

Active participants in these e-sessions can receive certificates, aiding in career advancement. Resource sharing is central to this CPD-focused exchange, with the official British Embassy website housing countless resources for instructors to utilize. Accredited courses are also available for participation. This CPD-focused ecosystem is optimized through the linkage of all these elements, multiplying training opportunities across all fronts.

One direct implication of this CPD system is its global reach. With such e-modes of CPD training, the audience continually increases, especially if a referral system is implemented where any member can add others, maximizing the benefits of the system and significantly deepening their understanding and honing their skills in the target areas.

Another noteworthy implication is the cross-cultural exchange among instructors in these regular online meetings. Each member can present their unique perspective on a particular point, and the aggregation of these reflections can provide an all-encompassing picture of the discussed concept or demonstrate the various ways a technique can be deployed. This exchange can greatly expand instructors' horizons and enrich their teaching practices cross-culturally.

Conclusions

This research aims to outline the CPD journey by analyzing metrics such as materials used, frequency of virtual meetings, expansion of participant groups. Through this process, a blended, cost-effective, and scalable CPD system has been uncovered that has the potential to revolutionize this arena. This system can train instructors and educators globally on a regular basis, keeping them updated with the latest trends in (e)-education. Such optimization and maximization can significantly enhance both the teachers' teaching journey and the learners' educational endeavors.

With an automated archival system, all CPD-centered discussions can be traced and accessed by any member at any time. This allows for revisiting prior trainings and assessing stored multimedia-based data to improve the system overall. Moreover, these remote CPD trainings can be accredited, offering certificates to instructors each time they participate in these professional seminars, complemented by the wide spectrum of resources available on the official website of the organization.

Such a comprehensive CPD system holds the promise to upgrade teachers' skills worldwide and advance the teaching profession overall. This sustainable e-system can be leveraged by educators, stakeholders, and policy researchers seeking to replicate such models in their respective educational institutions. CPD for teachers will always remain at the forefront of their responsibilities and those of their stakeholders because their excellence lies in continuous growth and improvement.

Ethical Approval

Funding Source

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