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Exploring novice English teachers' professional development: insights from the Turkish context

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Abstract

Novice English teachers' (NETs) status is particularized as a distinctive phase in which they often cope with various problems while learning to teach effectively. NETs' professional development (PD) demands much attention, yet there is a paucity of research documenting their PD in the ordinary course of their professional lives. This case study focused on four NETs' PD in the primary-school context in Turkey and investigated their perceptions of PD, what strategies they used, and the role of the school context in their PD. Findings showed that they perceived PD as an ongoing process inherent in their professional lives and in which they improved their knowledge and skills for better teaching. In addition, findings revealed that the NETs' PD relied on self-directed learning that mainly took place in their workplaces, and they followed certain strategies for PD. Lastly, findings indicated school context as a critical phenomenon facilitating and impeding the NET's PD. Accordingly, the norm of English-only, formal meetings and orientation programs appeared as facilitating factors, whereas the lack of proper induction programs, de-contextualized training seminars, and the NETs' neglected status emerged as hindering factors. In light of these findings, several implications for PD and further research are suggested.

Keywords: Novice English teachers, professional development, primary schools, English language teaching, case study

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1. Introduction

The increasing need for teachers' professional development (PD) is one of the critical ramifications of the changes in education. Despite various innovations in teaching and learning, teachers still matter for improving education systems and producing learner outcomes because "an education system is only as good as its teachers" (UNESCO, 2015, p. 3). This internationally acknowledged maxim underscores teacher quality and the ways to improve it. In line with this, teacher quality has also been embraced and gaining much currency in the landscape of English language teaching (ELT). There has been a growing emphasis that English teachers must continually refine their expertise throughout their careers for effective teaching and better learner outcomes (Borg, 2015; Farrell, 2016). Due to the global status of the English language, ELT is often exposed to global changes in language policies and new standards, resulting in curricular and instructional modifications in teaching English (Rose & Syrbe, 2019; Torres-Rocha, 2019). From this standpoint, teachers' PD gains much significance because the effectiveness of any implementation depends on teachers, who are the primary agents actualizing new schemes at the micro-level (Hashimoto & Nguyen, 2018). Furthermore, the English language is taught with different focal points (e.g., as a lingua franca, an academic language), each of which entails different pedagogies, curricular plannings, materials, and assessment tools and thus imposes new areas of competence on teachers. Although teacher education programs purport to prepare candidates to teach in different contexts and with different purposes, the proliferation in areas of competence makes it unlikely to equip candidates with all these competences and necessitates PD. From this standpoint, ongoing PD for language teachers is a must in the current educational zeitgeist.

In line with global developments, teacher education programs in Turkey have undergone multiple reforms in the last few decades. However, in-service English teachers and their development often remain in the background. In Turkey, much of the recent research on English teachers' PD predominantly targets either pre-service teachers or instructors in higher education (Gürsoy & Özcan, 2021). Despite the valuable insights such studies reveal, this research trend has failed to fully capture in-service English teachers' PD in different contexts (e.g., state or private schools) and what strategies they use. As for novice English teachers (NETs), their PD is further compounded by the complex nature of PD and the inconsistencies between teacher education programs and classroom realities (Johnson, 2006). From this standpoint, NETs' PD demands much attention because schools and classrooms are dynamic environments with their own cultures, rules of conduct, and realities, which deeply influence NETs' experiences and create highly complex ways of PD (Ashton, 2021). Therefore, for many NETs, effective teaching in such different contexts requires engaging in PD activities. However, little is still known about how NETs professionally develop in different contexts (Farrell, 2012, 2016). With all these in mind, this study addresses NETs working at private schools and aims to provide valuable insights about their PD in this context.

1.1. Conceptualizing PD

Since its acknowledgement as a distinct research area, PD has sparked off debates about its denotation and scope as it encompasses overlapping areas such as teacher development, in-service education, school-based learning, and self-directed learning (Mann, 2005). These debates have so far produced complexities and controversies along with a plethora of models and definitions. Rather than anchoring PD on a single definition among the myriad of others, this study conceptualizes it regarding the features of effective PD. Accordingly, PD refers to an ongoing and non-linear process embedded in teachers' professional lives and in which they individually and with others review, renew and extend their attitudes, beliefs, and competences by participating in all-natural and planned learning activities to increase the effectiveness of their teaching practices and to improve learners' achievements (Darling-Hammond, Hyler & Gardner, 2017; Day, 1997; Desimone, 2009; Guskey, 2000). This conceptualization emphasizes the continuous and transformative nature of PD and positions teachers at the center of their PD, which, as Wilden and Porsch (2017) argue, mainly bifurcates into formal and informal professional learning.

Formal professional learning is based on the top-down approach, often consisting of presentations, workshops, or seminars. This type of learning is designed and scheduled by the administration, and teachers are mandated to attend either a one-shot or a set of topic-based courses whose content and goals are decided by the administrators considering institutional needs and benefits (Richards & Farrell, 2005). In contrast, informal learning refers to the bottom-up approach, which is teacher-initiated and involves informal conversations, learning while teaching, reflections on teaching practices, collaboration with others, research, and self-directed learning (Cirocki & Farrell, 2019). This approach regards teachers as "legitimate knowers, producers of legitimate knowledge, and as capable of constructing and sustaining their own professional practice over time" (Johnson & Golombek, 2002, p. 3). Research on these approaches often centers around the efficiency of the bottom-up approach and the repercussions of the top-down approach on PD. However, studies also revealed such positive outcomes of the top-down approach as instigating reflection needed for bottomup development (Jones, 2010) and creating suitable environments for teacher collaboration and collegiality (Carless, 2006; Lo, 2020). Therefore, the current view of PD combines these two approaches instead of constructing a dichotomy between them because, in this way, the pitfalls that each has can be minimized (Cirocki & Farrell, 2019). In addition, theoretical and empirical research emphasize the complexity of teachers' PD stemming from the interactions among the teacher, the school context, and

professional learning activities (Opfer & Fedder, 2011). Therefore, understanding these aspects is critical while exploring teachers' PD (Johnson, 2006).

1.2. Particularities of NETs

Given that PD is characterized by continuity, complexity, and teacher's learning and under the influence of individual and contextual factors, NETs' PD demands a closer look due to the particularities that emerge in the initial years of teaching. NETs' status is considered a transition period to the teaching profession covering the first three years (Farrell, 2012). Research highlights these particularities using such metaphors as "reality shock" (Veenman 1984), "bumpy moments" (Romano, 2004), and "immigrants in a new country" (Sabar, 2004). All these have become bywords for their initial years, emphasizing the conflict between idealized understandings of teaching and the realities of the school culture. In this case, NETs must learn how to teach considering such realities (Farrell, 2008) while practicing their profession effectively. Additionally, the initial years harbor a wide array of difficulties stemming from language teaching skills, linguistic competence (Tsui, 2007), the complexity of teaching (Çakmak, Gündüz & Emstad, 2019), heavy workload, non-teaching tasks (Kim, 2019), seeking collegial support (Ashton, 2021) along with negative feelings such as confusion, pressure, and frustration (Lai & Huang, 2022). From this standpoint, how NETs professionally develop gains importance because, as reiterated in many studies, there is a paucity of research documenting NETs' PD in the ordinary course of their professional lives (Farrell, 2008; Noughabi & Amirian, 2021; Sah, 2021). This contradicts the purpose of and notion behind PD because without understanding how and where PD takes place, it is unlikely to ameliorate the existing pitfalls of PD.

1.3. Literature Review

Recent empirical studies on NETs' PD mainly bifurcate into two trajectories. The first trajectory involves studies focusing on teachers' needs in relation to PD and investigating the impact of a certain type of PD activity, and it has revealed that classroom management, proficiency in English, and integrating language skills were the areas that they needed to develop (Akcan, 2016; Zein, 2016), and they preferred informal dialogues, joint work, and observation as meaningful PD activities because they regarded their colleagues as sources of information (Cirocki & Farrell, 2019). Other studies in this trajectory have also pointed out the positive impacts of reflective group meetings (Farrell, 2016), reflections on critical incidents (Nejadghanbar, 2021), action research (Wyatt & Dikilitas, 2016), keeping teacher's diary (Chien, 2013), peer-coaching (Castañeda-Londoño, 2017), mentoring (Huang, Lock & Teng, 2019) on NETs' teaching practices and self-efficacies. Despite all these valuable insights, this research trend does not portray a full picture of PD, and what teachers do for their PD and under what circumstances they engage in PD activities remain blurred.

The second trajectory includes studies exploring NET's PD within the ordinary course of their professional lives and has indicated the deep influence of the school context on teachers' PD. Shin (2012) found out that NETs teaching English communicatively had to switch to L1 because using a different method against the traditional one led to isolation and troubles with administrators and other teachers. Dayoub and Bashiruddin's study (2012) revealed that in contexts where induction programs lacked, NETs' PD relied on self-directed learning activities such as learning while teaching, by reflection, and from colleagues. Mesa Villa's (2017) study indicated that lack of collegial support, the heavy burden of irrelevant non-teaching tasks, and constant negative feedback reinforced NETs' neglected status and led to a sense of alienation and highly individualistic PD prioritizing learner outcomes to move to a better school. In a more recent study, Ashton (2021) showed that in schools where a generic EFL curriculum was used, NETs lacked collegial support and spent much of their time planning and creating resources, which reinforced the sense of isolation and led to non-linear PD, whereas this way of teaching provided freedom for them and increased their teacher autonomy.

2. Method

Due to the gap in the literature and the need for much research on NETs' PD, this case study addresses this issue in the Turkish context and aims to explore how NETs professionally develop in their early years, focusing on the teacher, the school context and PD strategies they use. The intrinsic case study design was employed as it allows the researcher to deeply explore the particularities and uniqueness of the case, which are not clarified in preliminary research (Stake, 2005), through collecting data from multiple sources of information (Patton, 2015). From this methodological standpoint, this study seeks answers to the research questions given below.

- 1. How do the NETs perceive PD?
- 2. In what PD strategies do they engage for their PD?
- 3. What are the school-based factors that facilitate and impede their PD?

2.1. Participants and Context

The participants were selected using the purposive sampling strategy according to an initial set of criteria (Cohen, Manion & Morrison, 2018). These initial criteria were having at least a year of teaching experience without any intervals and working at the same school since the beginning of the teaching profession. Arya, Buse, Ege, and Ela (all pseudonyms), meeting these criteria, volunteered to participate in the study. They all

majored in English studies and became certified teachers after completing the ELT certificate program. They worked at different primary schools for approximately a year and a half (see Table 1). The schools where the participants worked were well-established private institutions across Turkey. In these schools, ELT was based on the curricula designed by expert teams working for the schools. Each participant underwent an intense orientation program involving sixty- to eighty-hour training spread over a two-week period which was divided into school culture (e.g., organizational structure, codes of conduct) and curriculum and instruction sections (e.g., methods, materials, assessment). In addition, they also attended training seminars on various topics for all English teachers throughout the year. The participants' weekly teaching loads ranged between 26- and 32-course hours, and each participant also had various non-teaching responsibilities (e.g., preparing weekly reports and organizing extracurricular activities). Arva and Buse taught English to first and second-grade students. However, Arva also taught some basic courses in English, such as life sciences, because the CLIL approach was used in her school. Similarly, due to the CLIL-based curriculum, Ela taught English and life sciences in English to third and fourth-grade students. Ege taught English to third- and fourth-grade students at beginner and elementary levels as the school grouped students according to their proficiency levels.

Table 1. Participants' demographics

Pseudonyms	Age	Sex	Teaching experience	Major	ELT Certificate	Orientation (Hours)	Teaching Load (Weekly/Hours)
Buse	26	Female	20 months	English		62	32
Ege	24	Male	18 months	Language	Yes	78	32
Ela	24	Female	15 months	and	ies	70	26
Arya	39	Female	18 months	Literature		60	28

2.2. Data Collection and Analysis

Data were collected through three interview methods and a critical incident dossier (see Table 2). The first type of interview was organizational narrative interviewing, which was geared to elicit storied experiences and descriptions related to their institutions from the participants (Kartch, 2017). These interview sessions were conducted with the participants focusing on their PD. Follow-up questions were also addressed to enrich their narratives with specific examples and clarifications. Semistructured interviews were conducted to elaborate on subtle points, addressing predetermined questions along with adding, skipping, or altering questions according to the topics to be covered (Dialsingh, 2008). Lastly, the reinterviewing session was conducted to verify the points mentioned in the first two sessions (Lavrakas, 2008). Due to this purpose, reinterview sessions were held with each participant approximately one month after the second interview was completed. The last data collection tool was the critical incident dossier. Each participant was asked to write critical incidents they recalled relating to their experiences of PD to eliminate memory recall errors occurring during interview sessions (Simmons, 2017).

The data analysis process commenced with transcribing interviews, and these transcripts were accompanied by data gathered from the dossiers. All the data were analyzed following the inductive analysis procedure (Creswell, 2012). Accordingly, the data were systematically read, segmented, coded, and these codes were grouped under sub-themes and themes. This process was reiterated until the redundant codes were eliminated and the remaining ones were placed appropriately. Additionally, peer debriefing and member-checking methods were employed to ensure the trustworthiness of the data (Lincoln & Guba, 1985).

Table 2. Data Collection Procedures

Data Collection	Participants' Pseudonyms						
Tools	Arya	Ege	Buse	Ela			
Organizational	25.10.2021	21.09.2021	04.10.2021	02.10.2021			
narrative interviews	(56 min.)	(49 min.)	(58 min.)	(41 min.)			
Semi-structured	02.10.2021	28.09.2021	28.09.2021 11.10.2021				
Interviews	(53 min.)	(44 min.)	(47 min.)	(44 min.)			
D :	09.11.2021	30.10.2021	22.12.2021	19.11.2021			
Reinterviews	(35 min.)	(38 min.)	(36 min.)	(33 min.)			
Critical incident dossiers	Eight critical incidents	Seven critical incidents	Six critical incidents	Six critical incidents			

3. Results

3.1. Perceptions of PD

Participants' perceptions of PD and the teaching profession indicate an intertwined relationship. In Arya's case, being an English teacher was meaningful for her as it was her childhood dream. Therefore, for Arya, teaching was an "emotionally priceless profession," yet it was also "physically and mentally demanding," mainly because effective teaching required constant improvement. Holding this view, Arya described her perception of PD using the metaphor of "a long path that does not have an end" and further elaborated on this metaphor, saying that while moving forward on this path, she sometimes needed "to look back on to brush up on her knowledge." Arya's description of PD maps onto her perception of teaching and emphasizes the notion of the teacher as a learner, along with the continuous and non-linear nature of PD. A similar relationship is also apparent in Ege's case. Although he defined the teaching profession as "a demanding job which require[d] improvement, physical and mental effort," he also admitted that "the

sense of satisfaction and achievement" helped him overcome such difficulties. In parallel, Ege believed that PD was "an integral part of his job" and "an ongoing process reshaped by experience and knowledge gained by practice." These expressions highlight the continuity and that the process of PD is embedded in his professional life. Buse focused on the breadth of teaching and contended that teaching was more than "delivering the content" involving "various other factors." She defined PD from a broad perspective as "every action that a teacher takes to improve her teaching practices." Although it is rather generic, her perception indicates teacher learning and effective teaching. Similarly, Ela associated her profession with "finding new and better ways suitable to students." Therefore, PD meant to her:

all knowledge, skills, and experience a teacher has gained since the first day and how all these positively influence her teaching. (Ela)

Although participants' perceptions of PD are closely linked to their own views of teaching, these remarks indicate that each NET acknowledged the teacher's central position and the notion of learning while teaching in the continuum of PD.

3.2. Strategies for PD

3.2.1. Trial-and-error

The NETs' narratives and responses emanate that the trial-and-error strategy had a significant role in learning while teaching during their first years. They mostly used this strategy to solve their instructional and classroom management problems. Ege's description delineates that he used the trial-and-error strategy to adapt materials regarding his students' needs.

The theory says children learn better through songs and games... When a game or song in the coursebook doesn't work, I try different ones and adapt them... Students' reactions and productions show which one works well for teaching vocabulary or grammar. (Ege)

A critical incident Arya noted portrays a similar pattern in which she used different vocabulary teaching techniques until her students' reactions and linguistic productions showed they learned.

Once, I was trying to teach the word 'respect'... I tried hard to explain that word in English, then with gestures and mimes, and then I made up a role-playing activity... I dedicated the whole class time to a single word. But I figured out they learned better through role-playing because they used that word even during break time. (Arya)

Buse's and Ela's cases involved similar instances of using the trial-and-error strategy for instructional problems, yet their accounts of using this strategy mostly centered on resolving disruptive behaviors. Buse described why she used this strategy, saying:

I had no idea how to stop the noise and children running around... After trying various ways, my first months taught me that giving responsibility to those noisy and highly active students positively changed their behaviors. (Buse)

Likewise, Ela also touched upon the usefulness of this strategy, saying:

Last year, I had a very noisy and mischievous classroom... I warned those disruptive students several times, as each novice would do. Then, I started to use different ways. First, I sent them to the head's room, and then I talked to their parents. All failed. So, I made up a game and named it behave-well, and it worked well. (Ela)

3.2.2. Reflection

Reflections were the second strategy that played a pivotal role in learning to teach. Findings indicate bifurcation in employing reflection as a strategy. Retrospective reflections on past learning experiences acted as an initial base during their first months in the teaching profession. In Buse's case, these reflections centered on the only course on ELT that she took during her undergraduate education.

During the first months, I frequently thought about all those micro-teaching activities I did in Applied Linguistics classes. What I learned in those classes became a starting point for me. (Buse)

As for Arya and Ela, their retrospective reflections incorporated their past experiences as language learners. Both teachers complained that they learned English through the grammar-based approach, and due to its negative consequences on productive skills, they paid special attention to pronunciation and speaking activities. Ege's retrospective reflections differ from the others as these reflections involved his past experiences of undergraduate education and as a language learner. He explained how these reflections shaped his teaching style, saying:

I learned English with its culture. So, I try to teach in the same way, adding cultural aspects as much as I can. While doing this, I also try to use the knowledge I gained during my undergraduate education. (Ege)

Additionally, the NETs' accounts also indicated instances of reflection on their own teaching experiences.

I can't help thinking and talking about what I did in the classroom, which parts went well, which didn't and how I could change those problematic parts. (Arya)

Last year, my major concern was to follow the syllabus and cover all the topics... More and more, I'm becoming preoccupied with my teaching practices and how to improve them. (Ela)

After becoming familiar with teaching in my first year, I realized that I monitored and discussed my teaching more frequently. (Ela)

3.2.3. Informal Conversations

Engagement in informal conversations was the third strategy that emerged from the data. The NETs regarded these conversations as an indispensable part of their profession and a practical way of learning from colleagues. The following quotes portray what gains they had from these conversations.

Conversations are practical for getting new ideas or learn what problems may occur while teaching a specific topic. Besides, I also learn if I'm having similar problems or not. (Arya)

Such conversations are an indispensable part of our job, and it's a good way to learn what kind of problems other teachers are facing or get some tips to solve them. (Buse)

We often tell each other about our classes and students... Such exchanges keep us informed and yield a sense of relief because you see you aren't the only one with such problems. (Ela)

...I'd rather talk more about my instructional problems and exchange ideas about how to solve them because such conversations are more practical as we can instantly share our ideas or knowledge. (Ege)

Accordingly, they engaged in informal conversations to solve their instructional problems and reassure themselves about their teaching practices' accuracy and appropriateness.

3.3. School Context and PD

3.3.1. School Context as a Facilitator

The first school-based facilitating factor on PD pertained to the norm of English-only. The NETs reported that their schools "prioritized teaching English" (Arya) and considered English "their flagship course" (Buse) or "the showcase" (Ege). Due to such values attached to ELT, the ultimate goal of these schools centered on enabling students to use English appropriately and accurately, think in English creatively and critically, and learn the language in relation to its culture. In parallel, the norm of English-only appeared as the distinctive ramification of these values and required them to use English while communicating with students within the school environment. The NETs expressed the contribution of this norm as follows:

It contributes a lot because speaking English is now my daily routine, and we also go on teaching out of the classroom. (Arya)

Speaking English almost all day encourages me to look for suitable ways to express myself to my students. Besides, in this way, learning and teaching go on within the school environment. (Buse)

Speaking English is often restricted to the classroom, where we often use structured and pre-determined language... In this way, students and teachers interact with each other in English in a more natural way... and honestly, it helped me improve my speaking skills. (Ela)

Generally, classrooms are often the only places where students and teachers have the chance to speak English. But here, the whole school environment is the place where we speak English. (Ege)

The norm of English-only and the teachers' positive dispositions to this norm provided a conducive environment where teachers and students used English and helped their PD.

The second element that facilitated PD was formal meetings. The NETs reported that they often discussed the progress of the syllabus, homework to be assigned, and a general overview of the past week. These weekly discussions on key instructional issues provided a formal environment for collegial dialogues that promoted exchanging experiences and knowledge. For Ege, these meetings were "awareness-raising and instructional" and "provided opportunities for learning from [his] colleagues." The rest of the NETs underlined similar benefits, yet they also pinpointed critical shortcomings. Although Buse found formal meetings "meaningful platforms for exchanging ideas and knowledge with colleagues," she also complained that they did not "have enough time to talk about each critical issue" as these meetings were "often held after-hours." Likewise, Ela also expressed the pros and cons of formal meetings, saying:

Those meetings are helpful, keep you on track and provide guidance for other general issues... But there are various items on the agenda to be discussed in an hour. So, we can't discuss each of them in a detailed way. (Ela)

Lastly, orientation programs appeared as the third school-based factor that helped the NETs improve their PD. Despite the nuances in the contributions of these programs, overall, they centered around an overview of the school's ideals, norms, curricula, instructional and operational procedures, and each NET underlined the effectiveness and meaningfulness of orientation as they yielded smoother accommodation to their new professions as follows;

The orientation program prepared me to work in the school... We were well-informed about critical instructional issues, administrative structure, dress code, and how to implement the curriculum. (Ege)

The program was well-organized and informative. Through a series of seminars, we were acquainted with the essentials of our job. (Buse)

In some private schools, teachers are often said, 'this is your schedule, this is your coursebook.' That's it. But we underwent a well-prepared orientation. It helped me understand how the school works, including administrative and teaching issues. (Arya)

The orientation program was designed to inform us about what it's like being a teacher in this school... We familiarized ourselves with each other, the school environment, and the administrative staff. (Ela)

3.3.2. School Context as a Hindrance

Despite the positive impact of orientation, the lack of a systematic induction program and the top-down approach that the schools adopted impaired the NETs' PD. The following statements encapsulate the post-orientation process.

Except for training seminars, there was nothing. No observation, no feedback. The overall attitude implied that 'OK guys, you were well-informed about everything. Now go and teach'. (Buse)

It was chaotic when the classes began. I tried to teach according to the way I was informed, but I didn't know which parts I did correctly or which parts I needed to improve ... I wasn't observed while teaching or I didn't observe anybody. (Arya)

In the absence of induction programs, the schools imposed in-service training seminars on all English teachers without specifying these seminars according to novices' needs and demands. Although these seminars were organized to facilitate PD, the NETs' accounts

portray a contradictory picture. Their reports indicated the fast-paced and theory-based nature of these seminars along with problems about their contents. Arya and Ela pointed out the loose or nonexistent connections among the contents and complained about the unsuitable practical suggestions. Underlining the lack of debates and practical applications, Buse stated that teachers were often passive listeners "bombarded with theories and typical practical suggestions." Critical incidents that Ege and Ela noted also show that these seminars were not designed regarding their professional needs.

After giving a 15-minute theoretical speech about using games, the presenter shared his screen and googled the words ESL games for kids. Then, he showed some games Google found for him... It was a kind of joke. Those games were either below the level of our students or unsuitable for our curriculum. (Ege)

I attended three different seminars on material development... The problem is we don't prepare materials because we're supposed to use those given to us. But we write feedback about each material we use. Ironically, we didn't attend any seminar about material evaluation. (Ela)

Despite the discrepancies in complaints about the training seminars, these quotes accentuate that the training seminars were inherently de-contextualized and did not cater to the NETs' professional needs.

Another area where the schools inhibited novice teachers' development pertained to unequal workload distribution within the workplace. This problem existed in all the schools and resided over the notion that novices need to work hard to improve themselves. Therefore, their weekly course hours were more intense than other teachers, and they had no discretion over their weekly schedule. In addition to teaching-related tasks such as student counselling, formal meetings, and portfolio assessment, these teachers were also responsible for various non-teaching tasks ranging from writing weekly reports for parents to looking after students during break time.

Dealing with parents and looking after students during break time are all laborious tasks. Good quality teaching requires time and effort because it's not about teaching in the classroom... There are other things we do, such as assessing students' portfolios or giving them feedback. But I'm dealing with such things, nothing to do with teaching. (Arya)

Holistically, teaching-related and non-teaching tasks culminated in less time for respite within and out of the school and refining their teaching. In addition, they often lacked adequate time to fulling such duties within working hours as they spent much of their time teaching at school. Therefore, they often had to either work overtime without remuneration or allocate part of their spare time to fulfill their duties.

I have lots of other work to do. So, I work during my spare time, either at school or out of school. Unfortunately, sometimes I have to delay important issues about my profession.

I don't have time to complete all non-teaching tasks because I teach English for 32 hours a week. What really bothers me is it's hard to put them in order of importance. (Buse)

I teach English for 32 hours a week. No problem. But I hate doing tedious administrative or bureaucratic works because they don't contribute to my teaching skills. I prefer to teach English for another 10 hours rather than doing other jobs. (Ege)

The following critical incidents also point out that the participants were also officially assigned to do tasks that no other teacher wanted to do just because they were novices.

I have to organize a thematic party each month just because I'm a novice ... I'm responsible for every detail, like informing parents about what materials are needed, where they can find costumes or the decoration of the venue ... (Ege)

It was my third day on the job. The deputy headteacher saw me in the staffroom. After learning that I had no class that day, he wanted me to solve the problem about the shipping of coursebooks. (Ela)

Lastly, the strict policy on using only the materials that the school provided appeared as the third hindrance. The NETs stated that they were not allowed to use any other materials except for those given by the schools, and there was also excessive administrative control over the instructional materials. For the NETs, the strict adherence to materials "set limits for the good quality teaching" (Ege), impelled teachers to "teach in the way the schools desired" (Ela), ignored "the unique nature of classrooms and teachers' choices or ideas" (Arya). Therefore, these remarks show that this strict policy severely restricted their control over the teaching process and did not allow them to use more suitable methods or materials when necessary. In addition, this policy also paved the way for professional and affective repercussions on the NETs.

This policy narrows my horizons and makes me idle because I only use the ones at hand rather than searching for and preparing better ones. (Buse)

Using only materials given to us is practical and time-saving for all of us. But I can't deny that it limits my development as a teacher... I keep preparing materials just in case, but I can't test them and see their shortcomings and impact on students. (Arya)

The school says this is the way you need to teach English... but it isn't good for my development. I'm advised not to prepare or use different materials, even if they are better. This makes me feel voiceless. (Ege)

I have very little room to make small changes... Sometimes, I feel like I teach English as others wish. (Ela)

4. Discussion

In attempting to explore the nature of NETs' PD, this case study draws from four NETs' oral and written reports about their PD in the primary-school context. Regarding the first research question, findings reveal that the NET's perceptions of PD were related to their perceptions of the teaching profession. Despite nuances, the shared points in their perceptions show that the NETs perceived PD as an ongoing process inherent in their professional lives and in which teachers improved their knowledge and skills for better teaching. This way of perception highlights the teacher's central position in PD, continuity, improvement for effective teaching, and teacher learning in the workplace

(Avalos, 2011; Dayoub & Bashiruddin, 2012). Teachers who narrowly perceive PD often confine their development only to such formal aspects of teacher learning (Gemeda, Fiorucci & Catarci, 2012), and findings indicate that this was not the case for the participants. Given that the participants' teacher education was only limited to a yearlong ELT certificate program, this finding is critical because novice teachers often have the disposition to act according to their perceptions and beliefs (Atlı & O'Dwyer, 2021; Farrell & Bennis, 2013).

In terms of the second research question, which explores the strategies the NETs followed for PD, findings reveal that trial-and-error, reflection, and informal conversations were the main strategies that the NETs followed. As the instances suggest, the NETs' reliance on the trial-and-error strategy stemmed from their lack of knowledge and experience (Castro, Kelly & Shih, 2010). However, all such trials, successes and failures help teachers cultivate their reflection skills (Oh & Lee, 2022), as the trial-and-error strategy does not take place in a vacuum without reflection. In line with this, findings reveal that the NETs' solutions were not the serendipitous outcomes of their haphazard choices but the amalgamation of their existing knowledge and reflections with classroom realities. As Ashton (2021) argues, although solutions this strategy produces are often less than perfect but practical, it is an essential part of being a reflective teacher and PD simply because novices tailor their teaching practices to their students' needs and outcomes and critically examine the pedagogical decisions they make.

Findings related to reflections also underpin Ashton's (2021) emphasis on reflection and reveal further evidence for reflective practices. The NETs utilized retrospective reflections on their past learning experiences and reflection-on-action. Their retrospective reflections functioned as an initial base for effective teaching (Richards & Farrell, 2005), as those experiences seemed the most meaningful elements in their pedagogical schema to survive at the beginning of their profession. Such reflections play a critical role until novices build up a solid base for improving their teaching practices (Dayoub & Bashiruddin, 2012). From this stance, the NETs' reliance on retrospective reflections can be seen as a strategy to compensate for their lack of teacher education because these programs imbue teacher candidates with the necessary skills and knowledge, and teacher candidates gain first-hand experiences through various theoretical and practical courses (Pedro, 2005), and eventually build up an initial repertoire of teaching which gradually broadens as they practice their profession (Yazan, 2019). As for reflection-on-action, findings reveal that the NETs' retrospective reflections tended to shift towards reflectionon-action as they gained experience. It is another indicator of teacher learning and development because a similar shift was also observed in Burhan-Horasanlı and Ortactepe's study (2016), in which the interplay between two types of reflection led to a third reflection type that improved the quality of teaching. Therefore, it can be inferred that the interplay between the trial-and-error strategy and retrospective reflections acted as a catalyst for reflection-on-action as they gained experience.

Findings related to informal conversations reveal that they served as a conduit for learning from their colleagues to improve their teaching and find reassurance. Therefore, these conversations were social and collaborative activities occurring within the school environment, contributed to teacher learning through negotiation, discussion, and confirmation of ideas about teaching practices (Martin-Beltran & Peercy, 2014), and, more importantly, reduced the sense of alienation and isolation (Vo & Nguyen, 2010). From the perspective of collaborative teaching practices, the NETs' engagement in informal conversations shows that collaborative practices were restricted to story-swapping with colleagues and seeking advice (Nguyen & Ng, 2020) and thus lacked joint work such as co-creating lessons or meaningful co-observation with a purpose or team teaching (Canaran & Mirici, 2020; Visione, 2022).

Regarding the last research question, exploring the roles that the schools played in the NETs' PD. Findings reveal that these schools appeared as social contexts which incorporated facilitating and hindering factors, and all these shaped and reshaped teachers' learning and development. Accordingly, the norm of English-only, formal meetings and orientation programs appeared as facilitating factors, whereas the lack of induction programs, workload, and too much control over the materials to be used emerged as hindrances. Findings indicate that the norm of English-only made a great impact on the NETs' PD as it expanded the boundaries of teaching and learning English from the classroom to the whole school environment and helped them improve their proficiency. Despite the great importance attached to a high level of speaking proficiency (Celik, Arıkan & Caner, 2013), in contexts where English is taught as a foreign language, speaking is among the areas that nonnative English teachers find most problematic (Shin, 2012) and in which they greatly need improvement (Zein, 2016). In addition, findings related to formal meetings reveal that collegial discussions on instructional practices, problems, and ideas preponderated these meetings despite the time restriction. Therefore, these meetings promoted reflective dialogues among teachers, strengthened the bonds with other teachers (Horn & Little, 2010), and acted as a springboard for informal conversations (Dogan, Yurtseven & Tatik, 2019). As for the orientation programs, their contributions revolved around rules and procedures. Therefore, they mainly imbued the NETs with the essentials of schooling for their acclimatization to their new profession in a short time (Wood & Stanulis, 2009) rather than the essentials of effective teaching. As Mitchell, Kwok and Huston (2020) underline, orientation programs should also create positive impacts on the quality of instruction, which was unvoiced by the participants.

Findings related to school context as a hindrance also underpin the limited contribution of orientation programs. In addition, these findings provide evidence for the neglected status of the NETs. The lack of induction programs and heavy reliance on inservice training seminars indicate that the schools did not support teacher development on a long-term basis. Induction programs are more comprehensive and aim to improve

novice teachers' PD through "a multi-faceted system consisting of planned and structured activities" (Wood & Stanulis 2009, p. 3). The absence of such programs led to the predomination of de-contextualized and mandated training seminars that did not cater to the NETs' needs (Arslan, Mirici & Öz, 2019; Wyatt & Ager, 2017). Besides, unequal distribution of workload and imposing non-teaching tasks on the NETs underpin their neglected status and indicates that they impeded PD as they were obliged to complete various types of teaching-related and non-teaching tasks imposed on them just because they were novices. Therefore, they often gave up their spare time and delayed engaging in PD activities to complete these tasks. Teachers working under such heavy circumstances often tend to shift their focus toward the completion of tasks imposed on them (Kim, 2019) and regard PD activities as a burden (Carless, 2006). Lastly, the strict policy on using the prescribed materials restricted the participants from sharpening their material adaptation or design skills. Additionally, given that the teaching profession is also identified with the empowerment of making decisions on micro-level issues (e.g., selecting activities and materials), being voiceless in such issues reduces teachers into implementers (Pearson & Moomaw, 2005).

5. Conclusion

This case study reported four NETs' PD in the primary-school context. Findings highlighted the importance of their perceptions of PD along with the school environment and culture. Continuity, improvement, and effective teaching appeared as bywords for their PD. This perception along with ineffective training seminars, led the NETs to follow self-directed learning strategies for their PD (e.g., trial-and-error, reflection, formal and informal conversations), which mainly took place within the school environment. Accordingly, schools emerged as social venues where teacher learning and development were molded by facilitating (e.g., norms and formal meetings) and hindering factors (e.g., workload, the lack of induction). These findings cannot be generalized as teachers have different PD stories due to contextual and personal differences. However, the detailed picture of four NETs provides in-depth insights that may guide other NETs working in similar contexts for their PD.

In line with the findings, this study suggests four critical implications. First, findings reiterated that de-contextualized in-service training did not work for teacher development and highlighted the necessity for long-term and contextualized induction programs. As private schools use their own curricula and follow unique procedures for employment, they should design their own induction programs which support PD with a systematically actualized high repertoire of activities focusing on informal aspects of PD, such as critical reflection groups and meaningful peer observation. Such induction programs may empower novice teachers to navigate the complexity of the teaching profession and PD in their initial years. In addition, findings related to formal meetings

implied their great potential for acting as a learning community. Therefore, these meetings can be reorganized in such a way that teachers can critically discuss their practices in a more effective and ongoing way under more appropriate circumstances. Second, non-teaching tasks and the strict policy on using only prescribed materials indicated the NET's neglected status within the school context. Accordingly, school administrators should recognize the particularity of the initial years in the teaching profession and vest NETs with much leeway in making decisions on micro-level issues. Regular meetings with novice teachers may help them understand their needs better, and a leadership program for the administrative staff may also raise their awareness of novice teachers. Third, the NETs' written and oral responses did not include any positive instances concerning their training in the ELT certificate programs, which necessitates questioning their effectiveness and contributions, and there is a need to improve the content and delivery of such programs. Lastly, it is believed that this study presents valuable insights into NETs' PD, yet, as emphasized in other studies, there is still a great need for research investigating NETs' PD situated in the school context. Therefore, future studies should focus on NETs' PD using such on-site data collection tools as ethnographic observations and field notes to deepen our understanding of PD.

References

- Akcan, S. (2016). Novice and non-native English teachers' reflections on their teacher education programmes and their first years of teaching. *Profile*, 18(1), 55–70.
- Arslan, S., Mirici, İ. H., & Öz, H. (2019). In-service training needs of EFL teachers in non-formal education settings. *SEFAD*, *42*, 223–244.
- Ashton, K. (2021). Novice teacher agency in the multi-level language classroom. *Language*, *Culture and Curriculum*, 34(3), 242–256. https://doi.org/10.1080/07908318.2020.1818766
- Atlı, H. H. & O'Dwyer, J. (2021). The contribution of personal epistemological beliefs to uptake in in-service professional development: A case-study. *Professional Development in Education*, https://doi.org/10.1080/19415257.2021.1939102
- Avalos, B., (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27(1), 10–20.
- Borg, S. (2015). Contemporary perspectives on continuing professional development. Ankara: British Council.
- Burhan-Horasanlı, E., & Ortaçtepe, D. (2016). Reflective practice-oriented online discussions: A study on EFL teachers' reflection-on, in and for-action. *Teaching and Teacher Education*, 59, 372–382. https://doi.org/10.1016/j.tate.2016.07.002
- Çakmak, M., Gündüz, M., & Emstad, A. B. (2019) Challenging moments of novice teachers: Survival strategies developed through experiences. *Cambridge Journal of Education*, 49(2), 147–162. https://doi.org/10.1080/0305764X.2018.1476465
- Canaran, Ö., & Mirici, İ. H. (2020). A new model of team teaching for teacher professional development: A case study of in-service English teachers. *Education and Science*, 45, 247–271
- Carless, D. (2006). Collaborative EFL teaching in primary schools. ELT Journal, 60(4), 328–335.

- Castañeda-Londoño, A. (2017). Exploring English teachers' perceptions about peer- coaching as a professional development activity of knowledge construction. HOW, 24(2), 80-101. https://doi.org/10.19183/how.24.2.345
- Castro, A. J., Kelly, J., & Shih, M. (2010). Resilience strategies for new teachers in high-needs **Teaching** andTeacherEducation, 622 - 629.areas. 26(3),https://doi.org/10.1016/j.tate.2009.09.010
- Çelik, S., Arıkan, A., Caner, M. (2013). In the eyes of Turkish EFL learners: What makes an effective foreign language teacher? Porta Linguarum, 20, 287–297.
- Chien, C-W. (2013). Analysis of a language teacher's journal of classroom practice as reflective practice. Reflective Practice, 14(1), 131–143.
- Cirocki, A., & Farrell, T. S. C. (2019). Professional development of secondary school EFL teachers: voices from Indonesia. System, 85, 1–14, https://doi.org/10.1016/j.system.2019.102111
- Cohen, L., Manion, L., & Morrison, K. (2018). Research methods in education. Oxon: Routledge.
- Creswell, J. W. (2012). Educational research: planning, conducting, and evaluating quantitative and qualitative research. Boston: Pearson.
- Darling-Hammond, L., Hyler, M. E., Gardner, M. (2017). Effective teacher professional development. Palo Alto, CA: Learning Policy Institute.
- Day, C. (1997). In-service teacher education in Europe: Conditions and themes for development in the 21st century. Journal of In-service Education, 23(1), 39–54.
- Dayoub, R., & Bashiruddin, A. (2012). Exploring English-language teachers' professional development in developing countries: Cases from Syria and Pakistan. Professional Development in Education, 38(4), 589–611.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. Educational Researcher, 38(3), 181–199.
- Dialsingh, I., (2008). Face-to-face interviewing. In P. J. Lavrakas (Ed.), Encyclopedia of survey research methods (pp. 259–261). Thousand Oaks: Sage.
- Dogan, S., Yurtseven, N., & Tatık, R. S. (2019) Meeting agenda matters: Promoting reflective dialogue in teacher communities. Professional Development in Education, 45(2), 231-249. https://doi.org/10.1080/19415257.2018.1474484
- Farrell, T. S. C. (2008). Novice language teachers: Insights and perspectives for the first year. UK: Equinox.
- Farrell, T. S. C. (2012). Novice-service language teacher development: Bridging the gap between preservice and in-service education and development. TESOL Quarterly, 46(3), 435–449.
- Farrell, T. S. C. (2016). Surviving the transition shock in the first year of teaching through reflective practice. System, 61, 12–19.
- Farrell, T. S. C., Bennis, K. (2013). Reflecting on ESL teacher beliefs and classroom practices: A case study. RELC Journal, 44(2) 163-176.
- Gemeda, F., T., Fiorucci, M., & Catarci, M. (2014). Teachers' professional development in schools: versus reality. Professional Development in Education, https://doi.org/10.1080/19415257.2012.759988
- Gürsoy, E., & Özcan, E.N. (2021). Finding and minding the gaps for language education in Turkey: a content analysis on doctoral dissertations in ELT programs from 2010-2020. Journal of Language and Linguistic Studies, 17, 830-847.
- Guskey, T. R. (2000). Evaluating professional development. Thousand Oaks: Corwin Press.

- Hashimoto, K., & Nguyen, V.-T. (2018). The professional development of English language teachers in Asia: Lessons from Japan and Vietnam. Oxon: Routledge.
- Horn, I., & Little, J. (2010). Attending to problems of practice: Routines and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal*, 47(1), 181–217.
- Huang, J., Lock, K. Y. N., & Teng, F. (2019). Autonomy in English language teaching: A case study of novice secondary school teachers in Hong Kong. *Chinese Journal of Applied Linguistics*, 42(1), 3–20. https://doi.org/10.1515/cjal-2019-0001
- Johnson, K. E. (2006). The sociocultural turn and its challenges for second language teacher education. *TESOL Quarterly*, 40(1), 235–257.
- Johnson, K. E., & Golombek, P. R. (2002). Inquiry into experience: Teachers' personal and professional growth. In K. E. Johnson & P. R. Golombek (Eds.), *Teachers' narrative inquiry as professional development* (pp. 1–14). Cambridge: Cambridge University Press.
- Jones, E. (2010). Enhancing professionalism through a professional practice portfolio. *Reflective Practice: International and Multidisciplinary Perspectives*, 11(5), 593–605.
- Kartch, F. (2017). Narrative interviewing. In M. Allen (Ed.), *Encyclopedia of communication research methods* (pp. 1072–1074). Thousand Oaks: Sage.
- Kim, K-N. (2019). Teachers' administrative workload crowding out instructional activities. *Asia Pacific Journal of Education*, 39(1), 31–49. https://doi.org/10.1080/02188791.2019.1572592
- Lai, T-H., & Huang, Y-P. (2022). "I was a class leader": Exploring a Chinese English teacher's negative emotions in leadership development in Taiwan. English Teaching & Learning, 46, 115–131. https://doi.org/10.1007/s42321-021-00092-4
- Lavrakas, P. J. (2008). Reinterview. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 712–713). Thousand Oaks: Sage.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Thousand Oaks: Sage.
- Lo, Y. L. (2020). Professional development of CLIL teachers. Switzerland: Springer.
- Mann, S. (2005). The language teacher's development. Language Teaching, 38(3), 103–118.
- Martin-Beltran, M., & Peercy, M. M., (2014). Collaboration to teach English language learners: opportunities for shared teacher learning. *Teachers and Teaching*, 20(6), 721–737.
- Mesa Villa, C. P. (2017). The socialization of a novice teacher of English: becoming an agent of change. *HOW*, 24(1), 83–100. https://doi.org/10.19183/how.24.1.318
- Mitchell, D. E., Kwok, A., & Huston, D. (2020). Induction program structures as mediating factors for coach influence on novice teacher development. *Professional Development in Education*, 46(5), 812–832. https://doi.org/10.1080/19415257.2019.1643394
- Nejadghanbar, H. (2021). Using critical incidents for professional development with Iranian novice English teachers. *TESOL Journal*, 12(1), 1–17. https://doi.org/10.1002/tesj.521
- Nguyen, D., & Ng, D. (2020). Teacher collaboration for change: sharing, improving, and spreading. *Professional Development in Education*, 46(4), 638–651.
- Noughabi, M. A., & Amirian, S. M. (2021). Assessing the contribution of autonomy and self-efficacy to EFL teachers' self-regulation. English Teaching & Learning, 45, 71–88. https://doi.org/10.1007/s42321-020-00060-4
- Oh, K., & Lee, S. H. (2022). A Korean teacher's reflection on critical science perspective-based home economics instruction. *Asia Pacific Education Review*, 23, 15–25. https://doi.org/10.1007/s12564-021-09699-5

- Opfer, V. D., & Fedder, D. (2011). Conceptualizing Teacher Professional Learning. Review of Educational Research, 81(3), 376-407.
- Patton, M. Q. (2015). Qualitative research and evaluation methods: integrating theory and practice. Thousand Oaks: Sage.
- Pearson, L. C., & Moomaw, W. (2005). The relationship between teacher autonomy and stress, work satisfaction, empowerment, and professionalism. Educational Research Quarterly, 29(1), 38 - 53.
- Pedro, J. Y. (2005). Reflection in teacher education: exploring pre-service teachers' meanings of reflective practice. Reflective Practice, 6(1), 49–66.
- Richards, J. C., & Farrell, T. S. C. (2005). Professional development for language teachers: Strategies for teacher learning. Cambridge University Press.
- Romano, E. M. (2005). Teacher reflections on 'bumpy moments' in teaching: a self-study. Teachers and Teaching, 10(6), 663-681.
- Rose, H., Syrbe, M. (2019). Global Englishes and teaching English as an international. In H. Mohebbi & C. Coombe (Eds.), Research questions in language education and applied linguistics: A reference guide (pp. 75–79). Switzerland: Springer.
- Sah, P. K. (2021). Teacher preparation for primary English education in Nepal: Missing agendas of diversity and inclusion. English Teaching & Learning. https://doi.org/10.1007/s42321-021-00100-7
- Shin, S. (2012). "It cannot be done alone": The socialization of novice English teachers in South Korea. TESOL Quarterly, 46(3), 542-567.
- Simmons, N. (2017). Critical incident method. In A. Mike (Ed.), The Sage encyclopedia of communication research methods (pp. 299–302). Thousand Oaks: Sage.
- Stake, R. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 443-466). Thousand Oaks: Sage.
- Torres-Rocha, J. C. (2019). EFL teacher professionalism and identity: Between local/global ELT tensions. HOW, 26(1), 153-176. https://doi.org/10.19183/how.26.1.501
- Tsui, A. B. M. (2007). The complexities of identity formation: A narrative inquiry of an EFL teacher. TESOL Quarterly, 41(4), 657–680.
- UNESCO (2015). The right to education and the teaching profession: overview of the measures supporting the rights, status and working conditions of the teaching profession reported on by member states. UNESCO.
- Veenman, S. (1984). Perceived problems of beginning teachers. Review of Educational Research, *54*(2), 143–178.
- Visione, J. D. (2022). What teachers never have time to do: Peer observation as professional Professionallearning. Development inEducation.48(2). 203-217.https://doi.org/10.1080/19415257.2019.1694054
- Vo, L. T., & Nguyen, H. T. M. (2010). Critical friends group for EFL teacher professional development. *ELT Journal*, 64(2), 205–213.
- Wilden, E., & Porsch, R. (Eds.). The professional development of primary EFL teachers: National and international research. Münster: Waxmann.
- Wood, A. L., & Stanulis, R. N. (2009). Quality teacher induction: Fourth-wave (1997-2006) induction programs. The New Educator, 5(1), 1-23.

- Wyatt, M., & Ager, E. O. (2017). Teachers' cognitions regarding continuing professional development. *ELT Journal*, 71(2), 171–185. https://doi.org/10.1093/elt/ccw059
- Wyatt, M., & Dikilitaş, K. (2016). English language teachers becoming more efficacious through research engagement at their Turkish university. *Educational Action Research*, 24(4), 550–570. https://doi.org/10.1080/09650792.2015.1076731
- Yazan, B. (2019). Toward identity-oriented teacher education: critical autoethnographic narrative. *TESOL Journal*, 10(1), 1–15. https://doi.org/10.1002/tesj.388
- Zein, M. S. (2016). Professional development needs of primary EFL teachers: perspectives of teachers and teacher educators, *Professional Development in Education*, 43(2), 93–313. https://doi.org/10.1080/19415257.2016.1156013

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