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The Pivot to Online Learning: A Case Study of Chinese EFL Student Teachers' Learning Experiences

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Abstract

Adopted a qualitative research approach, this study brought in the Chinese EFL student teachers' voices on their online learning experiences and perceptions to shed light on the further development of online teaching and learning in the EFL teacher education programs in China. This study collected data from Chinese EFL student teachers on their experiences and perceptions of online learning. The data included 148 responses from the open-ended response questionnaire and transcripts from two focus group interviews with 12 participants in total. The findings from this study revealed four major themes: learner autonomy, digital skills, Internet connectivity, and interactivity. The findings also indicated that Chinese EFL student teachers, to a certain extent, could leverage digital tools for learning purposes. Meanwhile, the Chinese EFL student teachers expected more comprehensive support in terms of technology troubleshooting, time management skills, self-discipline, and online resource evaluation.

Keywords

Chinese EFL student teachers; online learning; teacher education programs

1. Introduction

Teaching and learning online have been extensively adopted in education at all levels in China with the advancement of the internet, multimedia information processing, cloud computing, and other information technologies since 1994. However, online education has remained more of a supplement to classroom education, and large-scale normal online education lacks cases and research in China. The outbreak of the pandemic caused a transfer of schools and educational institutions to largely adopt online formats in teaching and learning. As an English as a Foreign Language (EFL) teacher with an EFL teacher education program who has been both taught and learned online, I reflected that teachers and students would need better preparation for the profound transfer to online learning, which will continue to be the main mode of education, if not already is. English is one of the compulsory subjects at all levels of school curricula (Ministry of Education of the People's Republic of China, 2012) and the English proficiency test is a compulsory subject for the national college entrance examination. This leads to a need for quality English teachers. EFL student teachers need to be well-prepared to further adequately prepare student teachers' learning outcomes as well as effectively incorporate technology into their future classrooms.

Online learning has become ubiquitous, with a significant presence in educational institutions, professional training programs, and informal learning environments (J. E. Seaman & J. Seaman, 2017), which leads the teachers need to be prepared with knowledge and skills for online teaching and learning (Park & Son, 2022). Specifically, teachers need the

digital literacies knowledge and skills to be able to operate digital hardware and software and adopt various technologies to teaching situations, search and retrieve, manipulate and evaluate, synthesize and create digital content, and interact with textual, sound, images, videos, and social media and to networking with others using ICT (e.g., Ata & Yıldırım, 2019; Sert & Li, 2019). Additionally, teachers need the knowledge and skills specific to online pedagogy, including preparing teachers to be digitally literate for the use of digital technologies for a dynamic learning environment that could enhance learning and teaching (e.g., Ertürk, 2022; Park & Son, 2022).

What's more, leaning on the theory of technology, pedagogy, and content knowledge (TPACK) (Koehler et al., 2013), it is evident that the technological pedagogical knowledge required for online teaching is content-specific. EFL teacher education in China has long been focused on content knowledge and pedagogy techniques in the classroom context. Technology had a transformative impact on education, with possibilities to revolutionize the way students learn and teachers teach. The large-scale pivot to online learning draws teacher educators to pay attention to preparing EFL student teachers with pedagogical strategies (e.g., building a supportive online environment, multimedia curriculum design, and interaction through web 2.0 tools) in online learning to effectively meet the needs of their students and maximize their learning outcomes in their career life. Definitely, we must not go back to the way teacher education was, having online mode as a supplement to classroom education.

2. Background

Online learning is defined in the work of Singh and Thurman (2019) as "learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be based anywhere (independent) to learn and interact with instructors and other students" (p. 289). This teaching-learning mode holds the potential to be student-centered and to result in greater innovation and flexibility in teaching and learning (Qie et al., 2021). As technologies evolve, technologies afford online teaching and learning (e.g., learning environment, platforms, and pedagogy) to continue to transform as well.

Teaching and learning online have been extensively adopted in education at all levels in China with the advancement of the Internet, multimedia information processing, cloud computing, and other information technologies since 1994 (Zhang & Wang, 2019). Major programs of the integration of information communication technologies (ICTs) into education of all levels have constructed a large number of digital resources, including national-level quality courses, quality video open courses, five-minute classes, MOOCs (Massive Open Online Courses), micro-lectures, and diverse types of digital resources databases. Also, programs for in-service and pre-service teachers in the use of educational technology have been initiated by the Minister of Education of China and launched on campus sites (Xiong et al., 2021). Although widely adopted, online education was seen as a supplement to traditional modes of teaching and learning (Lockee, 2021). What has been seen more generally in China, also applies to the case of EFL education typically adopting a blended mode as a supplement to face-to-face physical classroom settings (e.g., flipped classroom), cross-campus course selection, MOOCs, or non-degree courses for adult education.

The research exploring EFL student teachers' learning experiences and perceptions of online learning has yielded varying results. Studies (e.g., Ahmadi & Reza, 2018; Bailey, 2022) reported findings that indicate the positive learner experiences and perceptions of online learning in EFL teacher education and the EFL context, that is, online learning promoted the EFL student teachers in ways such as learning flexibility, learning interactivity, learning motivation and class engagement/involvement, and technology knowledge and skills. On the other hand, research (e.g., Adnan & Anwar, 2020; Mevlina et al., 2020) results showed opposite/negative experiences and perceptions in terms of technical issues, reduced learning motivation, lack of technical support, and lack of personal interaction.

Previous research on Chinese EFL student teachers' online learning indicated similar findings as the literature cited above in terms of both positive and negative experiences and perceptions. For example, the use of the platforms for online courses to EFL student teachers from teacher education programs indicated that students had positive attitudes towards online learning in terms of user-friendly platform system, flexibility, and timely interactivity between teachers and students (e.g., Chen, 2022; Zhang et al., 2018). On the other hand, Chinese EFL student teachers' online learning has encountered technical issues, lack of tech support, and low-class engagement that hindered EFL student teachers' learning (e.g., Wang, 2019; Xiao et al., 2020). The EFL student teachers expected the online classes to be better organized in terms of clear instruction approaches and activities, and timely feedback/interactions (Wang & Liu, 2023). These findings suggest teacher education programs to pay attention to preparing teachers with pedagogical strategies to become prospective teachers in their career life in an era where ICT integrated with education to an unprecedentedly high degree.

3. Methodology

Adopted three learning theories, namely constructivism learning theory (Bada, 2015), Wenger's community of practice (Wenger-Trayner & Wenger-Trayner, 2015), and community of inquiry (Chambers, 2019), the primary objective of this case study was to investigate EFL student teachers' experiences and perceptions of online learning, it was imperative to employ a methodology conducive to the collection of qualitative data that necessitated an analysis rooted in participants' own lived experiences and points of view (Creswell & Plano Clark, 2017). Data collection consisted of two phases: an open-ended response questionnaire followed by focus group interviews to investigate EFL student teachers' experiences and perceptions of online learning. The open-ended response questionnaire data was collected first. Based on the findings from the data collected in phase one, the author revised the semi-structured focus group interview protocol to probe for richer information. The focus group interviews were conducted as the second phase. The author analyzed the open-ended responses from the questionnaire data and the interview transcripts to explore the participants' perspectives in depth.

The research questions for this study were:

(1) What are the EFL student teachers' experiences of online learning in China?

(2) How do EFL student teachers perceive their online learning experiences in China?

3.1 Site and Participants

A purposeful sampling (Creswell, 2012; Merriam, 2009) approach was adopted to recruit a teacher's college and its EFL student teachers majoring in English Education for this case study. The chosen teacher college met the purposeful criteria of large school size, national-level-accredited EFL student teacher program, multiple grades, diverse genders, accessible location, and diverse composition of students (e.g., multi-ethnic, multi-regional). These criteria ensured the case would be "information rich" (Patton, 2014, p. 242). Criteria for inclusion as participants of this research are (a) full-time undergraduate enrolled in the chosen Normal University, (b) participant in the English Education program, and (c) had fully online courses for at least one semester. Participants for phase two were recruited through the emails collected through phase one. The author chose participants for focus group interviews to create a maximum variation sample concerning gender, grade level, and geographic residence to garner diverse and credible perspectives.

3.2 Phase One

The first phase of the study used a questionnaire of open-ended questions as the research instrument, in which the questions were broad and required feedback in the respondents' own words instead of stock answers. The questionnaire comprised eight open-ended questions and four demographic questions, which were designed to investigate EFL student teachers' experiences and perceptions of their online learning. The open-ended response questions in the questionnaire also reflected the adopted theoretical framework: the constructivism learning theory, communities of practice, and community of inquiry. That is, the open-ended response questions explored how the EFL student teachers reflected on experiences and perceptions of taking an active role in constructing their knowledge; the collaborative and participatory nature of the online learning community; and their engagement, social interactions, and instructional support as well as the overall impact of these experiences on their online learning. A cognitive interview was conducted to examine whether the individual items were clear and whether the overall instrument made sense to the participants. Based on the participants' feedback, it turned out that there were not any interpretive deviations to the survey questions from the researcher's intent.

Participants were asked to answer the open-ended response questionnaire in their preferred language, either English or Mandarin. The participants were encouraged to answer the questions in their mother language, Mandarin, as language expression is fundamental for in-depth research, and participants may feel comfortable expressing more freely and accurately and providing richer information.

The open-response data from the questionnaire were collected online. After the questionnaire was conducted, the 148 responses were analyzed using the computational tool software—IBM SPSS version 29 (for the analysis of statistical data) and NVivo version 14 (to aid in the data management and analysis process), to understand the Chinese EFL student teachers' experiences and perceptions of online learning. NVivo version 14, was also used to query keywords for comparison with manually coded categories and themes but was not used as a primary coding source and was employed primarily for data analysis validation. The researcher took the lead in the research process, with the software serving as a tool for data storage, organization, and validation (Bryant & Charmaz, 2012). Descriptive statistics of results include frequency and percentage of the responses to each question in the questionnaire. The results drawn from the analysis of phase one contributed to building an understanding of the EFL student teachers' experiences and perceptions of online learning, as well as the adjustments to the interview protocol of focus group interviews at phase two for a deeper

understanding of student teachers' experiences and perceptions of online learning.

An inductive approach was adopted for thematic analysis to determine the themes (Braun & Clarke, 2006). This involved deriving meaning and creating themes from data, that is, to allow themes to be determined by the data—to emerge from the data. In this research, themes were understood as the subject and main idea. Themes were presented in the form of a phrase, or a word based on the responses. The author invited a co-coder and practiced intercoder agreement (Creswell & Plano Clark, 2017) in order to increase the credibility of the qualitative results. There was an agreement that coders could code responses for more than one theme, and coders used their best judgment as to whether a response fit into a theme, as the definitions were non-exhaustive.

3.3 Phase Two

The second phase of the case study was focus group interviews. The semi-structured interview protocol was conducted with three questions removed from the originally proposed protocol, and two questions added to elaborate on the findings from phase one. Malterud (2016) suggested that there is no straightforward answer to sample size in qualitative research, and there is no definitive answer for addressing issues of sample size in thematic analysis. Coding reliability can be achieved in as few as 12 or even six interviews in some circumstances (Guest et al., 2006). Twelve participants for the focus group interview were recruited from 42 participants who consented to participate in phase one. The participants were grouped depending on their availability and physical location. As it was during the semester when the focus group interviews were taking place, all the participants in the focus group interviews were on campus. The semi-structured focus group interviews were conducted in two groups, with six participants in each group. Both rounds of focus group interviews were conducted in person on the weekend in the study rooms in the university library, with one group in the morning and the other in the afternoon. Each focus group interview lasted for approximately 80 minutes. The focus group interviews were audio recorded. For high data accuracy rates that provide reliable and reasonably accurate transcriptions, the focus group interviews were transcribed through professional transcription software first, and then the author read through the transcriptions while listening to the audio recordings to make corrections.

Complementary to the collected data from the open-ended response questionnaire, the collected data from focus group interviews were also analyzed through thematic analysis to determine the themes (Braun & Clarke, 2006). Thematic analysis remains one of the most popular qualitative analysis techniques that studies patterns of meaning (Guest et al., 2012). In other words, it is about analyzing the themes within the data set to identify meaning.

What's more, the participants can choose to reflect their opinions in both English and Mandarin, and the author presented the interview questions in both English and Mandarin. All participants in the focus group interviews reflected their opinions in Mandarin as they felt comfortable expressing their opinions in their native language which allowed them to communicate more freely and accurately, resulting in the provision of comprehensive information in their native language (Mandarin). The author analyzed the collected data in Mandarin and implemented the member-checking approach in the same language. The author translated the themes and excerpts into English and reported.

4. Findings

During the first phase of data collection, 148 out of 198 student teachers responded to the questionnaire. Approximately 3.4% (n = 5) out of the total responses to the phase one questionnaire were in English and the rest were in Mandarin. Of the 148 respondents, 12 participants participated in the focus group interviews and these responses from both phases are examined in this case study. The majority of the respondents were female (n = 138, 93.2%). Approximately 6.4% (n = 11) of respondents had online classes during the pandemic lockdown for one semester, 41.9% (n = 62) had it for two semesters, just over half of the respondents (50.7%, n = 75) had it for more than two semesters. The majority of respondents (60.2%, n = 89) had online classes during the pandemic lockdown in the urban setting as the primary place of residence, followed by the suburban setting (20.9%, n = 31) and the rural setting (18.9%, n = 28). Approximately 54.0% (n = 80) of respondents reported having both synchronous and asynchronous modes of the online classes during the pandemic lockdown, followed by 44.6% (n =66) of respondents had only synchronous modes, while the remaining 1.4% (n = 2) had asynchronous mode only. Twelve participants of the focus group interview were recruited from 32 participants who consented to participate in phase two, including six females, and six males, two had online classes for one semester, three had it for two semesters, seven had it for more than two, four had online classes in each of the three residence settings, and two had it each the two modes, and eight had it in both modes (sync. and async.).

The thematic analysis of the open-ended response questionnaire and the transcripts of the focus group interviews revealed four themes: learner autonomy, digital skills, Internet connectivity, and interactivity. Table 1 shows the themes and the definitions.

Table 1. Overview of Main Themes and Definitions

Main Themes	Definitions	Sub-themes	Percentage of participants coded with sub-theme
Learner Autonomy	The EFL student teachers' experiences of taking an active role in their own learning.	Need for time management	28.4%
		Need for self-discipline	53.4%
		Information-rich connectivity	85.5%
		Flexibility as affordance	93.9%
		Helpful peer support/ cooperation	41.9%
		Available instructor support	72.3%
Digital Skills	The EFL student teachers' experiences of adopting technology to promote learning.	Online tools	100%
		Online resources evaluation	45.3%
		Desire for technical support	7.4%
The Internet Connectivity	The availability/quality of the internet access (e.g., broadband connections, and Wi-Fi), and the devices (e.g., PC, tablets, laptop, and mobile phones) that enabled online learning.	Internet access issue	45.9%
		Devices available	100%
		Efficiency of learning with high speed Internet	83.1%
Interactivity	EFL student teachers' communication in online learning through embedded interactive features of the online environment as classified by the Community of Inquiry theory.	Student-content	100%
		Student-faculty	100%
		Student-student	100%
		Tech-afforded collaborative activities	66.2%

Note. The sum of percentages is greater than 100%, as responses could be coded into more than one category. Percentage of participants coded with sub-theme refers to the percentage of the number of participants out of all participants who were coded with a certain sub-theme in the questionnaire.

4.1 Learner Autonomy

This theme comprised the EFL student teachers' experiences of taking an active role in their learning in terms of information-rich connectivity, flexibility as affordance, need for time management, need for self-discipline, helpful peer support/cooperation, and available instructor support. Excerpts of the responses related to the sub-themes from the questionnaire and interview responses included,

- *When it comes to my own learning plan, like preparing for the Test of English Major grade four (TEM-4), I'd lose my focus as it is not due any time soon, and I was working all by myself.*
- *I often was distracted by the social media notifications, you know, one notification led to another, I just kept surfing them and it was a waste of time, indeed. Often took an hour or more for me to go back to study.*
- *Baidu-ed with key words, internet never failed me with the up-to-date and large amount of relative information, I was never at a lack of ideas with the information available online.*
- *I have more control of time arrangement, especially for the case of the asynchronous classes. I can create my own study schedule as I can access course materials, lectures, and assignments at any time.*
- *For the group assignments, the first thing we did was to set up the timeline. I was never late for the group meeting or to complete my parts, it was teamwork, I cannot be the one who made the team miss the due.*
- *TEM-4 for English majors is part of the graduation requirements. My teacher asked us to draft our own detailed plan to reach the goal. I drafted one, followed it, and I passed the exam last semester.*

Responses showed that the Chinese EFL student teachers reflected experiences of taking an active role in their online learning in terms of collaboration and participation in the online learning community. Specifically, they were active in forms of division of labor, brainstorming for group activities, attending group meetings on time, completing their parts for the group work, as well as sharing materials and information.

Meanwhile, it should be pointed out that collectivism, to a certain extent, encouraged the Chinese EFL student teachers to strive for their tasks for the benefit of the group when doing the group assignments as well as being proactive in making suggestions and proposing solutions. The relatively poor pace/time management skills for learning online call for further guidance (e.g., setting up learning goals, periodical achievement assessment) through integrating technologies.

4.2 Digital Skills

This theme comprised the Chinese EFL student teachers' experiences of using technology to promote learning. There are three revealed aspects: online tools, online resources evaluation, and desire for technical support. All participants in the questionnaire (100%, n = 148) mentioned their experiences in the online class in terms of using online tools, of which approximately 62.2% (n = 92) responses mentioned they were able to adopt more than three kinds of online tools for their learning. Responses related to online tools from the focus group interviews also showed that EFL student teachers were able to adopt multiple online tools to promote their learning. Tools discussed in the questionnaire and focus groups included learning and teaching platforms, such as Xuexitong (compared to Canvas); online office software, such as Jinshanwendang (compared to Google Drive); search engine, such as Baidu Scholar (compared to Google Scholar), Zhihu (compare to Quora); online apps, such as Tengxun huiyi (compared to Zoom), WeChat, email; social media, such as Xiaohongshu (compare to Tik Tok); and used VPN to get access to foreign resources for academic purposes, such as websites of Google Scholar. In addition, excerpts of the responses related to these the sub-themes from the questionnaire and interview responses included,

- *I searched for English listening apps in the App Store and chose the ones with the highest download number, I think this indicates an app of high quality. It may not always be the case, but it's my way.*
- *There are so many apps available, I couldn't figure out which are the good ones. I just asked my classmates, and friends for the apps they are using and found good, and I downloaded what they recommended.*
- *The instruction slides for Dingding (compared to Canvas) sent from school was too long, I didn't read it through, I had to search and watch instruction videos online by myself to figure it out.*
- *The WeChat message said I can call at the number if I got any problems in using the Xuexitong, but no one answered when I made the call.*

These excerpts indicate that the Chinese EFL student teachers were proficient in using digital technologies in terms of using online tools for their learning. Also, they were capable of primary skills for online resource discernment, which calls for integrating online resource evaluation skills into EFL student teacher education programs, and further adequately preparing EFL student teachers to effectively incorporate technology into their future classrooms. In addition, excerpts also showed that the EFL student teachers expected efficient tech support to ensure that both students and instructors can navigate the digital environment seamlessly and focus on the educational content without disruptions.

4.3 Internet Connectivity

This theme included the availability and quality of both the internet access and the devices that enabled online learning,

and the efficiency of learning with high-speed Internet. It shows that the majority of respondents (21.6%, n = 32) had experienced issues with internet connectivity located at the primary place of residence in urban settings. However, this result may be due to the urban setting as the primary place of residence for online classes taking the largest proportion (60.2%, n = 89) of the three settings of the total 148 responses. The rate of the number of responses in each setting indicated that more EFL student teachers whose primary place of residence for online classes in settings of rural (71.4%, n = 20) and suburban (51.6%, n = 16) had internet access issues. This may be because internet coverage and services vary in rural, suburban, and urban areas in China, with the range of broadband internet coverage and service of 99% in the urban setting, 78.3% in the suburban setting, and 59.2% in the rural setting (CNNIC, 2021). There were 83.1% (n = 123) of the total 148 responses from the questionnaire that mentioned the online environment was efficient in regard to quick search and access to learning materials that promoted learning. Excerpts of the responses related to this from the questionnaire include "I can check the information from the Internet immediately at any time which saves time," "Find materials in a timely manner, I'm able to conveniently access learning resources."

Focus group interviews provided more information regarding devices (e.g., PC, tablets, laptop, and mobile phones) that enabled online learning. Revealed by a participant in the focus group, Speaker # 11 stated,

> The student support specialists of the department of EFL teacher education program did an investigation with us (the EFL student teachers) at the very beginning of taking all courses online and asked if we had devices for courses online.

In response to the Disrupted Classes, Undisrupted Learning policy (MOE, 2020), the investigation was to see if any actions were needed to ensure that all students could have access to at least one device for online classes. This explained why there were no responses in the questionnaire about the lack of devices for online learning.

4.4 Interactivity

This theme comprised EFL student teachers' communication during online learning through embedded interactive features of the online environment. There are five revealed aspects of interactivity: student-content, student-faculty, student-student, and tech-afforded collaborative activities that supported/impacted EFL student teachers' online learning. Excerpts of the responses related to the sub-themes from the questionnaire and interview responses included,

- *Our teacher had the Danmaku (bullet screen) function turned on during the team presentations. The audience posted timely feedback, and the presentation team had the questions answered immediately. It was a lovely class moment.*
- *Teachers were available to reach through WeChat, email, and text. I felt comfortable when I knew there were a variety of ways to connect to the teachers.*
- *I liked it when we brainstormed, everyone contributed to the team with their ideas. And I think I've developed communication skills and teamwork skills.*
- *I found a website with plenty of templates for making a teaching plan. I also made an e-teaching plan adding animations, you know, the moving pictures for my lesson plan assignments.*

These excerpts showed that the EFL student teachers enjoyed engaging with each other to share ideas, collaborate on projects, and collectively construct knowledge. Also, participants in the focus group interviews shared their interaction experiences in the online class indicating that EFL student teachers enjoyed online classes through close interaction/relationship among themselves.

5. Conclusion

Out of personal interests as an EFL teacher educator, the wide use of the English language in the world and the unprecedented large scale of online learning in China brought the focus of this case study on the Chinese EFL student teachers' online learning experiences and perceptions. This case study adopted a qualitative approach to understanding the experiences of online classes among EFL student teachers in China. The results and findings revealed four major themes: learner autonomy, digital skills, internet connectivity, and interactivity.

This case study provided valuable feedback from the Chinese EFL student teachers' online learning experiences and shed light on how EFL teacher education programs can achieve better and more advanced EFL teacher education programs in terms of integration of online mode in China. Additionally, as the learners/authorities /stakeholders of EFL teacher education programs, EFL student teachers offered firsthand insights into the continual advancement of EFL teacher education programs, and "given educators time to rethink education and to address paradigms of education" (Bast, 2021, p. 2).

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References

Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, *2*(1), 45-51. http://www.doi.org/10.33902/JPSP. 2020261309.

Ahmadi, D., & Reza, M. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, *3*(2), 115-125. https://doi.org/10.29252/ijree.3.2.115.

Ata, R., & Yıldırım, K. (2019). Exploring Turkish pre-service teachers' perceptions and views of digital literacy. *Education Sciences*, *9*(1), 40. https://doi.org/10.3390/educsci9010040.

Bada, S. O. (2015). Constructivism learning theory: A paradigm for teaching and learning. *IOSR Journal of Research & Method in Education*, *5*(6), 66-70. https://vulms.vu.edu.pk/Courses/EDU201/Downloads/EDU%20201%20(Assignment%202).pdf.

Bailey, D. (2022). Interactivity during Covid-19: Mediation of learner interactions on social presence and expected learning outcome within videoconference EFL courses. *Journal of Computers in Education*, *9*(2), 291-313. https://doi.org/10.1007/s40692-021-00204-w.

Bast, F. (2021). Perception of online learning among students from India set against the pandemic. *Frontiers in Education*, *6*, 705013. https://doi.org/10.3389/feduc.2021.705013.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Bryant, A., & Charmaz, K. (2012). Grounded theory and psychological research. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology*, *Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 39-56). American Psychological Association. https://doi.org/10.1037/13620-003.

Chambers, R.A. (2019). Community of practice and community of inquiry: A Question of Practicality. In S. Carliner (Ed.), *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 1265-1269). Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/primary/p/211211/.

Chen, F. B. (2022). Research on the online teaching skills training to student teachers during COVID-19: A qualitative analysis of teaching videos. *Journal of Zhejiang Normal University (Social Sciences)*, *47*(7), 100-108. https://kns.cnki.net/kcms2/article/abstract.

China Internet Information Center (CNNIC). (2021). China Internet Development Report. https://www.163.com/dy/article/GILO25PD0538969U.html.

Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Pearson.

Creswell, J. W., & Plano Clark, V. L. P. (2017). Designing and conducting mixed methods research (3rd ed.). Sage.

Ertürk, G. T. (2022). Investigation of preservice EFL teacher's digital literacy levels and digital literacy skills. *Educational Research Quarterly*, *46*(1), 3-32. https://eds.p.ebscohost.com/eds/pdfviewer/pdfviewer.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*(1), 59-82. https://doi.org/10.1177/1525822X05279903.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). Introduction to applied thematic analysis. *Applied Thematic Analysis*, *3*(20), 1-21. https://dx.doi.org/10.4135/9781483384436.

Lockee, B. B. (2021). Online education in the post-COVID era. *Nature Electrontrics*, *4*(5-6). https://doi.org/10.1038/s41928-020-00534-0.

Malhotra, L., & Bhatia, H. K. (2021). From walls to clouds: SWOCS of online learning from voices of prospective teacher educators in India in response to COVID-19. *The Online Journal of Distance Education and e-Learning*, *9*(1), 92-105. https://www.tojdel.net/journals/tojdel/articles/v09i01/v09i01-10.pdf.

Melvina, M., Lengkanawati, N. S., & Wirza, Y. (2020). EFL learners' language learning strategies: Field specialization and gender. *International Journal of Education*, *13*(2), 63-69. https://10.17509/ije.v13i2.20972.

Ministry of Education of the People's Republic of China. (2020, January 30). Use online platforms to "classes suspended but learning continues". http://www.gov.cn/xinwen/202001/30/content_5473048.htm.

Park, M., & Son, J. B. (2022). Pre-service EFL teachers' readiness in computer-assisted language learning and teaching. *Asia Pacific Journal of Education*, *42*(2), 320-334. https://doi.org/10.1080/02188791.2020.1815649.

Patton, M. Q. (2014). Qualitative research and evaluation methods: Integrating theory and practice. Sage publications.

Qie, X., Kassim, M. S. B., & Ebrahimi, M. (2021). Measuring the efficacy of combining online and offline teaching methods based on the cross-culture situation: A case study of university students in China. *Innovative Teaching and Learning Journal*, *5*(2), 49-58.

Seaman, J. E., & Seaman, J. (2017). Digital learning compass: Distance education State Almanac 2017. Babson Survey Research Group. https://files.eric.ed.gov/fulltext/ED580356.pdf.

Sert, O., & Li, L. (2019). A qualitative study on CALL knowledge and materials design: Insights from pre-service EFL teachers. *International Journal of Computer-Assisted Language Learning and Teaching*, *7*(3), 73-87. https://doi.org/10.4018/IJCALLT.2017070105.

Singh, V., & Thurman A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, *33*(4), 289-306.

Wang, L. H., & Liu, H. Y. (2023). Study on students' online learning effectiveness during the pandemic period. *Technology Enhanced Foreign Language Education*, *2023*(01), 40-43+75+110. https://kns.cnki.net/kcms/detail/detail.aspx.

Wang, S. (2019). An analysis of the status quo of China's online education e-commerce platform and development countermeasures. *ECommerce*, *8*, 69-70.

Wenger-Trayner, E., & Wenger-Trayner, B. (2015). An introduction to communities of practice: a brief overview of the concept and its uses. BE. https://www.wenger-trayner.com/introduction-to-communities-of-practice.

Xiao, X. Y., Pan, S. J., & Shen, Y. R. (2022). Investigation on EFL student teacher online learning during COVID-19: A case study in Leshan Normal University. *Overseas English*, *7*, 98-109. https://kns.cnki.net/kcms2/article/abstract.

Xiong, Y., Ling, Q., & Li, X. (2021). Ubiquitous e-teaching and e-learning: China's massive adoption of online education and launching MOOCs internationally during the COVID-19 outbreak. *Wireless Communications and Mobile Computing*, *2021*, 1-14. https://doi.org/10.1155/2021/6358976.

Zhang X., & Wang, J. L. (October 18, 2019). A review of Internet development in China in the last 25 years. *Xinhuanet.* http://www.xinhuanet.com/2019-10/18/c_1125123489.htm.

Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, *13*, 1-6. https://doi.org/10.3390/jrfm13030055.