A Retrospective Evaluation of Pre-Pandemic Online Teacher Learning Experiences

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Abstract
Teachers are expected to encourage students to be active in the learning process in line with social-constructivist principles. However, when it comes to their own learning, they are obliged to attend activities organized by their institution. Triggered by this dilemma, this study introduced Computer-Mediated Communication as an alternative to the top-down delivery of trainer-fronted professional development and explored teachers’ uptake of Web 2.0 in the pre-pandemic era. To obtain comprehensive insights into teachers’ perceptions related to the use of Web 2.0 for their own learning, the study employed qualitative and quantitative methodology. Study results revealed that teacher development cannot be promoted with the use of Web 2.0 per se as it is very much dependent on teacher awareness, autonomy, beliefs, contextual realities but most significantly student learning. Despite limitations, this study highlights the principle of learner-centeredness as the key for promoting teacher development and the need to make prospective teacher learning practices an integral part of student-focused activity. Based on the results of the study, it is recommended that the multi-dimensional nature of teacher learning and contextual realities at multiple levels are considered in the design of post-pandemic teacher development schemes, significantly in institutions with low-autonomy cultures in order to turn top-down teacher development practices which teachers are used to into teacher initiated bottom-up learning processes.

Keywords
teacher professional development, professional learning, Web 2.0, computer mediated communication, virtual learning environments

Introduction
With the shift in education towards the social-constructivist view of learning, teachers have been trying to increase the use of student-centered activities in their classes in order to help their students to become more active and autonomous in the learning process. However, regarding their own learning, they have usually been expected to take part in training courses or schemes like performance management and teacher appraisal, which are top-down schemes that are questioned for not encouraging teachers to be active in their learning process (Atay, 2008; Wyatt & Ager, 2017) and for being short-term, traditional and content-focused (Opfer & Pedder, 2011). This form of teacher learning has recently been altered with the increasing use of Computer-Mediated Communication (CMC) tools enabling the creation of alternative professional development opportunities and continuous teacher learning (Pedder, 2007).

“CMC ranges along a continuum from product-oriented forms resembling paper-based writing (e.g., websites, most e-mail) on one end to more process-oriented interactive discourse that shares many features of speech (e.g., chat, instant messaging) on the other end” (Kern, 2006, p. 193). Web 2.0, sitting in between these two ends, is recommended for promoting learning (Brodahl et al., 2011) as it expounds knowledge construction as a social collaborative process within the parameters of the social-constructivist paradigm (Gadanidis et al., 2008). Because of its practicality for designing Virtual Learning Environments (VLEs), this study introduced Web 2.0 to the context of the present study in 2007 in order to encourage teachers to take part in Collaborative Inquiry (DeLuca et al., 2017) or professional learning communities, which are believed to foster teacher professional development (TPD) by focusing on learning of
not only teachers but also students, schools or leaders (Zonoubi et al., 2017). When the present study was introduced the uptake of CMC tools was based on teacher willingness, interest, or choice. However, with the outbreak of the pandemic, immediate transfer of most professional practices to online platforms became essential and teachers no longer had the luxury of opposing to the use of CMC. As sudden transformation of teaching practices to VLEs required effective use of CMC tools, institutions where CMC was not integrated in teacher development programs and/or daily teaching practices were extremely challenged.

TPD and CMC

Over the years several models have been developed to promote our understanding of TPD as a concept and how it can be achieved (Evans, 2014). In the last decade, being discontent with the confinement of TPD to pre-organized events or sessions in which information is transferred to a group of teachers based on a set agenda, researchers pointed to the need for teacher-centered TPD models that would consider teachers not as a group but as individuals with different objectives, needs and interests (Desimone & Garet, 2015; Evans, 2014; Zhao et al., 2019) and advised the use of CMC stating that it promotes teacher reflection and autonomy and contributes to the improvement of professional and subject knowledge (Zenios et al., 2004). Following this advice, the present study initiated the use of a Web 2.0 tool, Wiki, in the research context and adopted Foord’s (2009) “five circles of development” as its conceptual framework based on the following rationale.

Primarily, Foord’s model (2009) situates TPD in teachers’ real-life contexts. The perception that learning does not take place in a vacuum dates back to Vygotsky’s sociocultural theory, “which explains how the development of conscious intellectual activity is the result of social and cultural influences” (Wass & Golding, 2014, p. 671). Foord’s model (2009) is in line with the social constructivist theory since it holds that teachers learn or develop within a social environment. Foord’s model was considered to be the right framework for this study also because it represents TPD as a non-linear process with multiple components affecting each other (Philipsen, Tondeur et al., 2019) and encompasses the “foundational principles: Awareness, Autonomy, and Authenticity, or AAA for short” (p. 5) of the language curriculum which Van Lier (1996) developed for language teachers considering not only their intrapersonal characteristics such as “motivations, aspirations, actions and development” but also “interpersonal issues” (p. 14).

Figure 1 shows the teacher in the center of TPD. The research to date holds that for TPD to take place there should be changes in teacher knowledge, beliefs (Philipsen et al., 2019; Trautwein et al., 2015; Yang, 2012; Zhao et al., 2019) and also awareness on the part of individual teachers because in order to learn something one needs to notice it first” (Van Lier, 1996). Teachers’ readiness is also a prerequisite for TPD because adult development is voluntary and self-directed (Van Lier, 1996; Slaouti et al., 2013). According to Van Lier (1996), for learning to take place there should be autonomy and authenticity. He states that “the impetus of learning should come from the learner, who must want to learn” and authenticity is significant because it involves “free choice” and expresses “what a person genuinely feels and believes” (p. 12–13). Since teacher attitudes and beliefs affect their use of CMC (Hew & Brush, 2007; Hu & McGrath, 2011; Li, 2014; Yang, 2012), focusing on the teacher as the primary agent of professional learning is essential in CMC integrated TPD activities.

As shown in the second inner circle of Figure 1, TPD cannot be considered independent of the classroom environment. In the early 1990s, on the premise that TPD is related to classroom experiences teachers share with their students, Classroom-Based Teacher Development (CBTD) model was developed based on the following rationale: “CBTD is an orientation which both reconceptualizes how teachers improve their professional effectiveness in their workplace and build on the relationships that matter most to teachers in their development: their relationships with their students” (Thiessen, 1992, p. 86). Recent studies also report that teachers do not merely develop for themselves because their ultimate aim is to become better facilitators for their students (DeLuca et al., 2017; Desimone & Garet, 2015; Girvan et al., 2016; Trautwein et al., 2015; Zonoubi et al., 2017). Especially while exploring CMC, student learning becomes a major component of TPD (Philipsen et al., 2019) because students tend to be more motivated and active when they see that their teachers are interested in using computers (Hanson-Smith, 2000). As CMC is part of students’ lives and they have more knowledge about CMC tools than their professors (Zelick, 2013), TPD with CMC should be one of the top priorities on the higher education agenda.
The third inner circle of Figure 1 focuses on the teacher and colleagues. It is noted that “active learning involves practices such as team work and discussion as well as the application of knowledge through engagement” (Park et al., 2018, p. 13) but a school is like “an egg-box” and while teaching in their own classrooms teachers are separated from each other. This situation “can promote a privatist, go-it-alone teaching culture which may rationalize this isolation, but also seals off teachers from colleagues, a potential source of learning” (Roberts, 1998, p. 107). This culture can be transformed if teachers choose to use VLEs to explore their beliefs through ongoing professional exchanges with colleagues (DeLuca et al., 2017; Meskill, 2009; Zonoubi et al., 2017).

The fourth circle of Foord’s model situates teachers and students in a school environment. Institutional variables such as changes in management, procedures, requirements, or culture influence professional conception (Shagrin, 2015) and the use of technology (Shelton, 2016). Since contextual factors are believed to affect technology use (Guichon & Hauck, 2011; Hew & Brush, 2007; Li, 2014; Yang, 2012), contextual constraints need to be explored thoroughly prior to the design of a TPD scheme that will involve the use of CMC (Philipsen et al., 2019).

As shown in the outer circle of Foord’s model, TPD cannot be considered in isolation from societal, educational, or technological developments. Increasing use of technological tools in the wider society obviously affects their uptake by teachers (Shelton, 2016). In a similar vein, in many contexts learning through computers has become a trend and it is not possible to avoid collaboration via CMC in the achievement of professional or academic goals (Nguyen, 2010) especially after the outbreak of the Covid 19 pandemic.

The purpose of this study

Although some research studies explored the use of technology for TPD, further research is needed in educational settings (Egbert et al., 2002; Ibieta et al., 2017) where teachers have difficulty in catching up with technological developments. For example, in schools where English is taught as a foreign language (EFL) only a few studies have been conducted to investigate how Continuing Professional Development (CPD) can be used to enhance TPD (Lee, 2011; Wyatt & Ager, 2017). This very research gap triggered the present study to introduce the use of Wiki to EFL teachers and look into “teacher-learner relations, technology implementation, teaching management and teacher CPD” (Hu & McGrath, 2011, pp. 44–45) in a language school. Although various professional development opportunities such as master’s programs and Cambridge training courses were provided in this school, they were fixed in time, space, and content which are reported to be characteristics of top-down TPD programs (Giraldo, 2014). Also, most teachers had benefitted from these programs, so there was a need for new TPD opportunities that would encourage EFL teachers to be more active and autonomous regarding their development by exploring emerging technologies.

Clearly, there was a “needs gap” in the research context (Slaouti et al., 2013) to turn top-down delivery of trainer-fronted TPD into teacher-initiated bottom-up learning processes. Consequently, the present study made use of Wiki to create a platform for EFL teachers to participate in self-initiated TPD activities by taking the responsibility for their own learning while experimenting with Wiki. When the present study was initiated, the need for locally situated bottom-up teacher development programs which involved teachers in decision-making processes (Wyatt & Ager, 2017) and teachers’ use of information and communication technology (ICT) to this end (Ibieta et al., 2017) was highlighted by researchers. Recently, addressing this need has become more crucial since with the advent of Covid 19 pandemic many educational institutions have become highly dependent on CMC for pursuing their educational activities. However, simply transferring existing practices onto online mediums in low autonomy cultures where teachers are used to top-down TPD is not sufficient for the initiation of bottom-up TPD.

In order to integrate TPD schemes that would employ contextualized, needs driven and timely methods into educational contexts and instigate teachers to adopt inquisitive and proactive approaches regarding their professional growth within their own work settings (Giraldo, 2014), it is necessary to explore teachers’ attitudes towards the use of new applications in education (Wyatt & Ager, 2017). In this respect, there is an urgent call for more evidence base in higher education contexts. In response to this call, this study intended to investigate teachers’ TPD experiences with the use of CMC tools in the pre-pandemic era and its impact on their professional development retrospectively based on the following belief: In educational contexts where teachers prefer to hold onto their traditional teaching and learning habits, effective design and implementation of prospective TPD schemes which are in tune with contemporary movement towards the socio-constructivist paradigm can only be possible if lessons can be derived from lived experiences. In order to look back on the experiences of a group of EFL teachers with two Web 2.0 tools, namely Wiki and Moodle, and to explore whether their engagement with these tools had an effect, if any, on their professional development, the study asked the following research questions:

(1) To what extent did the introduction of Web 2.0 impact the participating teachers’ professional development?
(2) How was Web 2.0 used by the participating teachers?

The Study

Research Design

This is a case study, conducted in the form of a participatory action research which involved a series of “small cycles of
planning, acting, observing and reflecting” in order to understand issues under focus (Cohen et al., 2000, p. 229). The case being investigated was a group of EFL teachers working in a division of a language school at a university in Northern Cyprus. In line with the characteristics of qualitative research, there was focus on the social context where events naturally occurred and the emic perspective of the participants, that is what meaning they attributed to their experiences and how they constructed their worlds (Merriam, 2009). To this end, the study was conducted in teachers’ real work setting and it was about not only the participating teachers’ themselves but also their workplace (Cohen et al., 2000).

As the case selection criteria, convenience sampling technique was used because it enabled quick access to the data since the researcher was an insider, working in the same language school with the research participants. In order to explore teachers’ perceptions related to the use of Web 2.0 for TPD, the study employed mainly qualitative methodology. However, quantitative methodology was also used to observe participants’ day-to-day actions in VLEs and to verify qualitative data collected in the study. Through the employment of both qualitative and quantitative methodology, the study aimed to “research about persons’ lives, stories, behavior, but also about organizational functioning, social movements, or interactional relationships” (Strauss & Corbin, 1990, p. 17).

To elicit perceptions of the participants, who were considered to be co-researchers investigating the use of VLEs with the initiating researcher, multiple data collection instruments were used. In line with the principles of qualitative research, these instruments were revised on an ongoing basis considering developments in the research context. Following the collection of data from various data sources, codes were generated considering major themes that emerged from the data. Finally, research results were presented using descriptive qualitative approach (Kahlke, 2014).

Research Context

The present study was conducted in a relatively large language institution in North Cyprus. The school comprising around 180 teachers and about 8000 students was once well-known in the region because of the International Cambridge teacher training courses it offered. These courses were voluntary as were Masters and Doctorate programs offered at faculty level. As of 2005, all these training courses, which were fixed in time and space and also structured in terms of content because they were based on external syllabuses, started to decline because almost all the teachers in the research context had taken them. Eventually, the school was no longer in a position to offer international training courses and there were no additional schemes in the institution to encourage teachers to participate in TPD activities. As in those days the university was considering initiation of Performance Management through the use of portfolios in every department, the present study was introduced as an alternative to the cumbersome paper-based portfolios teachers were expected to create. In the pre-pandemic era, Web 2.0 tools such as Wiki and Moodle were brand new tools, so the present study used them for providing language teachers the opportunity of participating in a bottom-up TPD scheme as an alternative to the previous top-down TPD programs which they were used to.

The First VLE

The primary aim of the first VLE, “Efolio-Wiki,” was to facilitate the portfolio construction process. In its design, Wiki was preferred to other Web 2.0 tools as it is a very easy tool to use requiring no HTML knowledge and also because it enabled creation of a VLE in accordance with Foord’s model. With Wiki’s “ego-less, time-less and never finished” content (Lamb, 2004, p. 43) interested teachers could easily use ‘Efolio-Wiki’ anytime they wished with the purpose of reading, editing, or adding to its existing pages. In other words, within the parameters of Foord’s framework, teachers were able to use Wiki to improve themselves in their personal and professional interest areas or in their classes with their students to facilitate their learning. Wiki was also appropriate for institutional use because it enabled easy construction and sharing of teacher e-folios at the institutional level.

As can be seen from the template provided in Appendix A, “Efolio-Wiki” consisted of two levels. At the first level, teachers could create their e-folios in their individual wikis and at the second level they had the opportunity of supporting each other by accessing each other’s e-folio and exchanging ideas in group areas with their colleagues. Behind these visible levels in the template and the VLE itself, that is the teacher, teacher, and his/her students, colleagues, and the school, in “Efolio-Wiki” there was another disguised level from Foord’s model. Despite being invisible, this level, the teacher and his/her profession, was effective in the use of ‘Efolio-Wiki’ since in those days Wiki was a recent Web 2.0 tool that emerged as a result of technological developments making the creation of the first VLE possible.

Before “Efolio-Wiki” could be fully used by the research participants, two major administrative changes, demolition of portfolio construction by the university higher administration and merge of one school division into a new department called General Education (GE), required it to be revised. As research participants were reluctant to construct portfolios but were enthusiastic about exploring “wiki,” use of “wiki” became the main concern in the implementation of the second VLE.

The Second VLE

The shift of focus away from portfolio construction required renaming “Efolio-Wiki” as “Wiki-GE” and making it more institutional by inviting all the departmental staff to use it. In
the design of the second VLE, Wikipedia, being the most well-known comprehensive wiki project on the internet at the time (Lamb, 2004), was taken as an example. By following its design with hyperlinks from one page to the other, the template shown in Appendix A (second circle) was created. Using this template, teachers could still create e-folios but more importantly, they could collaboratively construct knowledge with their colleagues and students anytime they wanted.

Encompassing all circles of Foord’s framework in its design, “Wiki-GE” was a virtual environment that enabled teachers to easily interact and collaborate with their colleagues and their students by going beyond work or class space and time boundaries. In Wiki-GE, the teachers had the opportunity of following, participating in, or initiating online discussions in areas of their own interest. They could also create wikis for their classes by going into the designated link to their name on the staff wiki page. They could open as many wiki pages as they wanted for their own use or for their students and some teachers created class wikis to encourage their students to be active and autonomous in their learning processes. After the use of Wiki for some time, a second Web 2.0 tool, Moodle, was initiated by the participants who wanted to facilitate their students’ learning even further by providing them a more structured online environment with a wide range and variety of tools and tasks.

The Third VLE

The third VLE (GEmoodle) was created with the pressure coming from the outer circles of Foord’s model, mainly the third circle as it was moderated by three participants of this study and also the fifth circle since at the time Moodle was a very recent Web 2.0 tool that included a richer array of tools such as blogs, wikis, chat, messaging, discussions, and questionnaires. Hosting the online versions of many courses, providing departmental and course related information, materials, tasks for both teachers and students but significantly facilitating student learning, “GEmoodle” enabled the use of many activities for collaborative learning and the management of information at the institutional level.

Like other action research studies, development and related shift from the first to the third VLE was not a planned research process in this study. Despite their spontaneous creation, all the VLEs were developed in line with Foord’s model. In the first VLE, there was more focus on the inner circles of Foord’s (2009) model because it was designed to enable teachers to use Wiki in a solitary way for e-folio construction but also for exchanging or constructing information with students and colleagues but later on the school environment, the fourth circle of Foord’s model, put so much pressure on the study that the researcher had to reconsider the design of the first VLE and subsequently revised it to create the second VLE by integrating the fourth circle of Foord’s model into its design. Consequently, the second VLE was institutionalized and the scope of the study was expanded to invite all teachers in the department to use it for their own professional learning and/or for contributing to the learning of their students and colleagues.

In short, unlike the first VLE, which was more focused on the three inner circles of Foord’s (2009) model in its design, the second VLE emphasized four circles of Foord’s model. Interestingly however, it was the interaction of the first inner circle with the outer fifth circle of Foord’s model that led to the birth of the third VLE because some pioneering teachers, who followed the latest technological and educational developments in the fifth circle, took the decision of creating it encompassing all the five circles of Foord’s model.

Participants

It is stated that “action research starts with small groups of collaborators at the start, but widens the community of participating action researchers so that it gradually includes more and more of those involved and affected by the practices in question” (Cohen et al., 2000, pp. 229–230). This was exactly how research participants got involved in the present study. When the first VLE was initiated, 27 volunteer teachers from the language school of a large university in North Cyprus participated in the study. Eight of them worked and taught in the English preparatory division of the school. The remaining nineteen participants were from the other division which offered freshman English courses to students from different faculties. As the latter division was separated from the language school and started to function as an independent unit due to some administrative decisions, in the initiation of the second VLE the study was confined to this unit and all the teachers in this division of the school were invited to use it. However, only those, in total 41 out of 63, who responded to the perception questionnaire were included in the study. As stated earlier, in the course of time a third VLE was created by three participants of the study while the second VLE was being used. Hence, after providing the participants the opportunity of using the second and/or the third VLE for about a year, further data were collected from 12 participants. The participants were mostly experienced non-native English speaking female teachers who held such qualifications as MA diplomas and Cambridge or in-house training certificates.

Data Collection and Analysis

In the study, data were collected through the use of multiple data collection instruments. The timeline given in Figure 2 shows the data collection instruments (teacher interviews, teacher perception questionnaires, and user records), when they were employed and the number of participants involved in each data collection process.
As can be seen from Figure 2, initial data were collected from 27 teachers before the introduction of the first VLE (Efolio-Wiki) via interviews. In these interviews, the participating teachers’ perceptions of professional development in general and the use of Wiki for e-folio construction and TPD in particular were elicited in order to explore their understanding of TPD as a concept and to find out if they were positive about the use of Wiki for TPD (Please see sample questions in Appendix B). As the scope of the study was expanded with the design of the second VLE, a perception questionnaire was designed to elicit all volunteering teachers’ views regarding the use of Wiki for TPD and the designed VLE (Wiki-GE) for the institution. While aiming to explore teachers’ perceptions and beliefs, the questionnaire also intended to familiarize teachers with “Wiki-GE” and encourage them to contribute to its development. It should be noted that structured questions were included in the questionnaire to achieve a degree of standardization in the participants’ responses and to verify qualitative data collected through open-ended questions, which included explanations of the responses given to the structured questions by 41 teachers (Please see sample questions in Appendix B). For the analysis of the responses to the structured questions, frequency distribution was used.

After giving the participants the opportunity to experiment with the second or third VLE for a year, interviews were held with twelve teachers. These teachers were selected using the purposive sampling approach and divided into three groups on the basis of their interest in using VLEs. Those teachers who used a VLE actively were in group one. Group two was composed of those teachers who had interest in using VLEs in their future practices and group three included the teachers with least interest in using them. As can be seen from sample questions in Appendix B, in these interviews teachers’ perceptions were elicited regarding the advantages and disadvantages involved in the use of VLEs, its impact on teachers’ professional development and student learning.

Although a set of questions were prepared for the interviews, they were conducted in the form of conversations in order to allow the participants to freely express their ideas, feelings, ask further questions or make additional comments regarding their experiences with VLEs. The qualitative data collected through the interviews and questionnaires were content analyzed. Major themes were determined after reading the data several times to get a feel of recurring themes. Then, a coding system was created and an expert advice was sought prior to the coding procedure. After underlining and coding recurring themes in the data, most representative data sets and related quotations were highlighted. As qualitative data are generally collected in unique settings under unique conditions, ensuring reliability in its analysis is difficult. To address any threats to reliability in data analysis and to avoid deletion or miscoding of pertinent information provided by teachers, thick descriptions were provided in this study.

In addition to the data collected from the participants, user records were utilized to keep track of the data collected automatically by the “seedwiki” software. In these records, statistical information about active users (who created/edited pages) and passive users (who just viewed pages) was kept. These data enabled observation of the participants’ day-to-day use of wiki and verified the data collected through the perception questionnaires and interviews as they presented detailed information about its actual use. Using descriptive statistics, active and passive user attempts in the data were collated and displayed in bar charts to enable comparative analysis of different sets of data. Finally, in order to seek answers to the research questions, the comprehensive quantitative-qualitative data collected through the interviews, questionnaires, and user records were triangulated (Patton, 2002).

**Results**

The present study aimed to explore whether the initiation of Web 2.0 use in the research context had any impact on the EFL teachers’ professional development. To this end, two research questions were asked.

**Research Question 1. To What Extent did the Introduction of Web 2.0 Impact the Participating teachers’ Professional Development?**

The data analysis revealed recurring themes as awareness, choice, autonomy, motivation, reflection, learning with colleagues or information exchange within the institution,
contextual factors, and being up-to-date with recent developments. The data analysis also showed that some of the participants considered earlier professional development opportunities as centralized, too structured, and formal and thought that there was a need to explore different kinds of TPD activities in their own context. Since the study adopted Foord’s model (Figure 1) as its conceptual framework, the recurring themes emerging from the data were explored accordingly.

The teacher. The perceptual data pertinent to the first inner circle of Foord’s model (2009) involved the teacher. Figure 3, designed on the basis of teacher perceptual data collected in the study, shows that the teacher is the primary agent to trigger TPD. Firstly, the participants thought that development cannot be realized with pressure, as illustrated by the insight below:

This is a personal thing. Everybody has his own way of learning something and they have their own interests...you cannot force people to develop. Teachers should feel the need and say I want to do this, I want to try it. (P2E-R12)

This perception is parallel to Van Lier’s (1996) discussion that learning cannot be forced but can only be guided or encouraged. Similarly, two significant features of autonomy, “choice and responsibility” (Van Lier, 1996, p. 12) were considered important by the participating teachers.

All teachers should make use of it to the extent they wish...you can use it the way you feel comfortable with, to the degree you think it satisfies your and your students’ needs. That’s what autonomy is. (P2E–R1)

These perceptions, which are in line with literature highlighting the significance of personal development, teacher motivation, or attitudes (Girvan et al., 2016; Ibieta et al., 2017; Yang, 2012) came from the participants who were positive about the use of VLEs as an alternative means for TPD. These participants also thought that Web 2.0 use contributed to their own reflection process as it urged them to think professionally. In addition to making them autonomous, the participants stated that Web 2.0 gives them the freedom to design new activities and promotes a sense of learning together which are reported to be significant features of bottom-up TPD in a relevant study (Wyatt & Ager, 2017). In this respect, the cycle emergent in this study (Figure 3) is also very similar to Nguyen’s (2008) CMC pedagogical circle (Figure 4) which illustrates that in the use of CMC, the cyclical process of active learning can be triggered and is reinforced by reflection, autonomy, collaboration, and motivation.

The teacher and his/her students. The perceptual data pertinent to the second inner circle reflected the teacher and his/her students. Some teacher participants thought that VLEs offered insights into their students’ lives and enabled them to provide further assistance to their students. For the participating teachers, the most important advantage of creating a VLE was providing students with more exposure to English. In this regard, a participant said:

Just going to class is not enough because we’ve got only certain hours to do certain things in the classroom but in a web environment, extra information and activities can be put for students (P2E-R4).

Most of the participants thought that VLEs played an important role in student learning and they said students should be exposed to it more frequently. Even those participants who did not use VLEs felt that Web 2.0 tools would soon become an indispensable part of teaching and if they did not use them, their students would inquire why they were deprived of such learning opportunities. This finding is in
line with discussions in literature (Dudeney & Hockly, 2012; Trautwein et al., 2015; Slaouti et al., 2013), especially with Thiessen’s (1992) Classroom-Based Teacher Development model, and Van Lier’s (1996) language curriculum according to which teacher development is related to shared classroom experiences between teachers and their students. The study results also support the research to date which focuses on expectations from teachers to use emerging technologies effectively and the integration of Web 2.0 into daily institutional life (Brodahl et al., 2011; Hanson-Smith, 2000; Ibieta et al., 2017; Philipsen et al., 2019; Yang, 2012; Zelick, 2013).

The teacher and his/her colleagues. The data related to the third circle of Foord’s model (2009) including the teacher and colleagues demonstrated that some participants liked VLEs because unlike traditional websites, there was a two-way information flow. These participants noted that lead-in activities could be initiated in these environments for more fruitful face-to-face teaching team meetings. According to a participant, a VLE is especially useful in the following situations:

Some teachers do not want to join face-to-face discussions in the meetings. . .people who are more self-confident can dominate those discussions...if a web environment is provided, those who cannot join the discussions in a face-to-face environment will get the chance to contribute their ideas, especially if anonymity is provided (P2CQ4-R4).

Some participants stated that there was not enough collaboration in the institution and hoped that the created VLE would foster staff collaboration. Contrary to their expectations and the findings of the previous related studies which report positive effects of CMC use on collaborative learning (Zeniós et al., 2004), in the context of the present study Web 2.0 enhanced collaboration amongst colleagues only to some extent.

The teacher and his/her school. The perceptual data related to Foord’s (2009) fourth circle involving teacher and the school showed that the participants had some expectations from the school management. For example, a participant stated that the important thing is to “activate the inactive volcanoes in the institution.” According to this participant, this could be possible by exploring different kinds of learning opportunities as disclosed in the perception below:

First, we need to accept that improving your performance is an endless road and learning never ceases, from anyone, anytime you can learn something, the important thing is being alert to catch opportunities around. (P1A-R8)

The presented perceptual data are parallel to teacher perceptions in a relevant study (Wyatt & Ager, 2017) and the pertinent literature which holds that teachers are not practitioners who merely exhibit certain behavior but are individuals for whom knowledge should be kept dynamic (Orlando, 2013). Some participants in the present study were quite positive about the use of Web 2.0, which supports related research findings (Sadeghi et al., 2014); however, there were also participants who expressed worries related to contextual factors:

Everybody in our institution has lost motivation and interest... Many changes have taken place so people now want to stick to what they are doing, do same things, repeat things. We have lost our energy. (P2E-R12)

This perception which is in line with the studies reporting the impact of contextual factors (Guichon & Hauck, 2011; Hew & Brush, 2007; Philipsen et al., 2019; Shelton, 2016; Yang, 2012) calls for the consideration of the context before the introduction of any change or new application.

The teacher and his/her profession. The data pertinent to the fifth circle (Foord, 2009) involving the teacher and the teaching profession, illustrated that according to some of the participants, VLEs could be used to follow developments. In this regard, a participant expressed the following:

First you provided us with wiki, then we learnt about moodle; technology is developing, needs are changing everyday, education is changing and with these tools in a way learning becomes continuous. (P2E-R5)

Another participant noted that teachers will be obliged to catch up with the latest developments as can be seen in the insight below:

The use of interactive web environments in education is the future...Increasing number of people will meet on-line, interact on the web. Therefore, we really need to get involved in this; we need to encourage other teachers who I think will be left out if they don’t join this concept. I don’t want to call it a trend because it will stay. Ultimately teachers will have to join in, so the sooner you get on the bandwagon, the better. (P2E-R1)

These perceptions suggest that participants were aware of the importance of following developments in their profession, which is essential for TPD as also emphasized in the literature (Weller, 2013; Wyatt & Ager, 2017). In a relevant research study it is stated that for TPD to take place, there should be attitudinal, intellectual, and also behavioral change in teachers (Evans, 2014). As there seemed to be no concerns related to attitudinal and intellectual change in the perceptual data, data was checked for evidence of behavioral changes.

Research Question 2. How was Web 2.0 used by the participating teachers?

The perceptual data about Web 2.0 use in the present study were promising. The increase in its use by the participating teachers was a clear indication. However, this increase
cannot be taken at face value because the data in Graph 1, which displays active and passive users, show that most of the participating teachers were using Web 2.0 passively, only to view information, and not for interacting or engaging in discussions with colleagues or students.

Clearly, very few teachers were using Web 2.0 for collaborative learning purposes, the rest did not try hard as reflected in the perception of a participating teacher:

We could have used it more but we didn’t. I think we prefer to go for the traditional way. It’s not anything complicated but it’s still a challenge for us teachers. (P2E-R12)

Another participant talked about personal concerns:

I am interested in using these tools but I don’t trust myself in using computers. I am not good at computers. I have technophobia. (P2E-R11)

These two teacher comments reveal how teachers perceptions of their own identities and professional selves can impact their practices as discussed in a recent study (Philipsen et al., 2019). Too frequent administrative changes in the research context also occupied the participating teachers’ mind and prevented them from focusing on TPD. In an attempt to explain why the use of virtual learning environments was not welcomed by the majority in the research context, some participants pointed out culture-related issues. For example, a participant said:

“Transparency,” “democracy,” “autonomy,” these are difficult things to learn and practice. They require a lot of maturity, a lot of self confidence, a lot of collaborative work, team spirit...I mean the culture is not there yet in this institution but in the right culture, it is a perfect tool. (P2E-R3)

This insight is in line with research which discusses that school culture affects the use of technology (Shelton, 2016; Yang, 2012) and teachers’ participation in TPD activities (Desimone & Garet, 2015; Giraldo, 2014). The wider community in the research context was not very supportive either; the participating teachers were members of a community which preferred having an informal meeting over a cup of coffee to interacting in a virtual environment. Research findings reveal that this situation is not unique to the research context because in the pre-pandemic era teachers from different educational settings preferred face-to-face communication to on-line. Thus, expecting them to seamlessly transfer this interactional habit to an on-line medium was not very realistic in those days (Philipsen et al., 2019). Nevertheless, the following comment by one participant suggests that in the research context teacher practices with Web 2.0 were likely to change in time.

We should learn to be patient because as the days go by, the number of people using these environments increases. We should leave certain things to time because we’re breaking a tradition and a tradition is something that is established in a very long period of time. Breaking a tradition is not easy and this approach is breaking a tradition and it’s a radical change. (P2E-R5)

In a relevant study, parallel ideas were expressed by a teacher participant: ‘giving teachers time, giving trust to them, giving them opportunities to share with other practitioners: that’s the way forward’ (Yang, 2012, p. 113). Similarly, in a recent study it is noted that TPD with CMC requires time because teachers need to reflect on how using online environments will affect their roles and identity (Philipsen et al., 2019).

Overall, the data analysis exhibited that most of the teachers were not ready to integrate Web 2.0 into their professional practices. Although the majority appreciated its use in theory, in practice only a few teachers used it actively to enhance their own professional learning. In this regard, data analysis revealed that while the majority of the participants did not use Web 2.0 effectively in their teaching context by linking their theoretical knowledge with practice (Giraldo, 2014), the participants who actively used Web 2.0 were the ones “who already had an innovative pedagogical outlook” and were “inventive and creative across the board” as noted in a related study (Yang, 2012, p. 112).

Discussion

In brief, the study revealed the following outcomes:

- Uptake on TPD is strongest when the relationship and interaction between TPD and student learning is at its strongest, when student voices and demands are heard and acted upon and also when the institution is stable and supportive and time is made available.
- Issues arising from Web 2.0 are not particularly different from any other kind of voluntary TPD activity since the study findings showed that excuses like
having technophobia or inability, lack of time or perceived relevance were given for not using it.

- When there was control of environment like Moodle’s being institutionalized in the third VLE and becoming part of syllabus and assessment with dictated tasks, an increase in the use of Web 2.0 was observed, a finding which discloses the difficulty of involving teachers in high-autonomy activities in low-autonomy cultures where teachers are used to top-down TPD practices.

- TPD with Web 2.0 works well with self-motivated teachers engaged in exploratory practice and when effects on teacher learning and student engagement coincide; otherwise, it simply does not take place.

At this point, however, a more rigorous interpretation of the above listed results is required to see the “intangibles” which “are often more influential than tangibles” (Van Lier, 1996, p. 2). First of all, an in-depth evaluation of study findings reveals that the process is more important than the eventual outcome in TPD. It also points to the existence of Van Lier’s (1996) basic triad of Awareness, Autonomy and Authenticity (AAA) in the current research since teachers voluntarily participated in a CMC endeavour in this study and expressed their beliefs and reflections related to professional practice, colleagues’ contributions and various aspects of their teaching experience. Consequently, regardless of the frequency and/or volume of their online contributions as well as their familiarity, skills or exploitation of the CMC tools in the actual classroom, the overall perceptual data from the participants reflected participants’ real-life experiences and practices and thus were authentic.

Further, this endeavour seemed to raise participating teachers’ awareness regarding the importance of professional growth and improved practice. Their online contributions comprising their authentic comments, insights, reflections on the classroom teaching-learning, especially the related role of technology in modern language education, suggest their improved awareness of the necessity to introduce innovations to the language classroom in order not only to develop professionally but also cater for the language needs of the new generation of students. Importantly, data collected from the participants of this study suggest that again regardless of their online contributions and application of CMC in teaching, participating teachers seemed to be in the process of making decisions regarding their preparedness or timing for integrating CMC into their practices, thus, potentially becoming more autonomous in terms of their professional practices.

Interestingly, with the advent of the pandemic not only the participants of the present study but all members of the university teaching staff started to use Moodle, the Web 2.0 tool which was introduced to the institution many years ago through this study because the university management required the entire academic body to use it for delivering their courses and exams. In this study, which was conducted in the pre-pandemic era, no pressure was put on the participating teachers to use the proposed VLEs. Nevertheless, the participants who actively used Web 2.0 acted as pioneers and investigated not only the use of wiki with the initiating researcher but also introduced the use of another Web 2.0 tool (Moodle) to the research context. Therefore, in line with relevant research, results of the present study indicate that one size does not fit all and it is necessary to consider teachers as individuals rather than a homogenous group in TPD activities (Evans, 2014; Giraldo, 2014). Based on this finding which indicates that Web 2.0 promotes TPD when it is individualized and unmediated, provision of more individualized teacher learning opportunities should be considered in the post-pandemic era.

The study also revealed that teachers’ use of Web 2.0 can activate the cyclical process of awareness, desire, autonomy, choice and reflection (Figure 3), which are intrapersonal features that are considered to be fundamental for TPD (Evans, 2014; Giraldo, 2014; Van Lier, 1996). Related studies discuss that TPD activities should appeal to the hearts and minds (Evans, 2014; Yang, 2012; Zhao et al., 2019) and should be objective driven (Slouti et al., 2013). Also, in the relevant literature, it is noted that teacher beliefs have a stronger impact than external factors on teacher practices with technology (Li, 2014). Therefore, based on the experiences of the present study and up-to-date research, this study advises making TPD concepts and outcomes more specific for teachers (Desimone & Garet, 2015), being more sensitive towards teacher beliefs, identities, roles, or realities and providing more individualized support for fostering the uptake of emerging technologies and TPD activities in the pandemic and post-pandemic era (DeLuca et al., 2017; Girvan et al., 2016; Li, 2014; Philipsen et al., 2019; Shelton, 2016; Slouti et al., 2013).

Significantly, the findings of the present study demonstrated that the teachers who experimented with Web 2.0 tools took an interest in using them mainly because they realized that their students liked using computers and thought that their use would have a positive impact on their learning. This finding is in line with recent literature discussions (DeLuca et al., 2017; Hanson-Smith, 2000; Li, 2014; Yang, 2012; Trautwein et al., 2015; Zonoubi et al., 2017) and particularly for teachers working in EFL contexts it confirms that Web 2.0 in TPD “provides the armour a digital immigrant needs in a digital native’s world” (Wyatt & Ager, 2017, p. 177). The argument that teacher learning should go hand in hand with student learning was put forward many years ago based on the following rationale: “a focus on student learning ignores its intimate relationship to teaching” and “a focus on teacher learning, especially through training prior to and removed from the classroom, ignores the people in context in which the new practices are to be developed” (Thiessen, 1992, p. 87). It is reported that this practice has not changed much since TPD activities are still “fragmented” in some contexts. In order to improve these TPD practices...
“with little continuity” (Desimone & Garet, 2015, p.258), in light of its findings and pertinent literature, this study proposes Web 2.0 integration into prospective TPD schemes as its use can raise teachers’ awareness regarding the advantages of bottom-up teacher learning (Wyatt & Ager, 2017), particularly the significance of making TPD teacher (learner)-centered and focused.

Limitations of the study and recommendations

Admittedly, this study is limited in a number of ways. Due to lack of time and control of certain contextual factors, it had to be conducted with a limited number of teachers and the main bulk of the data was based on teacher perceptions. Therefore, it is not possible to generalize current research findings. Also, inter-rater reliability could not be ensured during the coding process because of limited resources. Another limitation concerning this study is related to the research design. As the study was institutionalized with the introduction of the third VLE, it was not possible to analyse and present quantitative data related to its use on a daily basis. Had it been possible, a more comprehensive representation of the collected data would have enabled comparison of day to day use of VLEs at each stage by teachers and students and increased the validity of the study by expanding the study sample.

Despite its limitations, this study has disclosed that teacher learning is inherently multi-dimensional and that it can be fostered if TPD activities are designed on the principle of learner-centeredness as discussed in the most recent research (DeLuca et al., 2017; Desimone & Garet, 2015; Philipsen et al., 2019). In the present study, administrative changes in the school environment were found to affect the participating teachers’ practices with Web 2.0 negatively. Parallel to the results of relevant studies, excuses like institutional instability, culture, or time constraints were given for not exploring the use of Web 2.0 in the promotion of learning (Desimone & Garet, 2015; Philipsen et al., 2019; Zhao et al., 2019). This finding indicates that a supportive and stable environment is necessary for teachers’ committing themselves to TPD, but more significantly, it ascertains the need for a system-wide approach to learning as pointed out in the literature with regard to CMC.

Significantly, the application of CMC into classroom collaborative work needs support from not only societal and institutional levels but also teacher’s teaching philosophy and experience, together with students’ expertise of and perceptions to collaboration via CMC and willingness to participate. (Nguyen, 2010, p. 226)

Since TPD components are interrelated and cannot be considered separately, a comprehensive approach should be adopted for its accomplishment (Philipsen et al., 2019). In this regard, awareness, vision, ingenuity, and flexibility (Evans, 2014) of program designers, policy makers, teacher trainers but especially educational leaders are significant as they are the people to whom teachers look up to for inspiration and support.

Launching a comprehensive TPD scheme obviously requires extensive time and effort. Implementers of such a system need to realize that teachers have to deal with problems like large class sizes, intensive syllabuses, and students with different needs and interests and amongst all these, they may opt to claim that they have little time or space for TPD as experienced in this study. To this end, educational managers have an important role to play for not only overcoming any obstacles that can hinder TPD but also ensuring school-wide application of a CMC integrated TPD scheme.

Conclusion

The need for more research as regards the use of CMC for language teachers’ professional development was highlighted by various researchers (Egbert et al., 2002; Ibieta et al., 2017; Nguyen, 2008; Philipsen et al., 2019; Zenios et al., 2004). The present study tried to fill this research gap by introducing Web 2.0 to EFL teachers to encourage them to take the responsibility of their own professional learning. Through the employment of Web 2.0, the study aimed to shift top-down trainer-fronted TPD activities in the research context to a CMC integrated bottom-up TPD scheme and bring teacher freedom and autonomy to the fore in TPD practices. Study results revealed that participating teachers were not against the implementation of a new “networked educational landscape” in their working environment but most of them did not use it to its full potential. In this regard, study findings confirmed that Web 2.0 “in itself, is not that revolutionary. What teachers do with it, given the autonomy to let them follow their creativity within pedagogical principles can be” (Eldridge & Neufeld, 2007, p. 25).

In addition to highlighting the teacher as the primary agent of TPD, study results showed that the introduction of Web 2.0 to the research context created a ripple effect sequentially affecting individual teachers, their students, colleagues, and the school environment.

\[\ldots\] ‘singular units’- episodes of micro-level development- most often occur by a kind of chain reaction, whereby one change dimension leads to another, which then leads to another. \ldots\] This may then spiral into further chain-reaction episodes, making for a cycle of successive chains; indeed, a teacher’s entire development over the course of her/his career will comprise a succession of countless such episodes, many of which merge into each other to the extent of being indiscernible as singular units (Evans, 2014, p. 194)

In this respect, the findings of the present study indicated that despite the significance of all circles in Foord’s model
(2009), the inner circles are central for TPD because as stated above changes in the inner circles create a ripple effect and consequently affect other areas of TPD represented in the outer circles of Foord’s framework. Thus, while disclosing the multi-faceted nature of TPD, this study asserts that TPD can reach the highest level when the relationship and intersection between teacher and student learning is at its strongest. To conclude, based on its findings and relevant research, the present study contends that teacher learning cannot be separate from student learning and highlights the need to prioritize student needs, interests, or requests in the design of teacher development schemes in order to enable teacher and student learning to go hand in hand.

As Covid 19 has taken the education sector into a new era, nowadays educators all over the world are using more up-to-date CMC tools like zoom, teams, chat, or boom for their professional practices. However, as stated earlier when it comes to TPD, it is not the CMC tools themselves but what teachers do with them (Eldridge & Neufeld, 2007) to enhance their learning as well as their students’. Empowering teachers to take more responsibility for their own development in line with socio-constructivist principles is highly significant in the post-pandemic era since as underlined in a recent research study only “if teachers are intrinsically motivated, and sufficiently autonomous with regard to CPD, it is likely to have a positive effect on learner motivation” (Watt & Ager, 2017, p. 180). Consequently, in light of empirical research and present study findings, it is recommended that TPD schemes be designed on the principle of learner-centeredness in the pandemic as well as the post-pandemic era and teachers together with their students be considered as learners within the parameters of these schemes.

Obviously, further evidence is required for effective implementation of TPD schemes that will encourage self-initiated and continuous learning on the part of teachers. For prospective TPD schemes, based on its findings, this study recommends consideration of realities not only in teachers’ immediate environments but also in the wider environment since developments like rapid technological advancements or the pandemic have a great impact on educational practices at every level of education. Hopefully, this study which employed the use of CMC for promoting teacher development in the pre-pandemic era will shed light onto the endeavours of other institutions with low-autonomy cultures in fostering teacher-initiated TPD practices benefiting from CMC or any other appropriate tools for their own contexts. It is also hoped that this study will inspire further research. Significantly, future studies that will focus on the relationship between teacher and student learning are bound to offer better insights into how students alongside their teachers can provide greater input into the design of bottom-up TPD schemes that are in line with socio-constructivist principles.

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