Pakistan Journal of Distance & Online Learning
Volume: XII, Issue I, 2026, 19-43

Teachers' Professional Development Needs and Preferences in Lagos, Nigeria: A Study to Inform the Design of Teecha

Olafare Oladimeji Festus*
Olabisi Faith Ayanfeoluwa**
Keith-Ajawaigbo Onyeka Jessica***

Abstract

This needs assessment study provides preliminary evidence to inform the design of TEECHA (Teachers' Empowerment, Education, Capacity Building and Advancement), a planned online professional development (PD) platform for teachers in Lagos, Nigeria. The study reported the needs assessment stage only; the platform has not yet been developed or evaluated. A quantitative descriptive survey design was used. A structured questionnaire was completed online by a purposive sample of 38 in-service teachers in Lagos, most of whom taught at pre-school (52.6%) or primary (26.3%) level. Data were analysed with frequencies, percentages and descriptive cross-tabulations. Classroom management was the most frequently reported main challenge in teaching (28.9%), and insufficient technical support (28.9%) and time constraints (26.3%) were the leading challenges in using technology. Half of the teachers described themselves as very familiar with online teaching, 73.7% had taken part in PD before, and 63.2% preferred online PD to in-person training (31.6%). They suggest that TEECHA should begin with practical modules on classroom management and technology integration, provide responsive technical support and short, flexible units, and offer both per-course and subscription payment. These provisional design choices should be tested through user testing, a larger survey and a pilot evaluation.

Keywords: *Teacher professional development, online learning platforms, Lagos, Nigeria, needs assessment, educational technology*

---

*Department of Technology and Vocational Education, University of Lagos, Nigeria. Email: folafare@unilag.edu.ng
**Corresponding Author. Department of Technology and Vocational Education, University of Lagos, Nigeria. Email: faitholabisi446@gmail.com
***Department of Technology and Vocational Education, University of Lagos, Nigeria. Email: kachikeith@gmail.com

Introductıon

Continuous professional development (PD) is widely regarded as a condition for high-quality teaching and better student outcomes. Reviews of the evidence show that PD is most effective when it is sustained, focused on content, collaborative and responsive to teachers' needs, whereas one-off workshops seldom change classroom practice (Guskey, 2002; Darling-Hammond et al., 2017). Online platforms offer a way to deliver PD that is flexible, scalable and not tied to a fixed time or place, and well-designed online models can also support collaboration between teachers (Hertz et al., 2022). These issues are acute in Sub-Saharan Africa, the region with the largest projected teacher gap, estimated at about 17 million primary and secondary teachers by 2030 (UNESCO Institute for Statistics, 2016).

In Nigeria, the National Policy on Education (Federal Republic of Nigeria, 2013) and the Teachers Registration Council of Nigeria's Mandatory Continuing Professional Development programme expect teachers to keep learning, and the National Digital Economy Policy and Strategy 2020–2030 (Federal Ministry of Communications and Digital Economy, 2019) supports digital approaches in education. In practice, access remains uneven. Participation in PD is low in parts of Lagos, and cost, time and teacher readiness are major barriers (Ememe, 2020).

Recent Nigerian studies show that teachers are open to digital learning, but they also show how little is known about what a purpose-built platform should offer. Qualitative work has examined teachers' satisfaction with an online training module (Mohebi, 2023) and teachers' self-directed use of YouTube, LinkedIn, Coursera and WhatsApp, together with high data costs and little school support (Adamu & Awodiji, 2026). Survey work has concentrated on teachers' digital competence (Fabeku & Enyeasi, 2026). To the authors' knowledge, none of these studies collected the combination of evidence needed to design a locally developed PD platform: the challenges teachers most want help with, how familiar they are with online teaching, which PD format they prefer, and whether, how much and in what way they are willing to pay. A new platform is worth considering alongside existing services because international platforms such as Udemy and Coursera are not built around the Nigerian curriculum, the continuing professional development requirements of the Teachers Registration Council of Nigeria, or the data and payment constraints that Nigerian teachers report (Ememe, 2020; Adamu & Awodiji, 2026).

A local platform can only fill this gap if its first content, support, delivery and pricing are based on what teachers say they need. The

contribution of this study is therefore practical. It identifies the teaching and technology challenges that teachers rank first, describes their familiarity with online teaching and their preferred PD format, and gives the first evidence on how much Lagos teachers say they would pay for online PD and which payment model they prefer. Together these set provisional priorities for the first version of TEECHA.

TEECHA is a planned online PD platform for teachers in Lagos, Nigeria. The name stands for Teachers' Empowerment, Education, Capacity Building and Advancement, which expresses its aim of empowering teachers with digital and pedagogical competencies. It is intended to offer training modules, peer collaboration and certification that are relevant to the curricular, cultural and technological context of Nigerian schools, with course areas such as digital pedagogy, classroom management, assessment strategies, subject-specific methodology and inclusive education.

A needs assessment is needed before development because decisions about content, pricing and delivery that rest on assumptions risk producing a platform that teachers do not use. The purpose of this exploratory study was therefore to describe the main challenges, familiarity with online teaching, previous PD experience, preferred PD format and payment preferences of a purposive sample of in-service teachers in Lagos, as a basis for initial design decisions for TEECHA and as a reference point for evaluating it later. The study reports the needs assessment stage only. It does not design, develop or evaluate the platform, and its findings are preliminary rather than representative of all teachers in Lagos.

Literature Review

Evolution of Teacher Professional Development

Over the last several decades, the definition of teaching professional development has changed from a one-time, sometimes solitary, experience to a more continuous, collaborative, and contextual process (Guskey, 2002). The early professional development experiences often involved the transfer of new information or new skills in a downward direction, with little interest in practical implications or the long-term effects on the classroom. These were often well-meaning, isolated, short-term activities such as one-off workshops, annual conferences, or brief seminars, but usually did not last long enough or were not established deep enough into teachers' practice to make a lasting pedagogical impact (Guskey, 2002). The assumption of these models, that new knowledge would by itself change how teachers teach, has been widely challenged by research on teacher change (Guskey, 2002).

Sustained, in-practice, collaborative and need-responsive professional development is increasingly recognized as important (Darling-Hammond et al., 2017). Darling-Hammond and colleagues conducted a thorough review of features of effective PD that centers on content knowledge, involves active learning strategies, supports collaboration, draws on models of effective practice, provides coaching and expert support, offers opportunities for feedback and reflection, and is given enough time for participants to internalize and apply new knowledge and skills. Programs with these characteristics have been shown to make statistically significant gains in both teacher instructional practices and student learning outcomes, and design quality is an important factor in professional development programs.

The advent of constructivist learning theories and adult learning theory (andragogy) has also influenced thinking about teacher professional development. Knowles (1984) stated that andragogy is learner-centred, experience-focused, and driven by relevance to work contexts. Professional learning, therefore, should be based on the prior knowledge and experiences of teachers, involve them in the learning process, and be relevant to their work and everyday challenges in the classroom (Knowles, 1984; Ajani, 2021). There has been increased focus on professional learning communities (PLCs), mentoring models, action research, and lesson study models as methods that reflect these adult learning principles. Online learning platforms offer a way to provide this type of professional learning more flexibly and to more teachers, provided that they keep the key elements of quality professional learning.

Online Learning Platforms and Teacher Professional Development

Online learning platforms have widened access to education and skill development. Massive Open Online Courses (MOOCs) on platforms such as Coursera, Udemy and edX give large numbers of learners access to courses from universities and professional providers, from undergraduates seeking additional learning to working professionals who want to reskill. These platforms are often presented as a flexible and scalable way to address education gaps in regions with limited infrastructure. However, open online courses tend to have low completion rates and to attract learners who already have higher levels of education, so wider access does not by itself produce wider participation (Reich & Ruipérez-Valiente, 2019).

When it comes to teacher professional development, online platforms have a number of important benefits over traditional face-to-face provision. First, they address geographical barriers that have been a

hindrance in accessing quality professional development, such as teachers in rural, remote, and underserved urban areas (McAleavy et al., 2018). Second, Web-based platforms allow for self-paced and asynchronous learning, so teachers can access professional development materials at their own time and at their own place in the hectic professional and personal world. Third, by becoming scalable online, high-quality professional development materials, once created, can be disseminated to nearly any number of educators at minimal extra expense. Fourth, the internet provides access to a much wider and more varied selection of special courses than would be possible by providing courses through face-to-face, locally organized offerings, giving teachers access to a greater variety of pedagogical approaches, subject-specific methodologies, and technological tools.

The online platforms are becoming increasingly more advanced with the ability to facilitate interactive and collaborative learning experiences. Online professional development opportunities, such as discussion forums, peer review assignments, live webinar sessions, virtual study groups, and collaborative project-based assessments provide teachers with opportunities to connect with their peers, share their experiences and classroom practices, and establish networks with other teachers beyond their local school or district context. The social and collaborative aspects of online learning are critical, as professional learning is often most effective when it takes place in a community of practice where teachers can discuss, ask questions, or refine their understanding and use of new knowledge and skills together (Wenger, 1998). Digital platforms can, therefore, be used to simulate and even augment the collegial and collaborative aspects of professional learning that are key features of the most successful face-to-face PD. The evidence also shows the conditions under which online PD succeeds or fails.

Hertz et al. (2022) propose a pedagogical model for online teacher PD, developed in the European Commission's Teacher Academy, that combines course content with active and collaborative learning rather than simply placing content online. Self-paced courses without interaction or support, by contrast, tend to have low completion (Reich & Ruipérez-Valiente, 2019). Sümer (2021) notes a gap between the literature and practice on how online teacher communities should be designed, and Oubibi et al. (2024) report that the effect of interactive technologies in African teacher education varies widely with infrastructure, socio-economic conditions and policy support. Taken together, these studies suggest that online PD tends to succeed when content is relevant and practical, when teachers interact with peers and facilitators, when access

costs are manageable and when participation is recognised, and that it tends to fail when these conditions are absent. The studies differ in setting and in the type of programme examined, however, and few of them concern self-paced PD platforms for in-service teachers in Nigeria.

The needs for teachers to become proficient in digital learning environments can be better understood in terms of the theoretical understanding of the Technological Pedagogical Content Knowledge (TPACK) model of Mishra and Koehler (2006). It is suggested by TPACK that there are three areas of knowledge, which need to be integrated in order to engage students using the affordances of technology: content knowledge, pedagogical knowledge, and technological knowledge. Effective teacher professional development in the use of any given digital tool should also facilitate teacher learning about the effective representation of technology in pedagogically and content appropriate instruction. The model illustrates the difficulty of teacher learning in technology and the criticality of the learning process to the development of integrated TPACK over time, across the continuum and across context.

Two meanings of online PD should be distinguished. The first is teachers learning through an online platform, whatever the subject of that learning, for example classroom management, assessment or inclusive education. The second is teachers learning how to teach online or with digital tools. TEECHA is planned as a platform of the first kind, with a broad range of courses. The questionnaire used in this study touched on both meanings: it asked about teachers' main challenge in teaching in general, but its familiarity and technology items concerned teaching online and with technology. It did not ask which course topics teachers want, so the findings inform the platform's content priorities, support, delivery and pricing more than its full course catalogue.

Online Professional Development in Africa and Nigeria

The efficacy of online professional development for teachers depends on various factors such as the quality of the online platform, the relevance of the content, and the pedagogical design of the learning activities. Zhang et al. (2022) developed a 27-item instrument that assesses teachers' perceptions of online learning platforms in three dimensions: content quality, technical quality and service quality. When they applied it to China's national online teacher training platform, improving the platform's style, tool functions, operating efficiency and teaching methods was found to enhance teachers' experience of online training. This has implications for TEECHA, because it shows that user experience and service quality need as much design attention as instructional content.

In Africa, Oubibi et al. (2024) reviewed studies published between 2014 and 2024 on interactive technologies in online teacher education. They reported that the effectiveness of these technologies varies widely because of infrastructural, socio-economic and policy-related challenges, and they stressed the importance of reliable ICT infrastructure, culturally relevant content and comprehensive training for educators. For an online PD platform, these findings imply that access constraints and local relevance have to be designed for from the start. The review covered online teacher education in general, so its findings apply to an in-service PD platform such as TEECHA only indirectly.

In Nigeria, the evidence on teachers' PD and digital learning is growing but fragmented. In a survey of 200 secondary school teachers in Shomolu Local Government Area of Lagos State, only about 24% had attended any PD programme, open distance learning was the least available option, and teacher-related barriers, including financial constraints, time and readiness, ranked highest (Ememe, 2020). Digital competence appears to be an area of need: a survey of 165 chemistry teachers in Osun State found average levels of digital competence and classroom innovation and recommended digital professional training for in-service teachers (Fabeku & Enyeasi, 2026). The Teachers Registration Council of Nigeria's Mandatory Continuing Professional Development programme is an important policy, but awareness and availability of programmes limit its effect, particularly for teachers in underserved communities.

Studies of teachers' experiences of digital PD in Nigeria point to both interest and constraints. In a qualitative study of 122 pre-service and in-service teachers, almost all participants were satisfied with an online training module delivered during the COVID-19 pandemic, and they valued relevant content, interactivity, practical examples and appropriate video length (Mohebi, 2023). Interviews and focus groups with 22 secondary school teachers showed that teachers already pursue self-directed learning on platforms such as YouTube, LinkedIn, Coursera and WhatsApp, but face expensive data and limited recognition and support from their schools (Adamu & Awodiji, 2026). Outside Nigeria, a discrete choice experiment in Indonesia found that teachers preferred online PD that included synchronous interaction, certificates and audio-visual materials and was delivered over a short period, and that cost significantly reduced the attractiveness of a programme (Ansyari et al., 2022). Together, these studies suggest that locally relevant, interactive, affordable and recognised online PD is likely to be well received. They do not tell platform designers which topics, platforms and payment models

Lagos teachers prefer. These studies also differ in method and setting. The Nigerian studies are small and largely qualitative, or concern a single subject or state, while the clearest evidence on preferences comes from Indonesia, where costs and incentives for teachers may differ. The evidence is therefore suggestive rather than conclusive for Lagos.

Interactive Technologies and Online Learning Communities

Interactive technologies and online learning communities are often presented as important components of effective online teacher professional development. PD is generally more effective when it gives teachers opportunities to learn actively, collaborate, receive feedback and reflect (Darling-Hammond et al., 2017), and online platforms can support these activities through discussion boards, peer review systems, collaborative document editing and virtual classrooms.

In a systematic review of online learning communities in teachers' professional development, Sümer (2021) found that such communities appear under several names, including communities of practice and computer-mediated communication, and are most often built around discussion boards, with learning management systems such as Moodle, social media groups and blogs also used. The review also noted a gap between the literature and practice on how to design effective online communities. This has implications for TEECHA, which will need deliberate community facilitation, clear guidelines for peer interaction and interactive learning activities, and which should evaluate which of these features teachers actually use.

Mobile learning is an important part of this picture. Mobile phones are widely used in Nigeria, so mobile-friendly platforms matter for teachers who lack a desktop computer or a stable home internet connection. A review of technology-supported teacher PD in low- and lower-middle-income countries concluded that mobile technologies have high potential to improve the reach, scalability and flexibility of PD (McAleavy et al., 2018), while Nigerian teachers report that the cost of data constrains digital learning (Adamu & Awodiji, 2026). TEECHA is therefore planned to be mobile responsive and to offer offline access to content.

Payment Models and Platform Sustainability

Online PD providers use several payment models. Common options are a single payment for access to one course, subscription access to a full content library, an annual subscription with discounted monthly rates, freemium access (limited free content with paid upgrades), and institutional licences, where schools or districts purchase courses for their

teachers. Some PD is also publicly funded or provided by schools as an entitlement.

Several factors may influence which payment model a teacher prefers, including the perceived value and quality of content, the range of courses on offer, personal and institutional financial resources, and longer-term learning pathways. Cost is an important consideration in Nigeria and comparable settings. Ememe (2020) found teacher-related barriers, including financial constraints, to be the most serious obstacle to PD among Lagos teachers, Nigerian teachers interviewed by Adamu and Awodiji (2026) reported expensive data and little financial support, and cost significantly reduced the attractiveness of online PD for Indonesian teachers (Ansyari et al., 2022). Monthly subscriptions are often assumed to be more affordable than a high one-time payment because costs are spread and the subscription can be stopped, but this has not been tested with Nigerian teachers.

Another approach to ensuring teachers have access to professional development platforms broadly is an institutional-based subscription model in which schools or school districts buy either site-wide or bulk access to professional development platforms on behalf of their teachers, thereby providing them access to a platform while also providing sustainable revenue to the platform provider. This model might be especially relevant in the Nigerian context where school principals and state education ministries could be institutional purchasers of professional development services for their teachers. It is therefore crucial to capture a complete picture of teacher payment preferences, both in terms of fees and when institutional procurement is possible, to build a sustainable, widely viable business model for TEECHA. This study provides initial evidence on individual teachers' payment preferences, but not on institutional purchasing.

Conceptual Framework for the Study

Three ideas from the literature shaped the questionnaire and the way the findings are used for design. First, andragogy (Knowles, 1984) holds that adults learn best when learning is relevant to their work and builds on their experience. This principle informed the decision to ask teachers to name their own main challenges and their preferred PD format, rather than to assume them, and it underlies the implication that the first modules should address the challenges teachers rank first. Second, TPACK (Mishra & Koehler, 2006) treats effective use of technology as an integration of technological, pedagogical and content knowledge. The challenges offered in the questionnaire span this range, from pedagogical problems

(classroom management, curriculum planning, assessment and student engagement) to technological ones (integrating technology, access, training and technical support). TPACK therefore suggests that TEECHA modules should teach tools in the context of pedagogy and subject teaching rather than as separate technical skills. Third, communities of practice (Wenger, 1998) explain why PD that involves interaction with peers tends to be more effective than isolated study. The questionnaire did not measure preferences for community features, so this idea informs the literature-based features in Table 8, which are to be tested in a pilot, rather than the survey findings. Willingness to pay and payment preferences are practical design questions that these theories do not address directly. They are included because they bear on whether teachers can afford the platform and whether it can be sustained (Ememe, 2020; Ansyari et al., 2022).

Summary and Research Gap

The literature shows that effective PD is sustained, collaborative and relevant to teachers' contexts, that online and mobile delivery can widen access, and that cost, data and local relevance shape uptake in Nigeria and comparable settings. Recent Nigerian studies are largely qualitative, concerned with digital competence or satisfaction, or drawn from other states and school types. What is missing is quantitative needs-assessment evidence, from Lagos teachers, on the challenges, familiarity with online teaching, preferred PD formats and willingness to pay that bear directly on the design of a local PD platform. The present study provides preliminary evidence of this kind from a small purposive sample.

Research Questions

There were following four questions focused in this study:

1) What do in-service teachers in Lagos report their main challenge in teaching and using technology for teaching?
2) How familiar are in-service teachers in Lagos with online teaching, and how many have taken part in professional development before?
3) Which format of professional development (online, in person or bite-sized modules) do in-service teachers in Lagos prefer?
4) Are in-service teachers in Lagos willing to pay for online professional development, how much would they pay, and which payment model (one-time payment, monthly subscription or annual subscription) do they prefer?

Methodology

Research Design

This study was an exploratory needs assessment, the first stage of the TEECHA project, and used a quantitative descriptive survey design. The design suits an exploratory needs assessment because the aim was to describe teachers' current challenges, familiarity, preferences and payment inclinations before the platform is built, not to test an intervention or establish cause and effect (Creswell & Creswell, 2018). Only quantitative data were collected; no qualitative data were gathered or analyzed.

Population, Sample and Sampling Procedure

The target population was in-service teachers in public and private schools in Lagos State, Nigeria, across educational levels and subject areas. A purposive sample of 38 teachers took part. Purposive sampling was used to reach teachers who were relevant to the purpose of the study, that is, teachers with some prior experience of professional development or an interest in it (Etikan et al., 2016). Teachers were drawn from across the six educational districts of Lagos State, which together cover the 20 Local Government Areas in the State. They were approached through the teachers' WhatsApp groups of their respective districts. A link to the online questionnaire was posted in each group, and the teachers who chose to respond formed the sample. The participating teachers came from 13 schools. Because the link was shared in open groups, the number of teachers who saw the invitation is not known, so a response rate cannot be calculated. Recruitment through an online invitation probably favored teachers who were interested in PD and comfortable with digital tools. Teachers who are less engaged with PD, or who face the greatest barriers of device and data access, were less likely to see or complete the questionnaire and are probably underrepresented, so generalizations from the sample are restricted accordingly.

The sample is small, and the choice of 38 should be understood in relation to the purpose of the study. The sample is small because this is the exploratory stage of the TEECHA project and participation was voluntary, not compulsory. A needs assessment of this kind aims to give early, descriptive evidence to guide design decisions, and small samples are accepted in pilot and exploratory phases of research for that purpose (Hertzog, 2008). The trade-off is limited precision and generalizability. For a percentage near 50%, the 95% margin of error with 38 respondents is about ±16 percentage points, and purposive selection adds a selection effect of unknown size. For this reason, the results are reported

descriptively, differences of a few respondents between response options are not treated as meaningful, and no inferential tests were used.

Participants

Table 01 describes the participants. Just over half taught at pre-school level (52.6%), about a quarter at primary level (26.3%) and fewer than one in five at secondary level (18.4%); one teacher (2.6%) taught at another level. Of the 36 teachers who reported their teaching experience, a third had 6 to 10 years (33.3%), a quarter had 0 to 2 years (25.0%), 22.2% had 11 to 15 years and 19.4% had 3 to 5 years; none reported 16 years or more. The sample is, therefore, made up mainly of early-years and primary teachers, which should be kept in mind when reading the results. The data available for analysis do not include teachers' gender, school type (public or private), subject or access to devices and the internet, so these characteristics cannot be reported.

Table 01
Characteristics of the Participants (N = 38)

Characteristic	n	%
Level taught: Pre-school	20	52.6
Level taught: Primary	10	26.3
Level taught: Secondary	7	18.4
Level taught: Others	1	2.6
Teaching experience: 0–2 years	9	25.0
Teaching experience: 3–5 years	7	19.4
Teaching experience: 6–10 years	12	33.3
Teaching experience: 11–15 years	8	22.2
Teaching experience: 16 years or more	0	0.0

Note. Percentages for level taught are based on N = 38. Percentages for teaching experience are based on the 36 teachers who answered the item; two teachers did not answer it.

Instrument, Validity and Reliability

Data were collected with a structured questionnaire developed by the researchers from the literature on online teacher professional development. The items analyzed in this study are two background items (level taught and years of teaching experience) and eight further items: the teacher's main challenge in teaching; main challenge in using technology for teaching; familiarity with online teaching (not familiar, somewhat familiar or very familiar); whether the teacher had taken part in professional development before; preferred format of professional

development (online, in person or bite-sized modules); willingness to pay for online professional development (yes or no); the amount the teacher would be willing to pay, in five bands from less than ₦2,000 to above ₦10,000; and the preferred payment model (one-time payment, monthly subscription or annual subscription). Each item asked the teacher to choose one option. The amount question referred to the price of a single course. As recorded, the amount bands overlap at their boundaries (for example, ₦4,000 appears in two bands), so the amounts are treated as approximate. The original questionnaire file and part of the original data are no longer available. The analysis therefore uses the recovered study data file, which contains the ten items listed above, and Appendix A reconstructs these items from the variable names, labels and response options in that file. Any other items in the original questionnaire could not be recovered and are not reported. The responses describe teachers' perceived challenges and stated preferences; they are not assessments of competence or records of actual purchasing.

Content and face validity were established through expert review. The draft questionnaire was reviewed by three lecturers in educational technology, one each from the University of Lagos, Al-Hikmah University and the Federal University of Technology, Minna, who judged each item for relevance to the research questions, clarity of wording and coverage. In line with their comments, the wording of some items was revised for clarity, and the questionnaire was kept short so that teachers could complete it quickly. The questionnaire was pilot-tested face to face with 10 teachers in Lagos Educational District IV to check that the items were clear. Because each item asks for a single categorical choice, the items do not form a rating scale, and internal-consistency reliability coefficients such as Cronbach's alpha do not apply to them.

Data Collection Procedure

The pilot study was administered face to face. The main study was administered online between April 2025 and May 2025. The questionnaire was created in Google Forms, and the link was shared with teachers on their WhatsApp platforms. All 38 completed questionnaires were included in the analysis, and none was excluded. Two respondents did not answer the item on teaching experience; all other items were answered by all 38 respondents.

Ethical Considerations

Ethical approval for the study was obtained from the Department of Technology and Vocational Education, University of Lagos. Participation

was voluntary, and teachers were free to decline or to stop at any point. Pilot participants gave verbal consent before completing the questionnaire. For the main online study, a note at the beginning of the Google Form informed teachers about the study, and completing and submitting the form was taken as consent to take part. Responses were anonymous, no names or other personally identifying information were collected, and the data were used only for this study.

Data Analysis

The data were coded and analyzed with IBM SPSS Statistics. Frequencies and percentages summarized each item, and descriptive cross-tabulations were used to compare preferred PD format by previous PD experience and preferred payment model by the amount teachers were willing to pay. No inferential tests were applied. With 38 respondents and three to five response options per item, many cells in any cross-tabulation would have expected counts below five, so chi-square tests would be unreliable, and the purpose of the study was descriptive. Percentages are based on all 38 respondents except for teaching experience, where they are based on the 36 teachers who answered the item.

Findings

Research Question 1: What do in-service teachers in Lagos report as their main challenge in teaching and their main challenge in using technology for teaching?

Table 02
Main Challenge in Teaching (N = 38)

Main challenge in teaching	Frequency	Percentage (%)
Classroom management	11	28.9
Integrating technology	8	21.1
Curriculum planning	8	21.1
Assessment strategies	8	21.1
Student engagement	3	7.9

Note. Each teacher chose one main challenge.

Table 02 shows that classroom management was the most frequently reported main challenge in teaching (28.9%). Integrating technology, curriculum planning and assessment strategies were each chosen by eight teachers (21.1%), and student engagement by three (7.9%). Because each teacher chose only one main challenge, these figures show which challenge teachers regarded as most pressing, not how many teachers

faced each challenge. The differences between the first four options are small, at three teachers or fewer.

Table 03
Main Challenge in Using Technology for Teaching (N = 38)

Main challenge in using technology	Frequency	Percentage (%)
Insufficient technical support	11	28.9
Time constraints	10	26.3
Student disengagement	7	18.4
Limited access	5	13.2
Lack of training	5	13.2

Note. Each teacher chose one main challenge

As shown in Table 03, the most common main challenge in using technology was insufficient technical support (28.9%), followed closely by time constraints (26.3%). Student disengagement was chosen by 18.4% of teachers, and limited access and lack of training by 13.2% each. The first two options differ by one teacher, so they are best read as joint leading challenges.

Research Question 2: How familiar are in-service teachers in Lagos with online teaching, and how many have taken part in professional development before?

Table 04
Familiarity with Online Teaching and Previous Professional Development (N = 38)

Item and response	Frequency	Percentage (%)
Familiarity with online teaching: Very familiar	19	50.0
Familiarity with online teaching: Somewhat familiar	15	39.5
Familiarity with online teaching: Not familiar	4	10.5
Previous professional development: Yes	28	73.7
Previous professional development: No	10	26.3

Note. Each teacher chose one main challenge

Table 04 shows that half of the teachers (50.0%) described themselves as very familiar with online teaching, 39.5% as somewhat familiar and

10.5% (four teachers) as not familiar. Most teachers (73.7%) had taken part in professional development before, while about one in four (26.3%) had not. These are self-ratings, and the online, purposive recruitment probably favoured teachers who were comfortable with digital tools, so familiarity among Lagos teachers generally is likely to be lower.

Research Question 3: Which format of professional development do in-service teachers in Lagos prefer?

Table 05

Preferred Format of Professional Development by Previous PD Experience (N = 38)

Preferred format	Previous PD: Yes (n = 28)	Previous PD: No (n = 10)	Total n	Total %
Online	20	4	24	63.2
In person	6	6	12	31.6
Bite-sized modules	2	0	2	5.3
Total	28	10	38	100.0

Note. Each teacher chose one format. The comparison by previous PD experience is descriptive and was not tested statistically.

Online delivery was the preferred format for most teachers (63.2%), followed by in-person training (31.6%). Only two teachers (5.3%) chose bite-sized modules. Table 5 also shows that online delivery was preferred by 20 of the 28 teachers who had taken part in PD before (71.4%) but by only 4 of the 10 who had not (40.0%); six of these ten preferred in-person training. With only ten teachers in the second group, this difference is descriptive, and should not be generalized.

Research Question 4: Are in-service teachers in Lagos willing to pay for online professional development, how much would they pay, and which payment model do they prefer?

Table 06
Willingness to pay, amount and preferred payment model (N = 38)

Item and response	Frequency	Percentage (%)
Willing to pay: Yes	37	97.4
Willing to pay: No	1	2.6
Amount: Less than ₦2,000	3	7.9
Amount: ₦2,000–₦4,000	6	15.8
Amount: ₦4,000–₦6,000	4	10.5
Amount: ₦6,000–₦10,000	9	23.7
Amount: Above ₦10,000	16	42.1
Payment model: One-time payment	19	50.0
Payment model: Monthly subscription	14	36.8
Payment model: Annual subscription	5	13.2

Note. Amount bands are shown as recorded in the data file; adjacent bands share their boundary values.

Almost all teachers (37 out of 38 i.e., 97.4%) said they were willing to pay for online PD. The most common amount band was above ₦10,000 (42.1%), followed by ₦6,000 to ₦10,000 (23.7%), so about two in three teachers (65.8%) chose ₦6,000 or more per course, while nine (23.7%) chose less than ₦4,000. One-time payment was the preferred payment model for half of the teachers (50.0%), followed by monthly subscription (36.8%) and annual subscription (13.2%). One-time payment was therefore the most common choice, but not a majority. The one teacher who was not willing to pay still selected an amount (less than ₦2,000) and a payment model.

Table 07
Preferred payment model by amount willing to pay (N = 38)

Amount willing to pay	One-time payment	Monthly subscription	Annual subscription	Total
Less than ₦2,000	2	1	0	3
₦2,000–₦4,000	5	1	0	6
₦4,000–₦6,000	1	2	1	4
₦6,000–₦10,000	4	2	3	9
Above ₦10,000	7	8	1	16
Total	19	14	5	38

Note. Cells show numbers of teachers. The cross-tabulation is descriptive and was not tested statistically.

Table 07 shows that the 16 teachers who would pay above ₦10,000 were split almost evenly between monthly subscription (8) and one-time payment (7), whereas five of the six teachers who chose ₦2,000 to ₦4,000 preferred a one-time payment. Annual subscription was chosen mainly by teachers in the ₦6,000 to ₦10,000 band (3 of 5). These are small numbers, and the patterns are reported only as a guide for testing pricing options. All of these responses are stated intentions, not evidence of what teachers would actually pay.

Discussion

The most frequently reported main challenge in teaching was classroom management (28.9%), with integrating technology, curriculum planning and assessment strategies close behind (21.1% each). These are practical, classroom-level problems, which agrees with evidence that PD is most effective when it addresses problems teachers face in their own practice (Darling-Hammond et al., 2017). The spread of answers across pedagogical and technological challenges also fits the TPACK view that technology skills need to be learned together with pedagogy (Mishra & Koehler, 2006), and the Nigerian finding that teachers' digital competence is only average (Fabeku & Enyeasi, 2026). Two cautions apply. First, more than half of the teachers taught at pre-school level, where classroom management is especially demanding, so the ranking may partly reflect the make-up of the sample. Second, teachers could choose only one main challenge, so a challenge that was second for many teachers may be under-counted.

Insufficient technical support (28.9%) and time constraints (26.3%) were the leading challenges in using technology, while lack of training was chosen by only 13.2%. This agrees with Nigerian evidence that teachers lack support from their schools for digital learning (Adamu & Awodiji, 2026) and that time is a major barrier to PD (Ememe, 2020). It suggests that teachers see the conditions for using technology, help when something goes wrong and time to use it, as more pressing than training itself. For an online PD platform, this means that responsive help and short units that fit around teaching may matter as much as course content. An alternative explanation is that teachers who answer an online survey through WhatsApp are already fairly confident with technology, so lack of training may be a larger problem among teachers who did not respond.

Familiarity with online teaching was high: half of the teachers described themselves as very familiar and only four as not familiar. Most (73.7%) had taken part in PD before, and online delivery was the most preferred format (63.2%). This fits Mohebi's (2023) finding that Nigerian

teachers were satisfied with online training, but it probably overstates familiarity and openness to online PD among Lagos teachers generally. In a survey of public secondary school teachers in one Lagos local government area, Ememe (2020) found that only about 24% had attended any PD programme, and the present sample was recruited online. The teachers who had not taken part in PD before more often preferred in-person training (6 of 10), which suggests that newcomers to PD may need an introduction or some face-to-face contact before they are comfortable learning online. Only two teachers chose bite-sized modules, although Ansyari et al. (2022) found that teachers preferred PD delivered over a short period. Teachers may not have understood the term, or may have read the options as alternatives when short modules can be delivered online; this needs to be tested.

Almost all teachers (97.4%) said they would pay for online PD, and about two in three chose ₦6,000 or more. This contrasts with evidence that cost and data are serious barriers for Nigerian teachers (Ememe, 2020; Adamu & Awodiji, 2026) and that cost reduces the attractiveness of online PD (Ansyari et al., 2022). Several explanations are possible. The sample was recruited online and may include teachers with better means than average; stated willingness to pay in a survey may exceed what people actually pay; and teachers may have imagined different kinds of course when choosing an amount. On payment models, half of the teachers preferred a one-time payment and 36.8% a monthly subscription. This does not support the common assumption, noted in the literature review, that monthly subscriptions are more attractive because costs are spread. The low preference for an annual plan (13.2%) suggests that a large upfront commitment is unattractive, but the split between one-time and monthly payment shows that a single model may not suit everyone.

Limitations of the Study

This study has several limitations. First, the sample of 38 teachers was small and purposively selected, so the findings cannot be generalized to all Lagos teachers, and the percentages are imprecise (a margin of error of roughly ±16 percentage points for proportions near 50%). Second, more than half of the teachers taught at pre-school level and fewer than one in five at secondary level, so the findings mainly reflect early-years and primary teachers. Third, recruitment through WhatsApp groups and an online form probably favored teachers who were interested in PD and comfortable with digital tools, so less engaged teachers and those facing the greatest access barriers are likely to be underrepresented, and familiarity with online teaching and willingness to pay are probably

overstated. Fourth, all data were self-reported, and each item allowed only one choice, so the results show teachers' single most pressing challenge or preference rather than the full range of their needs. Fifth, the original questionnaire file and part of the original data were lost. The analysis rests on a recovered data file containing ten items, the questionnaire in Appendix A is a reconstruction, and the amount bands overlap at their boundaries. Sixth, no inferential tests were used, so the comparisons between groups are descriptive. Finally, the study provides no evidence about teachers' classroom practice or students' outcomes; any effect of TEECHA on teaching or learning is an expectation that will need to be evaluated after the platform is built. Future work should use a larger and more representative sample that includes more secondary school teachers and teachers in lower-resource areas, should ask about specific course topics, devices, data costs and institutional purchasing, should measure willingness to pay for clearly defined products and periods, and should evaluate the platform through user testing and a pilot.

Implications for the Design of TEECHA

Table 08 translates the findings into design implications for TEECHA's content, support, delivery, accessibility and pricing. Implications that rest directly on the survey are separated from those that rest on the literature, which should be tested before they are treated as design decisions.

Table 08
Implications of the Findings for the Design of TEECHA

Design area	Evidence	Implication for TEECHA
Content (first release)	Survey: classroom management was the most frequent main teaching challenge (28.9%); integrating technology, curriculum planning and assessment strategies followed (21.1% each).	Start with practical modules on classroom management, technology integration, curriculum planning and assessment, teaching digital tools within pedagogy rather than as separate technical skills.
Support	Survey: insufficient technical support (28.9%) and time constraints (26.3%) were the leading technology challenges.	Provide responsive technical help (for example a help desk and quick guides) and short, self-paced units that fit around teaching.

Delivery and onboarding	Survey: online PD preferred by 63.2%; teachers without previous PD more often preferred in-person training (6 of 10); 10.5% not familiar with online teaching.	Make the platform mainly online, with an orientation course and plain-language onboarding. Test optional live or in-person sessions for new users in the pilot.
Pricing	Survey: 97.4% willing to pay; 65.8% chose ₦6,000 or more; one-time payment 50.0%, monthly 36.8%, annual 13.2%. Amounts are per course.	Offer a one-time per-course payment alongside a monthly plan. Test specific price points for clearly defined products before fixing prices, and test institutional licenses separately.
Accessibility	Not measured in the survey. Literature: data costs and infrastructure limit digital PD in Nigeria (Adamu & Awodiji, 2026; Oubibi et al., 2024), and mobile delivery has high potential to improve reach (McAleavy et al., 2018).	Design for mobile first, with low-bandwidth and offline access and accessible formats such as captions and text alternatives. Add device and connectivity items to the next survey.
Community and certification	Not measured in the survey. Literature: online learning communities are widely used in teacher PD (Sümer, 2021), and teachers prefer programs that give certificates (Ansyari et al., 2022).	Pilot community and certification features and record how often they are used.
Evaluation	Survey: baseline values for challenges, familiarity, PD experience, format and payment preferences.	Repeat the core survey items after launch to compare against this baseline.

These implications are provisional. They are based on a small purposive sample and, for accessibility and some features, on the literature rather than on data from this survey. They should be checked in a pilot of TEECHA and in a larger survey before final design decisions are made. Any effect of TEECHA on teachers' practice or students' learning is an expectation that will need to be evaluated after the platform is built, not a finding of this study.

Conclusion

This exploratory needs assessment of 38 purposively selected in-service teachers in Lagos (most of them were pre-school and primary teachers), provides preliminary evidence of the needs and preferences of the participating teachers. Classroom management was the most frequently reported main challenge in teaching, and insufficient technical support and time constraints were the leading challenges in using technology. Half of the teachers described themselves as very familiar with online teaching, about three in four had taken part in PD before, and most preferred online PD. Almost all said they would pay for online PD, about two in three chose an amount of ₦6,000 or more, and half preferred a one-time payment to a monthly or annual subscription.

Because the sample was small, purposive and made up mainly of early-years teachers, and the data were self-reported, these results are indicative and cannot be generalized to all teachers in Lagos. Within that limit, they set provisional priorities for the first version of TEECHA: practical modules on classroom management and technology integration, responsive technical support and short units that fit around teaching, an online platform with an introduction for teachers who are new to PD, and a choice between per-course and subscription payment. Provisions for accessibility, collaboration and certification rest on the literature and need to be tested. The study does not show that TEECHA will improve teaching or learning. The recommended next steps are user testing of early versions of the platform with teachers, a larger and more representative survey that also asks about course topics, devices, connectivity and specific prices, and a pilot evaluation of the platform's use and effects.

References

Adamu, C. D., & Awodiji, O. A. (2026). Digitally mediated professional development of Nigerian teachers intending to relocate abroad: Implications for school leaders. *Frontiers in Education, 11*, Article 1847574. https://doi.org/10.3389/feduc.2026.1847574

Ajani, O. A. (2021). Teachers' perspectives on professional development in South Africa and Nigeria: Towards an andragogical approach. *Journal of Educational and Social Research, 11*(3), 288. https://doi.org/10.36941/jesr-2021-0070

Ansyari, M. F., Groot, W., & De Witte, K. (2022). Teachers' preferences for online professional development: Evidence from a discrete choice experiment. *Teaching and Teacher Education, 119*, Article 103870. https://doi.org/10.1016/j.tate.2022.103870

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development.* Learning Policy Institute. https://doi.org/10.54300/122.311

Ememe, P. I. (2020). Open distance learning: An alternative strategy for rural teachers' professional development in Lagos State, Nigeria. *Teacher Education Through Flexible Learning in Africa, 2*(1), 84–103. https://doi.org/10.35293/tetfle.v2i1.89

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Fabeku, O. E., & Enyeasi, S. C. (2026). Assessing chemistry teachers' digital competence and classroom innovation in Osun State, Nigeria. *Sisyphus: Journal of Education, 14*(2). https://doi.org/10.25749/sis.45070

Federal Ministry of Communications and Digital Economy. (2019). *National digital economy policy and strategy (2020–2030)*. Federal Government of Nigeria.

Federal Republic of Nigeria. (2013). *National policy on education* (6th ed.). NERDC Press.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching, 8*(3), 381–391. https://doi.org/10.1080/135406002100000512

Hertz, B., Grainger Clemson, H., Tasic Hansen, D., Laurillard, D., Murray, M., Fernandes, L., Gilleran, A., Rojas Ruiz, D., & Rutkauskiene, D. (2022). A pedagogical model for effective online teacher professional development: Findings from the Teacher Academy initiative of the European Commission. *European Journal of Education, 57*(1), 142–159. https://doi.org/10.1111/ejed.12486

Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health, 31*(2), 180–191. https://doi.org/10.1002/nur.20247

Knowles, M. S. (1984). *Andragogy in action: Applying modern principles of adult learning*. Jossey-Bass.

McAleavy, T., Hall-Chen, A., Horrocks, S., & Riggall, A. (2018). *Technology-supported professional development for teachers: Lessons from developing countries*. Education Development Trust.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Mohebi, L. (2023). An evaluation of online training effectiveness and pre-service and in-service teacher satisfaction: A case study from Nigeria. *Journal of Digital Learning and Education, 3*(3). https://doi.org/10.52562/jdle.v3i3.804

Oubibi, M., Fute, A., Kangwa, D., Barakabitze, A. A., & Adarkwah, M. A. (2024). Interactive technologies in online teacher education in Africa: A systematic review 2014–2024. *Education Sciences, 14*(11), 1188. https://doi.org/10.3390/educsci14111188

Reich, J., & Ruipérez-Valiente, J. A. (2019). The MOOC pivot. *Science, 363*(6423), 130–131. https://doi.org/10.1126/science.aav7958

Sümer, M. (2021). Online learning communities in teachers' professional development: A systematic review. *Anadolu Journal of Educational Sciences International, 11*(2), 572–587. https://doi.org/10.18039/ajesi.853801

UNESCO Institute for Statistics. (2016). *The world needs almost 69 million new teachers to reach the 2030 education goals* (UIS Fact Sheet No. 39, UIS/FS/2016/39). UNESCO Institute for Statistics.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

Zhang, J., Wang, B., Yang, H. H., Chen, Z., Gao, W., & Liu, Z. (2022). Assessing quality of online learning platforms for in-service teachers' professional development: The development and application of an instrument. *Frontiers in Psychology, 13*, 998196. https://doi.org/10.3389/fpsyg.2022.998196

Festus, O. O., *Ayanfeoluwa*, O. F. & Jessica, Keith-Ajawaigbo Onyeka. (2026). Teachers' professional development needs and preferences in Lagos, Nigeria: A study to inform the design of teecha. *Pakistan Journal of Distance and Online Learning, 1*2(1), 19-43.