

Learning about Technology for Language Teaching Purposes: The Role of Online  
Communities for Supporting Language Teachers

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## Table of Contents

|  |    |
|--|----|
| List of Tables   | 1  |
| List of Figures  | 3  |
| List of Appendices   | 4  |
| Abbreviations  | 5  |
| Chapter 1. Introduction  | 6  |
| 1.1 Background to the study  | 6  |
| 1.2 Motivation for the study                                       | 9  |
| 1.3 Purpose and scope of the study                                 | 10 |
| 1.4 Significance of the study                                      | 12 |
| 1.5 Understanding the key terms and concepts                       | 13 |
| 1.5.1 Technology and CALL  | 13 |
| 1.5.2 Teacher preparation, education, training, and development    | 14 |
| 1.5.3 Online communities   | 15 |
| 1.5.4 Social Networking Sites (SNSs)                               | 16 |
| 1.6 Overview of the thesis   | 17 |
| Chapter 2. Literature Review                                       | 19 |
| 2.1 Preparing teachers to use technology for teaching purposes     | 20 |
| 2.1.1 Knowledge and skills for technology integration              | 20 |
| 2.1.2 The nature of CALL teacher preparation                       | 24 |
| 2.1.3 Technology preparation in general language teacher education | 31 |
| 2.2 Examining online communities on SNSs                           | 36 |
| 2.2.1 Teachers' uses of online teacher communities                 | 37 |
| 2.2.2 Online communities for crisis communication                  | 46 |
| 2.2.3 Online teacher communities in times of a crisis              | 49 |
| 2.3 Understanding teacher psychology                               | 52 |
| 2.3.1. Teacher motivation  | 53 |
| 2.3.2. Teacher identity  | 60 |
| 2.3.3. Teacher well-being  | 64 |
| 2.4 Current literature gaps and research questions for the study   | 68 |
| Chapter 3. Theoretical Frameworks                                  | 71 |
| 3.1 Theories of learning   | 71 |
| 3.1.1 A social theory of learning: Communities of Practice         | 72 |
| 3.2 Theories of motivation   | 75 |
| 3.2.1 Self-determination theory (SDT)                              | 75 |

|  |     |
|--|-----|
| 3.2.2 Expectancy-value theory  | 78  |
| 3.2.3 Self-efficacy theory   | 80  |
| 3.2.4 Attribution theory   | 82  |
| 3.2.5 Goal theories  | 84  |
| 3.3 Summary  | 87  |
| Chapter 4. Methodology   | 88  |
| 4.1 Research design  | 88  |
| 4.2 Data collection  | 90  |
| 4.2.1 Online observations  | 92  |
| 4.2.2 The initial questionnaire  | 99  |
| 4.2.3 Interviews and post-interview questionnaire  | 104 |
| 4.3 Data analysis  | 112 |
| 4.4 Ethical considerations   | 114 |
| 4.4.1 Ethical issues and dilemmas in social research   | 115 |
| 4.4.2 Ethical issues and dilemmas in Internet-based research   | 116 |
| 4.5 Research quality   | 119 |
| 4.6 Summary  | 122 |
| Chapter 5. Results   | 123 |
| 5.1 Online observations  | 123 |
| 5.1.1 Descriptive data of FBC-1-JP   | 123 |
| 5.1.2 Content analysis of initial posts shared in FBC-1-JP   | 126 |
| 5.1.2.1 Sharing information or resources   | 126 |
| 5.1.2.2 Asking for assistance  | 135 |
| 5.1.3 Content analysis of the comments shared in FBC-1-JP  | 142 |
| 5.1.4 The content before and during the pandemic   | 146 |
| 5.1.5 Number of users involved in each post  | 149 |
| 5.1.6 Comparison cases   | 151 |
| An overview of the five observed communities   | 163 |
| 5.2 The initial questionnaire  | 166 |
| 5.3 Semi-structured interviews   | 179 |
| 5.3.1 Perceived benefits and challenges associated with being in online language teacher communities | 181 |
| 5.3.2 Reasons for posting/not posting in the online communities                                      | 191 |
| 5.3.3 Suggestions for a better experience in online communities                                      | 196 |
| 5.3.4 Potential factors influencing the way language teachers learn about technology                 | 200 |
| 5.3.5 Learning about other topics besides technology   | 206 |

|  |     |
|--|-----|
| 5.4 The post-interview questionnaire   | 208 |
| 5.5 Summary  | 222 |
| Chapter 6. Discussion  | 223 |
| 6.1 Learning about technology in language teaching and learning  | 223 |
| 6.1.1 Language teachers' attitudes towards learning about technology   | 224 |
| 6.1.2 Language teachers' ways of learning about technology   | 229 |
| 6.2 The realities of the online communities for language teachers using technology                           | 237 |
| 6.2.1 The types of posts shared in a technology-focused online teacher community                             | 237 |
| 6.2.2 Reasons for participating in online language teacher communities                                       | 242 |
| 6.2.3 Benefits and challenges associated with language teachers' uses of online language teacher communities | 254 |
| 6.3 Utilising online language teacher communities in times of a crisis situation                             | 265 |
| 6.3.1 The realities of the online communities during the pandemic  | 265 |
| 6.3.2 Potential consequences of the pandemic   | 271 |
| 6.4 Limitations of the study   | 276 |
| 6.5 Summary  | 280 |
| Chapter 7. Conclusion  | 282 |
| 7.1 Key findings and contributions of the study  | 282 |
| 7.2 Implications for future research   | 286 |
| 7.3 Implications for practice and policy   | 291 |
| 7.4 Final remarks  | 297 |
| References   | 300 |
| Appendices   | 326 |
| Appendix A: The Initial Questionnaire (English Version)  | 326 |
| Appendix B: Consent Form for the Interview Participants  | 333 |
| Appendix C: List of Main Interview Questions   | 334 |
| Appendix D: Post-Interview Questionnaire   | 336 |

## List of Tables

|   |     |
|---|-----|
| <b>Table 1</b> Overview of Key Studies on Online Teacher Communities  | 91  |
| <b>Table 2</b> General Information about FBC-1-JP and the Comparison Cases  | 99  |
| <b>Table 3</b> Questionnaire Respondents' Countries of Residence (n=482)  | 103 |
| <b>Table 4</b> Age of Questionnaire Respondents (n=482)   | 104 |
| <b>Table 5</b> Demographic Information of the Interviewees (FBC-1-JP Community Members)   | 107 |
| <b>Table 6</b> Demographic Information of Interviewees (Other Facebook Community Members)   | 109 |
| <b>Table 7</b> Quarterly Membership Growth  | 124 |
| <b>Table 8</b> Descriptive Statistics of the Posts and Responses Before and During the COVID-19 Pandemic                                  | 126 |
| <b>Table 9</b> Categorisation of Posts about Sharing Information and Resources (n=466)  | 127 |
| <b>Table 10</b> Categorisation of Posts About Asking for Assistance (n=158)   | 136 |
| <b>Table 11</b> Main types of comments shared in FBC-1-JP (n=2824)  | 142 |
| <b>Table 12</b> Types of the Posts Before and During the COVID-19 Pandemic  | 148 |
| <b>Table 13</b> Details of the Top 10 FBC-1-JP Members who Posted an Initial Post   | 150 |
| <b>Table 14</b> Descriptive Statistics of the Five Observed Communities   | 152 |
| <b>Table 15</b> Categorisation of Posts Shared in FBC-1-JP (n=37)   | 154 |
| <b>Table 16</b> Categorisation of Posts Shared in FBC-2-EUR (n=86)  | 156 |
| <b>Table 17</b> Categorisation of Posts Shared in FBC-3-PK (n=64)   | 158 |
| <b>Table 18</b> Categorisation of posts shared in FBC-4 (n=100)   | 160 |
| <b>Table 19</b> Categorisation of Posts Shared in FBC-5-JP (n=286)  | 163 |
| <b>Table 20</b> Summary of Each Type of Post Across the Five Observed Communities   | 165 |
| <b>Table 21</b> Reasons for Not Using Technology for Teaching Purposes (n=23)   | 167 |
| <b>Table 22</b> Questionnaire Respondents' Results Regarding the Ways to Learn About Technology in Language Teaching and Learning (n=482) | 169 |
| <b>Table 23</b> Questionnaire Respondents' Results Regarding Frequency of SNS Use (n=482)   | 170 |
| <b>Table 24</b> Questionnaire Respondents' Results Regarding the Ways of Using Facebook, Twitter, and LinkedIn Professionally (n=482)     | 172 |

|  |     |
|--|-----|
| <b>Table 25</b> Reasons for Not Wanting to Join an Online Community Related to Language, Teaching, and Learning (n=11)   | 175 |
| <b>Table 26</b> Reasons for Wanting to Join a Face-to-Face Community Related to Language, Teaching, or Technology (n=131)  | 177 |
| <b>Table 27</b> Reasons for Not Wanting to Join a Face-to-Face Community Related to Language, teaching, or Technology (n=138)  | 179 |
| <b>Table 28</b> Main Themes and Sub-Themes Identified from the Interviews (n=31)   | 181 |
| <b>Table 29</b> The Respondents' Expectations for the Online Language Teacher Communities  | 210 |
| <b>Table 30</b> Respondents' Confidence Levels Before the Pandemic and Now (n=29)  | 219 |
| <b>Table 31</b> Post-Interview Questionnaire Respondents' Results Regarding the Ways to Learn About Technology in Language Teaching and Learning in 2020 and 2022 (n=29) | 221 |

## List of Figures

|  |     |
|--|-----|
| <b>Figure 1</b> Conceptual Framework of Teacher Motivation for Social Media                        | 58  |
| <b>Figure 2</b> Self-Determination Theory's Taxonomy of Motivation                                 | 77  |
| <b>Figure 3</b> Attribution-Based Theory of Intrapersonal Motivation                               | 84  |
| <b>Figure 4</b> The Convergence Design   | 89  |
| <b>Figure 5</b> Number of Daily Active Users (DAUs) on Facebook                                    | 93  |
| <b>Figure 6</b> Preview of a Facebook Group  | 95  |
| <b>Figure 7</b> Sample of the Observation Journal  | 98  |
| <b>Figure 8</b> Research Variables Affecting the Question of Whether Informed Consent is Necessary | 118 |
| <b>Figure 9</b> FBC-1-JP Membership Growth   | 124 |
| <b>Figure 10</b> Number of Posts per Month   | 125 |
| <b>Figure 11</b> Example of a Poll Question  | 138 |
| <b>Figure 12</b> Number of Posts During the Three-Month Period                                     | 152 |
| <b>Figure 13</b> Percentage of How Often Respondents Feel Work-Related Stress (n=29)               | 216 |



## **List of Appendices**

|   |     |
|---|-----|
| <b>Appendix A</b> The Initial Questionnaire (English Version) | 326 |
| <b>Appendix B</b> Consent Form for the Interview Participants | 333 |
| <b>Appendix C</b> List of Main Interview Questions            | 334 |
| <b>Appendix D</b> Post-Interview Questionnaire                | 336 |

## Abbreviations

API: Application Programming Interface

CALL: Computer-Assisted Language Learning

CEFR: Common European Framework of References for Languages

COVID-19: Coronavirus disease 2019

DAU: Daily Active User

DELTA: Diploma in Teaching English to Speakers of Other Languages

EDI: Equality Diversity Inclusiveness

ESL: English as a Second Language

GIF: Graphic Interface Format

GTEC: Global Test of English Communication

LMS: Learning Management System

MEXT: Ministry of Education, Culture, Sports, and Technology

MT: Machine Translation

MOOC: Massive Online Open Course

PD: Professional Development

PLE: Personal Learning Environment

PM: Private Message

RQ: Research Question

SIG: Special Interest Group

SD: Standard Deviation

SDT: Self Determination Theory

SNS: Social Networking Site

SLA: Second Language Acquisition

TESOL: Teaching English to Speakers of Other Languages

TOEFL: Test of English as a Foreign Language

TOEIC: Test of English for International Communication

## **Chapter 1. Introduction**

The main focus of the current thesis is to understand how online teacher communities on Social Networking Sites (SNSs) are supporting language teachers who are using technology for instructional purposes. Employing a longitudinal mixed methods research design, involving observations of online language teacher communities, questionnaires, and interviews with language teachers, the primary goal of the study is to provide insights into how technology-using language teachers are using online language teacher communities. Moreover, their views and attitudes of using such communities as a source of professional learning are investigated in-depth. The introductory chapter begins by giving a brief overview of the context in which the present study is situated. The following section outlines the statement of the problem to lay the foundations of the aims and scopes of the study. Subsequently, the purpose and scope, significance of the study, and key terms and concepts are stated. Finally, the chapter ends with a brief overview of the entire thesis.

### **1.1 Background to the study**

There is no doubt that technology has had a profound impact on various aspects of the field of language teaching and learning. Technology has increasingly been an essential part of language education, as evident in the proliferation of literature regarding technology in language teaching and learning, particularly over the past decade (e.g., Chappelle & Sauro, 2017; Farr & Murray, 2016; Thomas et al., 2012). One of the underlying reasons for the increased use of technology is that language teachers are facing growing pressures to use technology for teaching purposes from a number of different stakeholders, such as governments, administrators, employers, parents, and students (Kearney et al., 2017). Many of these stakeholders advocate the use of technology for teaching purposes due to a wide range of reasons, such as cost-cutting purposes, the betterment of the institutions' image,

and the improvement of learning and teaching environment (Stockwell, 2022). On the surface, many institutions may believe that the use of technology reduces traditional costs—for instance, teachers and students may require less printed materials since they can be accessed digitally (Reinders & Hubbard, 2012), or teachers' workload may be reduced due to the use of automated grading systems (Kashy et al., 2001). However, additional costs, including the upkeep of existing technological devices and setting up necessary training and support systems for teachers are often ignored. Institutions tend to be less willing to invest in teachers' professional learning and development in technology simply because they are on a tight budget or because they do not see the importance of educating their teachers on how to use technology for teaching purposes.

The success of technology integration is linked to a myriad of factors, one of which relates to teachers having sufficient knowledge and skills in technology (Hubbard & Levy, 2006a). In order to acquire the necessary knowledge and skills, teachers need to receive some kind of training on how to use technology in language teaching and learning. Since the mid-2000s, a growing number of scholars have consistently stressed the importance of providing teachers using technology with support throughout their careers (e.g., Hubbard, 2018; Hubbard & Levy, 2006a; Son, 2018; Son & Windeatt, 2017). Teachers are likely to encounter different problems and issues with integrating technology into their classes at different stages of their careers. For instance, pre-service teachers, who are often young, tend to have received some training in technology at some point during their pre-service education. They may know how to use technology for general purposes but may be unaware of how to use it effectively for teaching purposes due to their lack of teaching experience (Stockwell, 2022). Moreover, early in-service teachers may encounter similar issues to those of pre-service teachers, but they may encounter additional challenges. They may struggle to

execute their lesson plans which include the use of technology and to work out difficult relationships with their co-workers and administrators who may limit their freedom to use technology (Stockwell, 2022). Furthermore, experienced in-service teachers who have been teaching in the field for a long period of time may not have had any training with regards to using technology for teaching purposes during their pre-service education and experience in using technology in their own education. Hence, they may be more hesitant about using technology as they would need to change the way they have long been teaching (Stockwell, 2022). As teachers using technology face different types of hardships throughout their enduring careers, their motivation to use and learn about technology will most likely depend on the amount and quality of education and support that they receive.

Despite the importance of educating and supporting teachers, the reality is that many teachers are not able to access training programmes and other types of support due to a number of reasons, including financial and time constraints and a lack of effective formal training programmes available in their region (e.g., Hanson-Smith, 2016; Kessler, 2006, 2007). As a result, teachers have often been relying upon learning through informal means using the Internet (Son, 2014). With the advent of the Internet and development of web search engines, SNSs, and other online communication tools, there are various ways for teachers to learn about how to use technology in language teaching and learning. As SNSs have become a ubiquitous part of the lives of many individuals, it is not surprising that teachers have been increasingly using them to connect with other like-minded teachers. Locating appropriate online language teacher communities of practice has often been suggested as a possible solution to overcome some of the issues in the current form of teacher preparation with regards to learning about technology (Hanson-Smith, 2016).

In the past decade or so, there has been a growing awareness of using teacher communities on different SNSs, including Facebook, as a source of professional learning (e.g., Bissessar, 2014; Nelimarkka et al., 2021; Yildirim, 2018). The obvious benefits of such communities are that language teachers can freely join them and discuss matters concerning their views and queries. By using online communities, they may be able to find new online resources, teaching ideas, and solutions to the problems they encounter when using technology for teaching purposes. To date, however, only a handful of studies have examined how language teachers are actually making use of online communities (e.g., Lord & Lomika, 2014; Rosell-Aguilar, 2018; Wesely, 2013), and even fewer studies seem to be set where the primary discussion of the language community is on technology.

## **1.2 Motivation for the study**

One of my personal motivations for embarking upon the study was due to my experience of teaching English as a Foreign Language (EFL) in Japan. The time when I had commenced the present PhD programme in 2018, I was still a novice language teacher who had just started teaching at a private high school. The school in which I had started my teaching career would be considered as “technologically-advanced” for using cutting-edge technologies for teaching purposes, at least according to the objective set by the Japanese Ministry of Education, Culture, Sports, and Technology (MEXT) (2018). All the students and teachers had access to the latest tablet computers and laptops, and all the classrooms were well-equipped with projectors, smartboards, and Wi-Fi connections. Despite heavily investing in different technologies, the school did not offer any training programmes to the teachers on how to use them for teaching purposes. Many teachers, including myself, seemed not to be using the given technologies to their full potential and struggled with implementing the given technologies effectively into the classes. Realising the need to learn more about

how to use technology in language teaching and learning, I tried to find informal ways of learning which would suit my needs as a part-time teacher who had limited time and financial resources. I decided to join several different free online language teacher communities on different social media platforms as per suggested by one of my mentors. After reading upon existing literature on different ways of learning and being in online language teacher communities for some time, I realised that there was great promise in online communities on SNSs for language teachers using technology. Although there have been increasingly more studies examining the potential use of online communities on SNSs for supporting teachers' professional development and learning in the past decade, as previously mentioned, studies set in the context of language teaching and technology seemed to be far less limited (see Section 2.2.1 for further details). Hence, as an attempt to fill the existing gap in the field of language teacher preparation and find a way to support language teachers using technology, I decided to undertake the study.

### **1.3 Purpose and scope of the study**

The current study aims to uncover the realities of online language teacher communities consisting of members who are language teachers using technology. With this main goal in mind, a Facebook language teacher community is closely examined for over two years to understand what types of discussions and engagement among its community members are occurring. Moreover, using questionnaires and interviews, the study tries to explore the reasons why some language teachers join online teacher communities on SNSs, their views about them, and their ways of learning about technology. Ultimately, the study aims to identify the complexities involved with using technology-focused online language teacher communities on SNSs as a professional learning source for language teachers.

From the beginning, the limits to the research study are stated. Firstly, the scope of the study is restricted to language teachers who are already on SNSs. It is not the intention of the study to examine those who are not on SNSs. Certainly, investigating how language teachers who are not on SNSs are able to utilise online language teacher communities for professional purposes is equally important, but in order to avoid the research topic from being too broad, it was deemed appropriate to narrow down and focus on only those who were using SNSs for the study. Moreover, it should be noted that the study is limited to examining online language teacher communities formed on Facebook and their members. Despite the fact that other SNSs, such as Twitter (e.g., Carpenter & Krutka, 2014, 2015; Curwood & Biddolph, 2016; Wesely, 2013), are currently popular among teachers, and Instagram (Carpenter et al., 2020), and Reddit (e.g., Staudt Willet & Carpenter, 2020) are also becoming increasingly popular, Facebook was chosen as the main platform for observation since numerous studies published in the past decade have consistently shown that various teachers have been using online communities on Facebook to obtain support for their teaching (e.g., Bissessar, 2014; Kelly & Antonio, 2016; Nelimarkka et al., 2021; Patahuddin & Logan, 2019; Rutherford, 2010; Yildirim, 2019). However, since each SNS platform has a unique purpose and audience, the outcomes of the study need to be interpreted with caution.

It is also worth mentioning that the unexpected outbreak of the coronavirus disease 2019 (COVID-19) which spread across the world in early 2020 has unavoidably influenced the study. The COVID-19 pandemic occurred after the initial data collection had commenced in 2018. Since the observation was already done online, the data collection of the online posts and comments was not affected. However, the distribution of the initial questionnaire and the interviews which were initially planned to be conducted in March 2020 were delayed for a few months since the initial questionnaire and interview questions needed to be



carefully reassessed and altered to take into consideration the crisis situation in which many language teachers were suddenly forced to teach online remotely. In times of a pandemic, there are some apparent benefits of online language teacher communities: Without breaking social distancing rules, teachers are able to easily connect with other teachers who are teaching in similar contexts. Considering the changes brought upon by the pandemic, the current study also aims to investigate how language teachers were using online communities to learn about technology in language teaching and learning during the pandemic. Since the online observation of the target online community had already started in October 2018, the observation data included approximately 17 months' worth of data prior to the pandemic and 11 months' worth of data during the pandemic. On the other hand, the distribution of the questionnaires and the interviews were administered only after the COVID-19 outbreak, so the data sources relied on the participants' recollection of what they were doing prior to the pandemic. In this way, the pandemic has inevitably influenced the preliminary stages of the research, though the main aim of the study remained intact throughout the entire time.

#### **1.4 Significance of the study**

An intended outcome of the study is to determine the possibilities and challenges of using online language teacher communities on SNSs for supporting technology-using language teachers. Hence, the study will likely benefit a number of relevant stakeholders. Firstly, language teachers will be of direct relevance. As language teachers are increasingly required to use technology in their classes, they consequently need to learn about how to use technology for language teaching purposes. The findings of the study will therefore offer them new and additional perspectives on how they can capitalise on online language teacher communities on SNSs, which are freely open to the public, for professional learning purposes. The study will also be of great benefit to teacher educators, institutional

administrators, and policymakers who will play an important role in raising teachers' awareness of the available resources and tools to learn about technology.

Another vital part of the study is understanding how online language teacher communities on SNSs can be of use during times of a crisis. Although the end of the COVID-19 pandemic seems to be near, other crises, including wars, earthquakes, and pandemics, are bound to occur in the future. What the current pandemic has highlighted is the lack of preparedness of many institutions in the world for emergency situations and the need for taking crisis management of education more seriously (e.g., Kim et al., 2022). The potential outcome of the study will likely not only inform language teachers on how they can rely upon online communities for support during times when in-person interactions are limited but also offer institutional administrators and policymakers much-needed answers on how they can better prepare their schools and universities for the next crisis situation, possibly using online communities.

## **1.5 Understanding the key terms and concepts**

### **1.5.1 *Technology and CALL***

The main reason for choosing to use the term “technology” throughout the thesis is because of the relatively straightforward aspect of the term in contrast with other related terms such as “Computer-Assisted Language Learning (CALL).” CALL, which is an encompassing term to describe “the use of all types of computers and other digital devices for assisting the language learning process” (Son, 2018, p. 2), is also widely used in the literature (e.g., Hubbard & Levy, 2006a; Stockwell, 2012), but there have been common misconceptions surrounding the term (Stockwell, 2022). Based on informal conversations with some of the language teachers teaching in Japan who were involved in the pilot study, it was clear that many of them had different understandings of what CALL actually entails, and some even

associated CALL with a specific type of courseware to be used for language teaching purposes. To avoid any confusion, the questionnaire and interview questions employed in the current study did not use the term “CALL” and used the term “technology” instead. However, it did not seem appropriate to change the term just for the thesis, so the term “technology” will be used in the thesis as an umbrella term encompassing all aspects of CALL and other related terms including Mobile-Assisted Language Learning (MALL), Technology-Assisted Language Learning (TALL), and Technology-Enhanced Language Learning (TELL).

However, it should be noted that the term “CALL” will be used in the thesis when referring to the field of technology in language teaching and learning. Ever since the coinage of the term in the early 1980s, CALL has grown into a legitimate and an established field, with various reputable journal and book titles currently using its name (Levy & Hubbard, 2005). A Google search in May 2005 on “Computer-Assisted Language Learning” yielded 99,100 hits (Hubbard & Levy, 2006), and in December 2010, the term yielded 23,900 hits (Stockwell, 2012). Approximately a decade later, a Google search done by the present author in February 2022 yielded 115,000,000 hits, which seems to illustrate how popular the field has become throughout the years. Due to the “durability” of the term and the belief that it will be continuously used in the future, it seemed to be suitable to use the term to refer to the field which focuses on “the use of technologies in the language teaching and learning process” (Stockwell, 2012, p. 11).

### ***1.5.2 Teacher preparation, education, training, and development***

Within the literature of language teacher education, including CALL teacher education, the terms “teacher preparation,” “teacher education,” “teacher training,” and “teacher development” are commonly used (e.g., Crandall & Christison, 2016; Kessler, 2021; Son &

Windeatt, 2017). Although the terms are occasionally used interchangeably, they are not exactly the same (Son, 2018). In the current thesis, “teacher preparation” will be used as an overarching term to include both teacher training and teacher development at pre-service and in-service levels. Training and development are often distinguished based on the length of the learning goals (e.g., Richards & Farrell, 2005; Rothwell & Whiteford, 2021). According to Richards and Farrell (2005), teacher training is generally referred to as “activities directly focused on a teacher’s present responsibilities and is typically aimed at short-term and immediate goals” (p. 3). On the other hand, teacher development focuses on longer-term goals and “seeks to facilitate growth of teachers’ understanding of teaching and of themselves as teachers” (Richards & Farrell, 2005, p. 4).

### **1.5.3 Online communities**

Traditionally, when online communities did not exist, most communities were regarded as geographic communities, which are referred to as “close-knit groups in a single location” (Preece & Maloney-Krichmar, 2006, p. 00). As the interactions among community members took place mostly in face-to-face settings in these communities, they were typically formed based on a common physical location. Now with the Internet, communities do not exist only in the physical world. Without the need to be physically present, individuals living in different parts of the world can get together to form online communities. Online communities come in different shapes and forms. They can be classified based on their sizes (e.g., small, large, massive) and locations (e.g., local, national, regional, international) (Hur & Brush, 2009). They can also differ in terms of the frequency of in-person interactions (Lazar & Preece, 2002; Sessions, 2010). Furthermore, they can form around different foci, such as based on educational affiliations, workplaces, jobs, hobbies, political views, and religions (Aydin, 2012). In recent years, online communities which consist of professionals working in the same field have been increasingly common (Hara et al., 2009) and such a

community is often regarded as an “online community of practice” (see Section 3.1.1 for further details).

#### **1.5.4 Social Networking Sites (SNSs)**

Ever since the launch of the first Social Networking Site (SNS) in 1997 with SixDegrees.com (Williams, 2019), different SNSs, such as Facebook, Twitter, and LinkedIn have emerged one after another. It is an understatement that SNSs have affected the lives of many individuals, as according to a recent report published in 2022 by Meta Platforms, the company which owns Facebook, an average of 1.93 billion users were active on a daily basis in the fourth quarter of 2021 (i.e., between the period of September 2021 and December 2021) on Facebook alone (Meta Platforms, 2022). Although Facebook is currently considered to be one of the most popular SNSs around the world (e.g., Malik et al., 2021; Sheldon et al., 2021), other SNSs are also being used by a vast number of individuals.

To describe these platforms, a number of terms have been used in the literature, including “social networking sites,” “social network sites,” “social networking services,” “online social networks,” and “social networks” (e.g., Baran & Stock, 2016; Lombardo, 2017; Peña-Ayala, 2020). One of the earlier definitions, which is still commonly quoted still in recent literature, was provided by boyd and Ellison (2007) who referred to the platforms as:

web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (p. 211).

As the features and nature of the platforms have changed considerably since 2007, Ellison and boyd (2013) revised their earlier definition to take into consideration the later development of the platforms, which they refer to as:

networked communication platform(s) in which participants 1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-level data; 2) can publicly articulate connections that can be viewed and traversed by others; and 3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site (pp. 158–159).

Throughout the thesis, the acronym “SNS” will be used to refer to “social networking sites,” following Ellison and boyd’s (2013) revised definition. It is worth noting that Ellison and boyd advocated the use of the term “social network site” instead of “social networking site” in their two seminal papers. They argue that the use of the noun form to place an emphasis on the role of the network, in contrast to the use of the verb form, which they believe it “emphasizes relationship initiation, often between strangers” (boyd & Ellison, 2007, p. 211). As the present study takes the position that Facebook and other SNSs are indeed being used to initiate relationships among teachers who are initially often strangers, it seemed more appropriate to employ the verb form for the thesis.

## **1.6 Overview of the thesis**

Besides the introductory chapter, the current thesis consists of six further chapters. The following two chapters outline the relevant literature and theoretical frameworks to establish the background of the current study. As a cross-disciplinary approach is undertaken for the study, the two chapters critically examine previously published works mainly from the fields of CALL, teacher education, and teacher psychology. Drawing from these three main areas

of research, the gaps in the current literature are highlighted, and the research questions are posed accordingly. Subsequently, Chapter 4 deals with the methodology of the study. The chapter describes the reasoning behind employing a longitudinal mixed-methods research design as well as the details of the data collection and analysis methods used to answer the proposed research questions. Chapter 5 presents the main results from the online observations of technology-focused language teacher communities on Facebook, an initial questionnaire, semi-structured interviews, and a post-interview questionnaire respectively. The following sixth chapter delves into the discussion and interpretations of the findings. Specifically, it attempts to answer the main research questions based on the collected data and existing literature. Lastly, Chapter 7, the final chapter, brings all six subsequent chapters together and summarises the main outcomes of the study. The thesis is then concluded by discussing the study's research and pedagogical implications.

## Chapter 2. Literature Review

Merely providing language teachers with technological devices will not mean that they will be able to integrate them smoothly (Kessler, 2018). For successful technology integration, language teachers need to learn about different technologies and learn how to use them in a teaching context (Hubbard & Levy, 2006a). The importance of language teachers having sufficient relevant knowledge and skills has been well-established in the literature: Going as far back as the 1980s, Curtin and Shinall (1987) emphasised the need for training for those using technology for teaching purposes, and since the mid-2000s, there have been a proliferation of publications which further support their claim (e.g., Hubbard & Levy, 2006a; Son, 2018; Son & Windeatt, 2018). Despite this, not many language teachers are actually being educated in technology, often due to time and financial constraints and inaccessibility of effective training programmes (e.g., Hubbard, 2008, 2018; Kessler, 2006, 2007). Consequently, they are placed in the position where they need to learn by themselves (Stockwell, 2009), often relying upon informal means of learning (Son, 2014). Of the various informal ways of learning about technology currently available for language teachers, online communities have been put forward by a number of scholars as an alternative source of learning (e.g., Hanson-Smith, 2016).

To fully understand the background of the current study, an overview of relevant literature in CALL, teacher education, and teacher psychology is provided in the present chapter. More specifically, the chapter begins by examining relevant themes discussed in the field, including the skills and knowledge crucial for technology integration, the emergence of CALL in language teacher education, and the current challenges of teacher preparation in general. In the subsequent sections, various research investigating the potential value of



online communities as a source of teacher learning is presented. Subsequently, the sections aim to connect the current study with relevant concepts in teacher psychology, such as teacher motivation, teacher identity, and teacher well-being. Finally, the current literature gaps and research questions which guide the study are presented.

## **2.1 Preparing teachers to use technology for teaching purposes**

Within the field of CALL, CALL teacher preparation has increasingly generated attention, particularly over the past two decades. One of the foundational works can be dated back to the collection of articles on the topic of CALL teacher preparation published in a special issue in *Language Learning & Technology* published in 2002 (Motteram et al., 2014). Shortly after, Hubbard and Levy (2006) published a comprehensive book on the topic, providing insights into formal in-service and pre-service CALL teacher programmes and alternatives to formal CALL training. Ever since these two main works, CALL teacher preparation has been considered to be an essential part of CALL, with Hubbard (2008) even saying that the future of CALL is “closely tied to the future of language teacher education because language teachers are the pivotal players: they select the tools to support their teaching and determine what CALL applications language learners are exposed to and how learners use them” (p. 176). The following section outlines prominent themes discussed in relevant literature: It begins by attempting to answer the question of what knowledge and skills teachers need to acquire to prepare themselves to successfully integrate technology into their classes. The subsequent sections examine the nature of CALL teacher preparation and its role within the larger framework of general language teacher education.

### **2.1.1 Knowledge and skills for technology integration**

One common theme discussed in the literature on CALL teacher preparation is the content that training programmes should offer to teachers (Son, 2018). Although the exact

knowledge and skills which language teachers need to acquire to successfully integrate technology have been contested, several works have often been cited to understand the fundamental competencies required for technology integration. Firstly, Hubbard and Levy (2006b) suggested that CALL teacher competences are defined in terms of knowledge and skills, each with a pedagogical and technical component. According to their broad conception, language teachers who use technology for instructional purposes should possess sufficient: (1) pedagogical CALL knowledge (i.e., “systematic and incidental understanding of ways of effectively using the computer in language teaching”); (2) technical CALL knowledge (i.e., “systematic and incidental understanding of the computer system, including peripheral devices, in terms of hardware, software, and networking”); (3) pedagogical CALL skills (i.e., “ability to use knowledge and experience to determine effective materials, content, and tasks, and to monitor and assess results appropriately”); and (4) technical CALL skills (i.e., “ability to use technical knowledge and experience both for the operation of the computer system and relevant applications and in dealing with various problems”) (Hubbard & Levy, 2006b, p. 16). A key point of their conceptual framework is that they distinguish between knowledge and skills. According to Hubbard & Levy (2006b), even if teachers learn a certain skill to execute a task (e.g., sending an email), this does not necessarily mean that they have foundational knowledge about what is actually going on and may not know what to do when a problem arises.

Another framework which has frequently been made reference to in the field of CALL teacher preparation as well as teacher education in general is Mishra and Koehler’s (2006) technological pedagogical content knowledge (formally abbreviated as TPCK, currently abbreviated as TPACK) framework, which originally extends on the PCK framework proposed by Shulman (1986, 1987). Since the introduction of the TPACK framework in

2006, numerous scholars have adopted it as a framework to understand the knowledge teachers need so that they can implement technology successfully into their own teaching context (Herring et al., 2016). The basic premise is that teaching with technology is a complex activity, and teachers who teach with technology need to possess knowledge that emerges from three core components, namely technology, pedagogy, and content (Koehler & Mishra, 2006). The framework identifies seven types of knowledge which comprise of the intersections of these three components: technology knowledge (i.e., knowledge about technologies, involving skills to operate them), pedagogical knowledge (i.e., “deep knowledge about the processes and practices or methods of teaching and learning”), content knowledge (i.e., “knowledge about the actual subject matter that is to be learned or taught”), technological pedagogical knowledge (i.e., knowing “how teaching might change as the result of using particular technologies”), technological content knowledge (i.e., knowing “the manner in which the subject matter can be changed by the application of technology”), pedagogical content knowledge (i.e., knowing “what teaching approaches fit the content” and “how elements of the content can be arranged for better teaching”), and technological pedagogical content knowledge (i.e., knowing “the basis of good teaching with technology”) (Mishra & Koehler, 2006, pp. 1026–1029). Although unlike Hubbard and Levy’s (2006b) framework, the TPACK framework is not CALL-specific and does not acknowledge knowledge and skills as separate entities, the two frameworks both consider pedagogy and technology as vital elements for successful technology integration, meaning that the content of the teacher preparation programmes for language teachers who are using technology to teach should cover both these elements.

As a result of the COVID-19 pandemic, many language teachers in the world needed to temporarily transition from face-to-face teaching to online teaching, though some may argue

that at the beginning, it was more like “panic-gogy” rather than online teaching (Baker, 2020; Spinks et al., 2021). Online teaching is not a new concept and has been practised long before the pandemic (e.g., Colpaert, 2006; Felix, 2003). As online teaching is different from face-to-face settings, scholars have suggested that language teachers need to acquire additional competencies specific to online teaching (e.g., Compton, 2009; Hampel & Stickler, 2005; Wang et al., 2010). Hampel and Stickler (2005), for instance, proposed a pyramid of skills which are required specifically for online teaching, though they recognise that some of them are the same or parallel to those necessary in face-to-face teaching settings: Firstly, the seven-layered pyramid of skills starts with “basic ICT competence.” The next layer of the pyramid is “specific technical competence for the software,” such as Learning Management Systems (LMSs). The third layer is formed by competencies which enable teachers to “deal with constraints and affordances of the particular software they are using.” The following layer is “online socialization,” which involves the ability of being able to establish rules or protocol for their online classroom (i.e., “netiquette”) with their students. The fifth layer focuses on the competencies needed to “facilitate communicative competence” among their students. One layer up on the pyramid concerns teachers’ skills that value their “creativity and choice.” By the time the teacher reaches the apex of the pyramid, they will have developed their own “personal teaching style,” being able to take advantage of the affordances that the online technologies offer, establish good rapport with their students, and creatively use class materials and tools to create an online learning environment in which active class participation and communicative language learning are promoted (Hampel & Stickler, 2005, pp. 317–319). The ongoing pandemic illustrates that even language teachers who had no intention of teaching online were forced to teach online, and as similar crisis situations may occur again in future, there is a need for teachers to be prepared to use technology in both face-to-face and online settings.

Another relevant concept which is increasingly being linked to the discussion with regards to teacher preparation in both teaching settings is digital literacy (e.g., Huack & Kurek, 2017; Tomczyk & Fedeli, 2022), which overlaps with the competencies mentioned in the aforementioned frameworks for teachers using technology. Although there is currently no agreed upon universal definition at this point in time, the term has been defined by various scholars (e.g., Dudeney et al., 2013), and bearing in mind these existing definitions, Son (2015) broadly defined it as “the ability to use digital technologies at an adequate level for creation, communication, collaboration, and information search and evaluation in a digital society,” involving “the development of knowledge and skills for using digital devices and tools for specific purposes” (para. 1). As spelled out in his definition, digital literacy consists of five main elements, including information search and evaluation, creation, communication, collaboration, and online safety. These digital literacy skills are not only relevant for teachers who are using technology to teach but also for students who are using technology to learn. In many cases, teachers hold the sole responsibility to develop their students’ digital literacy (Son et al., 2017). However, before they can assist their students, it is important for teachers to first increase their own digital literacy (Huack & Kurek, 2017), meaning that teachers who are using technology in their classes need to be provided with learning opportunities where they can become digitally literate.

### ***2.1.2 The nature of CALL teacher preparation***

According to Son (2018), another theme discussed in the field is the approaches, processes, and issues involved in CALL teacher preparation. Based on past studies published mainly in two edited volumes on CALL teacher preparation programmes (i.e., Hubbard & Levy, 2006a; Kassen et al., 2007), Hubbard (2008) identified four ways of approaching language teachers’ technology instruction: (1) “breadth first,” which takes place in the form of a

traditional survey course consisting of a broad range of topics on technology in language teaching and learning; (2) “depth first,” in which technology is learnt through exploring a single topic deeply within a course; (3) “integrated,” in which technology is assimilated into an entire teacher preparation programme rather than a one-off course; and (4) “online,” which is the approach following the idea that technology should be learnt through technology (pp. 180–182). In the same article, Hubbard (2008) also provided a list of learning processes in which teacher educators are recommended to draw on to create a comprehensive and successful CALL course. He identified lecture/demonstration, project-based learning, situated learning, reflective learning, portfolio-based learning, mentor-based learning, communities of practice, and self-directed learning as eight primary learning processes which can be incorporated separately or together. Lecture/demonstration is often employed in CALL courses, particularly in survey courses taking the breadth-first approach, though not many scholars particularly support this type of process as the preferred way of learning. To make the learning experience more meaningful, Hubbard (2008) asserted that lectures and demonstrations should not be one-way and should incorporate hand-on learning opportunities for their students. Secondly, in project-based learning, the project is at the heart of the course, and the necessary knowledge and skills are learnt through working towards the goals of the given project. Hubbard (2008) introduced Chao’s (2006) study as an example of project-based learning to illustrate how teachers attending a CALL course for English teachers enrolled in a Taiwanese TESOL (Teaching English to Speakers of Other Languages) master’s programme created WebQuests, an inquiry-based online learning tool, as their main project of the course, and through the project, they were introduced to CALL concepts and acquired the know-how to utilise the tool. Thirdly, the process of situated learning, which links learning with real teaching situations, has been widely supported in research on CALL teacher preparation (e.g., Egbert, 2006; McNeil, 2013; Wesely &

Plummer, 2017). For instance, in McNeil's (2013) study, which relied on self-reported data from 21 graduate students enrolled in a CALL course in South Korea, it was found that there was a strong positive correlation between the course activities which were reported as highly situated and perceived CALL learning. The fourth learning process which Hubbard (2008) identified is reflective learning, and he referred to Slouti and Motteram's (2006) study which drew data from teacher narratives to illustrate how such a learning process can be valuable in CALL teacher training. Moreover, portfolio-based learning is another widely recognised way of learning about CALL, as indicated in Son's (2009) study which showed that creating their own web-based portfolios led teachers in an online postgraduate course to expand their Internet knowledge and skills as well as to a chance to explore ideas, reflect on their teaching, and collaborate with others. As an alternative way of learning, mentor-based learning has also been suggested in the literature of CALL teacher preparation. For example, through examining an expert-novice mentoring system, Meskill et al. (2006) found the three groups of mentees and mentors all benefited from the mentoring: The preservice mentees offered opportunities for their mentors to learn about new teaching approaches and state-of-the-art technological knowledge and skills. On the other hand, in-service mentors brought in expertise in pedagogy as well as perspectives on how to implement technology in one's classroom. The other mentors who were doctoral students also brought in fresh perspectives on teaching approaches and higher levels of technological knowledge and skills. Related to this learning process is communities of practice, which have shown to encourage teachers' learning in technology (see Section 3.1.1 to understand the theoretical foundation underlying this process). Hubbard (2008) cited several works, including Hanson-Smith's (2006) book chapter which introduced several actual communities of practice consisting of members who are language teachers teaching with technology in the world. Hanson-Smith (2006) viewed communities of practice as playing a vital role in enhancing teachers' knowledge and skills

in technology and recommends that pre-service teacher educators introduce them to their students in their courses so that they can utilise them throughout their careers. Finally, Hubbard (2008) identified self-directing learning as the eighth process commonly employed in the field. Self-directed learning essentially means “helping teachers help themselves” (Robb, 2006, p. 335), and as Robb (2006) claimed, with technology constantly developing, formal courses need to prepare teachers for not only the present but also the future in which they are able to learn on their own to keep up with the rapidly changing education landscape. Since Hubbard’s (2008) article, additional scholars have continued to support this learning process as an alternative to formal CALL teacher preparation (e.g., Son, 2014; Stockwell, 2009). Based partially on Robb’s (2006) work, Stockwell (2009) proposed CALL self-direction strategies, consisting of five main categories: “critically examine the environment,” “seek sources of information,” “keep up with technological developments,” “set and adhere to learning goals,” and “track your progress” (pp. 101–102). He examined four English teachers at a private university in Japan who were educating themselves to use technology in their own teaching context after attending a two-hour introductory seminar on CALL and these self-direction strategies. Through this study, he found that the teachers faced numerous challenges when teaching themselves to use technology without formal training. Based on the findings, one recommendation which he makes is that teachers using technology in class locate and engage in communities of practice in which they are able to keep up-to-date with newer technologies, and seek ideas and advice from experienced users.

In addition to understanding the approaches and processes associated with CALL teacher preparation, research in the past two decades has addressed the shortcomings of actual CALL training programmes. Kessler (2006, 2007), who is one of the leading pioneers investigating this topic, attempted to examine the effectiveness of such training for



enhancing teachers' knowledge and skills in technology in language teaching and learning in several different studies. For instance, drawing on data sources from a survey completed by 240 graduates of a North American TESOL master's degree programme, a focus group with 18 individuals involved in CALL training, and interviews with three TESOL teacher trainers, Kessler (2006) reported that the majority of participants were dissatisfied with their past experience in formal CALL training and reported the general lack of it. The findings also suggested that instead of turning to formal CALL training, teachers were utilising alternative sources, such as listservs, professional conferences, and websites. Moreover, in a different study, Kessler (2007) examined the extent to which formal and informal means of CALL teacher preparation programmes and resources prepare teachers to effectively use technology, using data collected through an online questionnaire which received a total of 108 responses from graduates of TESOL master's degree programmes in North America. The findings indicated that questionnaire respondents mostly negatively viewed their experiences in attending formal teaching preparation programmes, thus suggesting that CALL preparation in TESOL master's degree programme in general has room for improvement. They also positively rated informal modes of learning as more beneficial and convenient, which appeared to provide further evidence that informal preparation plays a vital role in preparing teachers to use technology for instruction.

Despite both studies set in North American contexts and conducted over a decade ago, they have continued to be referenced in various recent works (e.g., Hanson-Smith, 2016; Hubbard, 2018; Kessler, 2022; Son 2018) as examples demonstrating that CALL formal training programmes are ineffective or lacking. Although the findings in the two studies suggested that teachers were using informal ways of learning, not much detail was provided as to how language teachers were actually learning about using technology for teaching purposes.

Interestingly, only a limited number of studies thus far have investigated this topic. For instance, Egbert et al.'s (2002) small-scale study, which is one of the first studies conducted in the field, examined how language teachers learn about CALL activities, drawing on data from a paper-based questionnaire responded by 20 language teachers who had completed a graduate-level CALL course at a large midwestern university in the US within four years (1996–2000) and follow-up interviews with the respondents. Since their completion of the CALL course, the resources commonly used among the participants were peer/colleagues (n=7), web browsing (n=5), books (n=4), conferences (n=4), and journals (n=4). An unexpected outcome was that although 13 out of 20 participants reported that they subscribed to a professional listserv (i.e., TESLCA-L) during their course, only two claimed that they were presently learning about CALL using this method. In an interview, one participant who was no longer using it explained that he/she unsubscribed to it because he/she did not have time to read the content and did not find the discussion particularly interesting. In a relatively more recent study, Son (2014) conducted a similar study examining the ways in which language teachers learn about technology in language teaching and learning and how often they utilised the materials and tools. Collecting data through an online questionnaire which received 45 responses from members belonging to an international association for CALL, he found that many participants often tried to improve their CALL competencies through searching the Internet, reading books, journal articles, and email list messages, and connecting with other teachers on SNSs. Based on the findings, Son (2014) recommended that teacher educators teaching courses in CALL teacher programmes should “focus more on supporting teachers’ personal learning strategies and social and collaborative activities for autonomous professional development in CALL” (p. 184).

Two years after Son's (2014) study, Hanson-Smith (2016) provided an overview of the latest online resources and tools which may enhance language teachers' professional knowledge and skills in technology. As little has changed with regards to formal CALL training programmes since the late 2000s, and following the continuing trend advocating self-directing learning, she recommended several self-help methods that teachers can utilise on their own. Firstly, she suggested teachers create their own "personal learning environments (PLEs)," relying on various teaching-related websites (p. 211). Specifically, she introduced several actual teacher blogs (e.g., Bryne, n.d.; Stannard, n.d.), webinars (e.g., Schrock, 2022), and other educational websites to illustrate how teachers can take advantage of them. Secondly, she recommended teachers to make use of free online courses or massive open online courses (MOOCs), which are essentially accessible to anyone with Internet access and often relatively short-term. Although MOOCs have a high drop rate, she still argued that teachers are able to benefit from taking such online courses related to technology, pedagogy, and language teaching since they can learn about up-to-date technologies used in language education on a regular basis as well as build connections and communities of practice with other teachers taking the same online course. Thirdly, Hanson-Smith (2016) suggested teachers get involved in professional associations and online communities for technology-using teachers as through participating in events, such as conferences, webinars, workshops, and conventions, organised by the communities, teachers are able to find like-minded teachers and promote peer mentoring as well as collaboration among members. Although she introduced various professional associations and online teacher communities which are currently active, it is still relatively unknown how such communities, particularly online communities formed on SNSs, can support teachers intending to learn about technology in teaching and learning.

Although Egbert et al.'s (2002) and Son's (2014) studies which were outlined in the preceding section provide insights into how some language teachers are using some of the options raised by Hanson-Smith (2016), no similar studies have been conducted in recent years, particularly since the COVID-19 pandemic. It is obvious that the ongoing pandemic situation has disrupted teachers' lives in some way or another, but it is unclear how their learning was affected and what they were actually doing to learn about technology during such difficult times.

### ***2.1.3 Technology preparation in general language teacher education***

The origins and development of CALL can be traced back to over half a century ago (Davies et al., 2013), and the field of CALL teacher preparation has been in existence for about two decades now (Kessler, 2021). Despite CALL being considered an established field (Stockwell, 2012) and an integral part of language education (Donaldson & Haggstorm, 2006), there seems to be some misalignment between CALL teacher preparation and general language teacher education (Motteram et al., 2013). Technology has been comparatively somewhat downplayed in the larger and more established field of teacher education, though that is not to say that the scholarship has completely ignored technology preparation over the years (e.g., Lontas, 2020). In a well-cited edited volume on language teacher education published by Burn and Richards (2009) with a total of 30 individual chapters, only one chapter was specifically devoted to understanding the connection between technology and language teacher education. In the chapter, linking research conducted in the field of CALL to general language teacher education, Reinders (2009) discussed what technology preparation should cover, how it can be implemented in language teacher education, and how technology is changing the face of language education.

Due to the ubiquity of technology in language teaching and learning, institutions and national governments have called for the need for the inclusion of technology preparation in teacher education, particularly since the early 2010s (Motteram et al., 2013). For instance, TESOL International released a set of technology standards for language learners and language teachers (Healey et al., 2011). The TESOL Technology Standards include four overarching goals in which teacher educators should bear in mind when teaching language teachers about technology. They suggest that language teachers should: (1) “acquire and maintain foundational knowledge and skills in technology for professional purposes;” (2) “integrate pedagogical knowledge and skills with technology to enhance language teaching and learning;” (3) “apply technology in record keeping, feedback, and assessment;” and (4) “use technology to improve communication, collaboration, and efficiency,” and each goal consists of several specific standards, including can-do statements (Healey et al., 2011, p. 8). These standards have been adopted in various foreign language teaching settings (e.g., Arnold, 2013) and provide a foundation to “guide teachers toward thoughtful, reflective technology use” (Kessler, 2018, p. 215).

Although there has been such a trend towards connecting technology preparation and language teacher education more closely, the literature on language teacher education does not always seem to place a focus on technology. For instance, several recent comprehensive books on language teacher professional learning (e.g., Farrell, 2022; Nguyen, 2019) did not make any specific reference to the TESOL Technology Standard and rarely mentioned other topics related to technology use in language education. In his recent book, Farrell (2022), who has published numerous well-known works related to language teacher education over the past two decades or so (e.g., Farrell, 2000, 2014, 2015, 2021; Richards & Farrell, 2005), introduced the ways in which in-service teachers can enhance their general professional

knowledge and skills in language teaching and learning. He identified 11 approaches to professional learning activities, six of which can be carried out individually and the other five collaboratively: Firstly, language teachers can individually develop their professional knowledge and skills through engaging in self-monitoring using questionnaires and checklists and gather data about their teaching using audio and/or video recordings. Self-monitoring, which essentially means to observe oneself, encourages language teachers to explore their teaching beliefs and practices so that they are able to understand and control their own behaviour better (Richards & Farrell, 2005). Secondly, they can conduct a retrospective analysis of “critical incidents” to which he referred as “particular events, actions or episodes that occur in lessons” (Farrell, 2022, p. 33), and through documenting and reflecting on these incidents, it provides them with insights about their teaching (Richards & Farrell, 2005). The third method suggested by Farrell (2022) is case study analysis, which involves writing up a case study about their practice, including positive episodes as well as problematic issues and dilemmas, so that they reflect and grow as a teacher. Another method language teachers can employ individually is reflection using teaching portfolios. Teaching portfolios often include the teacher’s teaching philosophy, teaching goals, lesson plans, examinations, evaluations given by their students, peers, and supervisors, and other teaching-related documents, and the idea is that by compiling such a portfolio, it enables them to review and reflect on their teaching experiences so that they can make better decisions about their future professional goals and priorities (Richards & Farrell, 2005). Furthermore, as a way of improving their teaching, they can also carry out action research projects, which are “teacher-conducted classroom research that seeks to clarify and resolve practical teaching issues and problems” (Richards & Farrell, 2022, p. 171). Finally, Farrell (2022) suggested language teachers increase their language awareness and knowledge, which are considered to affect the way they teach their classes. As a language

teacher, it is important for them to enhance their proficiency and use of the target language as well as obtain more language knowledge, including phonology, morphology, syntax, semantics, and pragmatics.

In addition to the aforementioned six individual professional learning strategies, Farrell (2022) offered five ways in which language teachers can carry out collaboratively: He first suggested that they make “critical friends” who are “people who collaborate in a way that encourages discussion and reflection in order to improve the quality of teaching and learning” (Farrell, 2001, p. 369). The emphasis is more on “friends” than the “critical” part as critical friends provide each other with support and encourage each other’s professional learning (Farrell, 2022). Next, he considered team teaching with co-workers as another vital collaborative professional learning activity as by cooperating together to teach a class, the two teachers can learn from each other and promote collegiality on a professional and personal level. Moreover, peer coaching is the third type of relationship recommended by Farrell (2022) as in a peer-coaching relationship, teachers collaborate and assist each other so that they can improve certain aspects of their teaching. It is similar to critical friendships and team-teaching relation, but the fundamental difference is that in a peer-coaching relationship, one teacher is the coach and the other takes the position of the learner who gets coached and learns from the coach. Furthermore, the fourth collaborative strategy which language teachers can employ to improve their professional learning is peer observations. As touched upon in the previous section, at an individual level, it is important for teachers to self-monitor their teaching practice using various techniques such as recordings, questionnaires, and checklists, but it is also important to observe their peers (Farrell, 2022). As Richards and Farrell (2005) pointed out, peer observations bring about various benefits to language teachers. For instance, through peer observation, novice teachers can see how

experienced teachers teach their classes and learn from their teaching. Experienced teachers may also benefit from this type of activity as they will be able to see how other teachers deal with similar problems that they face. For both teachers, peer observations also provide opportunities for them to “trigger reflections about one’s teaching” (Richards & Farrell, 2005, p. 86) as well as conversations between teachers who may not normally interact with, providing them with a chance to expand their professional circles and enabling them to share their ideas and expertise with each other. Finally, as the sixth collaborative strategy, Farrell (2022) recommended teachers should utilise teacher development groups where they can assist one another, share and discuss ideas and issues, reflect on their teaching, and provide each other with emotional support. He identified three main types of teacher development groups, namely “peer groups,” which consist of teachers working within a single school, “district level groups,” which consist of teachers from various schools within a certain district, and “virtual groups,” which are formed online (p. 77). Farrell (2022) noted that “virtual groups,” including the ones formed on SNSs, have been particularly useful during the ongoing pandemic as teachers were able to easily connect and collaborate with each other despite being in varying physical locations.

Although Farrell (2022) did not specifically note that these individual and collaborative strategies can be used to develop teachers’ professional knowledge and skills in technology for language teaching purposes, most of them seem to be applicable in this context. The way he approached language teacher professional learning appears to largely overlap with the aforementioned approaches and processes involved in CALL teacher preparation identified by Hubbard (2008). This is not entirely unexpected since as technology is more widely used in language education, CALL teacher preparation increasingly becomes synonymous with language teacher professional learning.



## **2.2 Examining online communities on SNSs**

As outlined above, language teachers who are using technology for teaching purposes are in need of enhancing their professional knowledge and skills using various professional learning strategies throughout their long career paths. Since teachers are notorious for having a busy and heavy workload (Williamson & Myhill, 2008), it is important for professional learning opportunities to be offered in a way that suits their demanding work schedules. In addition, considering that teachers are at differing career stages (Eros, 2011), rather than taking a “one-size-fits-all” approach, the content needs to be flexible and accommodate their individual demands. Taking these factors into account, among the various professional learning opportunities suggested in the preceding sections, one viable option which appears to cater the needs of language teachers is online communities. As numerous online teacher communities have been forming on SNSs platforms, scholars have become increasingly interested in understanding how they can support teachers’ professional needs. As stated in the previous chapter, little research has been conducted to investigate how online teacher communities on SNSs can specifically assist language teachers’ learning about technology for teaching purposes, but studies examining other aspects of online teacher communities can still be of relevance. Hence, the following section explores the ways in which teachers make use of online teacher communities in general, looking at the benefits as well as the negative aspects of utilising them for professional purposes. Moreover, as the current study aims to understand the role of online teacher communities amid the pandemic, the subsequent sections examine existing studies to understand how online communities on SNSs can be of use for teachers during such a crisis.

### **2.2.1 Teachers' uses of online teacher communities**

Ever since the launch of SixDegrees.com, one of the first major SNSs in the world, in the late 1990s, various SNSs, including Facebook, have emerged (boyd & Ellison, 2008). With millions of users active on these platforms, they have without a doubt affected the lives of many individuals (Yildirim, 2019). Teachers are no exception to this, as evidenced by the growing number of studies investigating their uses of SNSs for professional purposes in the past decade. As of 2022, studies examining the educational value of online communities on SNSs for supporting teachers have predominantly focused on Facebook (e.g., Bissessar, 2014; Nelimarkka et al., 2021; Patahuddin & Logan, 2019; Rutherford, 2010; Yildirim, 2019), Twitter (e.g., Britt & Paulus, 2016; Carpenter & Harvey, 2019; Carpenter & Krutka, 2014, 2015; Cho & Jimerson, 2017; Curwood & Biddolph, 2017; Davis, 2015; Staudt Willet, 2019; Wesely, 2013), Instagram (e.g., Carpenter et al., 2020a), Pinterest (e.g., Schroeder et al., 2019), and Reddit (e.g., Staudt Willet & Carpenter, 2020).

As there have generally been low levels of satisfaction with traditional approaches to professional learning activities (Dede et al., 2009), it is not entirely surprising that teachers have been turning to online teacher communities formed on SNSs, which are often free and easily accessible to anyone who has access to the Internet. Teachers have been reported to be participating in the online communities for a variety of different reasons: For instance, Hur and Brush (2009) who closely examined three self-organised online teacher communities using observations and interviews (n=23) as their main data collection methods identified five main reasons for teachers wanting to participate in the online teacher communities. They found that teachers who were participating in these communities were: (a) “sharing emotions,” (b) “utilizing the advantages of online environments,” (c) “combating teacher isolation,” (d) “exploring ideas,” and (e) “experiencing a sense of

camaraderie” (pp. 290–291). Although Hur and Brush’s (2009) study, which was conducted over a decade ago, did not base their study on online teacher communities on platforms which are currently popular, it has still frequently been used in recent studies as a basis to explain why teachers are participating in online communities on SNSs, including Facebook and Twitter (e.g., Carpenter & Krutka, 2014, 2015; Staudt Willet, 2019; Yildirim, 2019). Hence, similar to what Staudt Willet (2019) did, these five main reasons suggested by Hur and Brush (2009) are used to organise the findings found in recent literature.

Firstly, Hur and Brush (2009) identified “sharing emotions” as one of the main reasons for teachers wanting to participate in online teacher communities (p. 292). They found that the community members were sharing both positive and negative emotions in the communities. For instance, in their observations, they found that some community members were sharing about their problems and hardships related to teaching, and other members gave them words of encouragement, offered solutions, or expressed similar concerns. Moreover, when the teachers were sharing positive teaching experiences, members often replied with words of appreciation, and shared similar positive episodes. Through sharing one’s emotions, Hur and Brush (2009) speculated that teachers were able to receive emotional support as well as solutions to the problems that they encountered when they were teaching. In recent studies examining online teacher communities on other SNSs, emotional sharing and support have also been a recurring theme (e.g., Carpenter & Krutka, 2015; Carpenter et al., 2020a; Davis, 2015; Duncan-Howell, 2010; Staudt Willet, 2019; Wesely, 2013, Yildirim, 2019). For instance, similar to what Hur and Brush (2009) observed, Yildirim (2019) who examined an online community on Facebook for those teaching high school mathematics found that several of the interview participants were emotionally invested in the community as they were motivated to help each other and saw it as place where they can relax, release their

emotions, and share experiences with other teachers in similar teaching situations. Moreover, a questionnaire of 755 teachers who were using online teacher communities on Twitter (n=755) administered by Carpenter and Krutka (2015) found that 25% of the respondents indicated that they were using Twitter for professional purposes to receive emotional support from other community members. Similarly, Duncan-Howell (2010), who also administered an online questionnaire to members of an online teacher community (n=98), found that 38.1% of them reported that they belonged to the community because of reasons associated with emotional support.

Another point raised by Hur and Brush (2009) was that teachers are “utilizing the advantages of online environments” (p. 293). In their study, several interviewees indicated that without having the fear of being perceived as “stupid” or “incapable” by their co-workers, they were able to share issues and ask questions in the communities which consisted of teachers they did not know personally. Through participating in the online communities, teachers can potentially discuss their problems and queries about matters they found difficult to discuss with the teachers at their own workplace. A number of existing studies have also noted other affordances of the online environments: In Carpenter and Krutka’s (2015) study, for instance, several of the participating teachers claimed that they were appreciative of the teacher communities on Twitter being online and not being face-to-face since the online aspect of the communities enabled them connect with teachers from “beyond their own schools and districts, both those who were like-minded and those with different points of views” (p. 715). Another teacher on Twitter notes, “Twitter is 24–7 PD which I can do from home, school, public transport—anywhere!” (p. 716), indicating the convenient and flexible aspect of online communities. Similarly, in Bissessar’s (2014) study, in which the researcher interviewed 22 teachers in an online teacher community on Facebook for those teaching in

Trinidad and Tobago, one of the interviewees explicitly stated how she enjoyed communicating with teachers who were living in the remote areas of the country.

Closely related to the second reason, Hur and Brush (2009) also identified “combating teacher isolation” as the third potential reason why teachers are motivated to participate in the online communities (p. 294). Several of the participating teachers who were isolated at their workplace indicated that they had joined the online communities to interact with other teachers since they did not have anyone else to discuss matters related to teaching. In other similar studies as well, there seems to be growing evidence that teachers are using online teacher communities in order to ameliorate their feelings of professional isolation (e.g., Carpenter & Krutka, 2014, 2015; Carpenter et al., 2020; Wesely, 2013). For instance, Wesely’s (2013) study, which is one of the few studies focusing on online language teacher communities, showed how language teachers around the world were participating in the online communities on Twitter because they felt that they were professionally isolated at their workplace due to a variation of reasons, such as being the only foreign language teacher in a certain regional area, being the only teacher of a particular language within a single school, or having a general lack of administrative support.

As for the fourth reason, Hur and Brush (2009) proposed that teachers are participating in the online teacher communities “to explore new ideas” (p. 295). In their study, several interviewees reported that they were searching for teaching ideas in the communities, and an analysis of the online posts demonstrated that teachers were commonly sharing personal teaching experiences and ideas in the communities. As Hur and Brush (2009) suggested, reading these different types of posts may potentially help teachers broaden their perspectives and reinvent their teaching techniques. Like Hur and Brush (2009), a number

of researchers conducted a content analysis of the online posts to identify the different types of content shared in the online teacher communities on different SNSs (e.g., Curwood & Biddolph, 2018; Goodyear et al., 2019; Patahuddin & Logan, 2019; Rutherford, 2010; Staudt Willet & Carpenter, 2020; Yildirim, 2019; Wesely, 2013). The posts shared in the online teacher communities on SNSs are often diverse in nature, though they are typically on topics pertaining to teaching, learning, and education. For example, sharing information or resources, such as teaching materials (e.g., Patahuddin & Logan, 2019; Yildirim, 2019), websites (e.g., Curwood & Biddolph, 2017), videos (e.g., Staudt Willet, 2020), books and articles (e.g., Staudt Willet, 2020; Yildirim, 2019), blog posts (e.g., Staudt Willet, 2020), and curriculums (e.g., Yildirim, 2019, Wesely, 2013), offering teaching ideas, advice, or tips (e.g., Curwood & Biddolph, 2018; Goodyear et al., 2019; Staudt Willet, 2020; Wesely, 2013), and describing classroom practice (e.g., Curwood & Biddolph, 2018) were some of the prominent types of posts identified in the literature.

Finally, Hur and Brush (2009) suggested that teachers were participating in the online teacher communities to feel “a sense of camaraderie” (p. 297). Based on the findings from the interviews, they noted that many teachers were initially participating in the online teacher communities to obtain emotional support and teaching ideas. However, as they were interacting with other teachers in the online communities over time, Hur and Brush (2009) found that they were able to build a sense of camaraderie among themselves, thereby encouraging them to continually participate in them. Similarly, Duncan-Howell (2010) also found that teachers maintained their memberships to the community due to a number of different reasons, with one reason being to obtain “a sense of belonging and camaraderie” (p. 336). Moreover, a total of nine teachers in Carpenter and Krutka’s (2015) study reported that they became friends with the teachers they met in the online teacher communities on

Twitter. One of them even commented, “I have met my close collaborators on Twitter, and they have now become my closest friends” (p. 718). In another study, Carpenter et al. (2020a), who employed an online questionnaire (n=841) to examine how and why teachers used Instagram, found that many respondents indicated that they actively engaged with other teachers on Instagram to create ties with other teachers. For instance, one respondent viewed the platform as a place “to build real friendships with other passionate educators” (p. 8). Although similar findings have also been noted in other studies (e.g., Davis, 2015; Goodyear et al., 2019), even from these studies alone, it is clear that having a close relationship with community members plays a key motivator for participation in online teacher communities.

Overall, the findings from recent publications tie in well with the five main themes identified in Hur and Brush’s (2009) study. Evidently, researchers over the years have been interested in understanding why and how teachers are making use of online teacher communities on SNSs. The benefits of using online teacher communities on SNSs for professional learning purposes have been extensively noted in these types of studies, but there have also been multiple studies focusing more on identifying the potential challenges in teachers’ uses of online teacher communities on SNSs, particularly in the past five years (e.g., Carpenter & Harvey; 2019, Carpenter et al., 2020b).

It has been largely recognised that one of the main benefits of participating in online teacher communities is how teachers are able to review various types of posts shared in the community. However, as included in the title of Carpenter and Harvey’s (2019) research article, “There’s no referee on social media” (p. 1), the reliability and credibility of the content shared in the online teacher communities may be questionable. Although moderators or administrators of the community may delete posts which are obviously misleading or

unsuitable for the community (Riding, 2001), the quality of the content being shared is still not guaranteed. For instance, Hertel and Wessman-Enzinger (2017), who examined 176 mathematics teaching resources about negative integers shared in Pinterest, reported that one-third of them included mathematical errors. In another study conducted by Carpenter and Harvey (2019) who interviewed 48 teachers using SNSs for professional purposes, approximately half of the teachers (n=21) showed their disapproval of posts which were not professional in nature. As one teacher reported, she encountered one teacher who was “dropping vulgar language when it wasn’t unnecessary” (p. 6). Moreover, many teachers expressed their dislike towards posts which were overly political (n=16), personal (n=14), or negative (n=13). Further, multiple teachers expressed their frustrations towards posts shared in the online teacher communities which were promoting commercial products or other unrelated messages. On top of the quality of the posts potentially being problematic, there could also be quantity-related challenges. Britt and Paulus (2016), for instance, who investigated a popular educational-related community on Twitter found that some teachers were overwhelmed with the amount and pace of the content shared in the community, as two teachers commented: “the chats are just absolutely ridiculously fast” and “It’s kind of overwhelming for a new person on Twitter” (p. 56). A possible reason for the added number of posts may be due to “spam” (i.e., irrelevant or unsolicited) messages, which have been regarded as a growing issue in online teacher communities (e.g., Carpenter et al., 2020b).

Another potential challenge associated with using online teacher communities as a professional source has been reported to be the uneven levels of participation within a community. For example, Nelimarkka et al. (2021) who analysed eight years’ worth of posts, comments, and reactions shared in a large online teacher community on Facebook consisting of approximately 20,000 teachers reported that only about 10 percent of the members were



actively writing posts or comments in the community. Comparably, in Rutherford's (2010) study in which an online teacher community on Facebook for teachers in Ontario was extensively examined, despite having over eight thousand members in the community, only 384 members were observed to be actively taking part in the discussions during the year between 2007 and 2008. Although "lurking" (i.e., reading the content without actively participating) is considered to be a common form of participation within online teacher communities (Goodyear et al., 2019), if there are too many members who do not actively post or comment in the community, it leads to the overall reduction in activity, which, in turn, brings upon negative consequences to the community (Nelmarkka et al., 2021), and, in the worst case, leads to its "death" (Iribberi & Leroy, 2009).

As the previous sections have outlined, online teacher communities on SNSs have often been praised for enabling teachers to easily connect with other teachers and mitigate various teaching-related problems in the comfort of their own homes or during their free time at work (e.g., Carpenter & Krutka, 2015). While teachers can potentially cut down on time that they would have spent on travelling to physical locations, it can be easily forgotten that participating in the online teacher communities still require a substantial amount of time and effort on the teacher's part. Duncan-Howell (2010), for instance, found that the majority of teachers in their study (i.e., 84 out of 98 participants) reported that they spent up to six hours a week participating in the online communities. Despite the fact that teachers are spending a notable amount of time taking part in the communities, their effort may not always be recognised. There is the possibility that their colleagues or bosses may not accept this form of learning as "proper work," which can make it difficult for them to use SNSs during working hours at schools (e.g., Davis, 2015). Another related challenge is the blurring boundaries between work and private time. Although teachers can access the online teacher

communities on SNSs at any time of the day, the downside of this is that the time spent on learning through these communities often cuts into their off-hours without much realisation (Highley & Seo, 2012).

Finally, the literature on online teacher communities SNSs has also made reference to the term “context collapse” when describing the challenges of using them for professional purposes (e.g., Carpenter & Harvey, 2019; Carpenter et al., 2019; Carpenter et al., 2020a). Due to the open nature of SNSs, these platforms can easily lead to “context collapse” which is used to describe the phenomenon when the content shared on SNSs reaches a large number of unintended audiences (Marwick & boyd, 2011). Individuals typically write online messages with a specific audience in mind, but in actuality, the content can be viewed by unimagined groups of users (Carpenter et al., 2020a). As Carpenter and Harvey (2019) explained, while for in-person interactions, individuals can see their audiences and adjust their message accordingly, for online interactions, they can no longer make the necessary adjustments due to the blurring of the context boundaries. Consequently, context collapse is especially relevant to professionals as it has increasingly become difficult to separate their professional and personal lives. For instance, in Marwick and boyd’s (2011) study, the researchers reported that one of their participants was threatened with a lawsuit and lost work due to what the person personally wrote on Twitter. For teachers, who are expected to maintain their professional image in front of their students, parents, colleagues, administrators, and other relevant stakeholders even outside the workplace (Cho & Jimerson, 2017), context collapse can be especially challenging (Carpenter et al., 2020a). Because of this, some teachers may feel that they cannot freely discuss certain topics in the online teacher communities on SNSs in fear of saying something controversial. For example, Carpenter and Harvey (2019) mentioned Stilzlein and Quinn’s (2012) study who found that

teachers were hesitant towards voicing their true feelings online about the controversial “No Child Left Behind” law in the US, which essentially held schools accountable if their students did not perform well in the standardised tests, because they felt that their job was at risk if they opposed to it. Hence, it can be assumed that the openness of SNSs may be a possible factor why some teachers are reluctant towards actively participating in the communities.

To sum up, teachers are making use of online communities on SNSs to search for new teaching ideas, to connect with others to obtain a sense of belonging, and to capitalise the affordances which the online communities offer. Despite these benefits, recent literature on online teacher communities have also noted several potential threats, which may prevent teachers from using them to the fullest extent. The subsequent sections discuss how online communities in general are used during a crisis and how online teacher communities specifically can support teachers during the COVID-19 pandemic.

### ***2.2.2 Online communities for crisis communication***

Previous studies have suggested that SNSs play a crucial role in times of crisis situations, including natural disasters (e.g., wildfires, hurricanes, volcanic eruptions), man-made disasters (e.g., terrorist attacks), and political crises (e.g., protests) (Watson et al., 2016). One of the obvious benefits of using SNSs during a crisis is the ease of disseminating information in a short period of time. When a crisis occurs, they often result in a flood of related posts and messages soon after the occurrence. For instance, within minutes of the flooding in the Chennai region in India in 2015, there were numerous posts including the word “Chennai floods” on Facebook (Bhuvana & Arul Aram, 2019). In a similar story, immediately after the occurrence of the Tohoku earthquake in Japan in 2011, many users in

the affected region were reporting first-hand information about the disaster on Twitter even before the general public understood the actual severity of it (Cho et al., 2013). As these two examples suggest, SNSs are commonly being used to share critical information to the general public when a crisis occurs. In addition to being a useful tool at the initial stages of a crisis, SNSs have also been reported to be utilised in the middle and recovery stages. As SNSs can reach a large audience, they have been used to organise and manage volunteers. For instance, Sharp and Carter (2020) noted that SNSs played an important role in recruiting and managing volunteers during flooding in the UK. In their study, one of the interviewees described the usefulness of Facebook as it helped inform the public about volunteer work needed to clean up the affected areas. Additionally, Sharp and Carter (2020) found that SNSs were being used to request for specific equipment, fundings, and donations.

SNSs are not only used to disseminate information and facilitate one-way communication, but they are also used to facilitate two-way communication in times of crisis (Watson et al., 2016). For instance, Watson and Finn (2013) reported on how SNSs were used to facilitate interactions between SNS users with local information and stranded passengers who were not sure what to do during the 2010 eruptions of Eyjafjallajökull in Iceland. On Facebook, one passenger who was stuck in Italy asked for transportation information and was able to receive advice from other Facebook users who knew about the European train systems well. Similarly, in a more recent study, Jang and Choi (2020) observed that during the COVID-19 pandemic, in an online community formed on a Chinese SNS for Chinese international students in South Korea, community members were able to provide each other with support. The community served not only as a virtual information hub where community members could obtain information about news and information about the pandemic, but it also served

as a platform where community members could seek and receive advice about getting tested, quarantining, and other pandemic-related concerns.

Although there are clear benefits of using SNSs during a crisis, the negative aspects should not be overlooked. In the past, traditional media platforms, such as TVs, radios, and printed newspapers, were the main sources of news, but with the use of SNSs nowadays, there is far more content available. Hence, as previously stated, the main benefit of using SNS during a crisis situation is that individuals can be exposed to more crisis-related information, though this can also be an issue. Firstly, large amounts of information may lead to information overload (Kaufhold et al., 2019), which, in turn, may have a negative impact on individuals' overall well-being. For instance, during the COVID-19 pandemic, as many individuals were spending a large amount of time on SNSs, they were constantly being exposed to distressing reports and images of overcrowded hospitals with sick patients and exhausted medical professions (First et al., 2020). Consequently, some scholars have found that the increased coverage of the pandemic on SNSs were linked to negative psychological outcomes, including the increased feeling of anxiety, fatigue, and depression (e.g., Chao et al., 2020; First et al., 2020).

Another related issue of using SNSs during a crisis concerns the quality of shared information. As previously mentioned, the information shared on SNSs is not always accurate or reliable (e.g., Hertel & Wessman-Enzinger, 2017), but in emergency situations when there is greater uncertainty and higher level of distress, the dissemination of false information and fake news on SNSs is particularly prevalent and can contribute to severe consequences (Watson et al., 2016). During the COVID-19 pandemic, there were multiple reports on how SNSs played a critical role in spreading unverified misinformation about

public health, including topics related to mask-wearing, social distancing, and treatment. (e.g., Love et al., 2020; Najmul Islam et al., 2020; Tagliabue et al., 2020). In addition, Watson et al. (2016) used the Boston Marathon bombing incident in the US as an illustrative example to highlight the ramifications caused by the spread of false information on SNSs during a crisis situation. Shortly after the bombing incident, an official Twitter account run by an American news agency sent out a false post stating that the White House was under attack and President Obama had been hurt. Although it was quickly announced that the Twitter account had been hacked and that the report was untrue, the disinformation led to a brief stock market crash. Moreover, a further repercussion caused by the rapid spread of false information on SNSs, particularly on Reddit, was the misidentification of a university student who became wrongly accused as one of the bombing suspects (Watson et al., 2016). It is likely that the misidentification of the culprit inflicted long-term psychological distress and trauma to the student's family and relatives who had lost their son to suicide. While SNSs can bring upon various benefits during a crisis, it should also be noted that the use of SNSs for crisis communication may in times bring upon irreversible detrimental consequences.

### ***2.2.3 Online teacher communities in times of a crisis***

While crisis management has been well documented in the literature for several decades now (e.g., Fink, 1986; Ishikawa & Tsujimoto, 2009), the subfield of crisis management in education, which is also referred to as “education in emergencies (EiE),” is still much in its infancy (Versmesse et al., 2017). Considering that education is a basic human right (UNESCO, 2020), one of the main purposes of EiE research is to ensure that educational institutions are prepared so that education is smoothly delivered during emergency situations (Burde et al., 2017). In pre-pandemic times, much of the discussion in EiE pertained to

emergencies focusing on settings where the physical infrastructure of education institutions is damaged due to natural disasters such as earthquakes, flooding, cyclones, and hurricanes (e.g., Akram et al., 2012; O'Toole & Freisen, 2016) and man-made disasters such as war (e.g., Hos, 2016). However, as the ongoing COVID-19 pandemic illustrates, not all emergencies affect the school physical infrastructure. Although the physical infrastructure remained intact, the pandemic still wreaked havoc in education across the world: UNESCO (2020) estimates that the learning of 87 percent of students in over 160 countries were disrupted by the pandemic. During the pandemic, the inevitable switch from face-to-face teaching to remote teaching highlighted educational institutions' lack of preparedness to effectively respond to online teaching. Although there has been growing interest in online teaching education, particularly over the past decade (e.g., Meskill, 2013; Casey et al., 2018), it was obvious that many teachers did not have sufficient skills or knowledge to smoothly teach online (Trust & Whalen, 2020). Although online learning requires careful planning (Son, 2018), teachers in many cases had no choice but to teach without much preparation during the pandemic and only used the basic features of video-conferencing tools, such as Zoom, to emulate face-to-face classes (e.g., Moser et al., 2022).

During this period of uncertainty, numerous teachers around the world seemed to be turning to online teacher communities on SNSs. For instance, Trust et al. (2020) conducted a preliminary study on how teachers were using Twitter at the start of the pandemic from mid-March 2020 to mid-April 2020. Using Twitter's Application Programming Interface (API), the researchers randomly selected 500 posts with the “#remoteteaching” and “#remotelearning” hashtags written by teachers. Similar to what was found in the aforementioned studies which were conducted prior to the pandemic (see Section 2.2.1), Twitter served as a platform where teachers could share and obtain teaching-related

resources, ideas, and insights. The initial analysis also illustrated that teachers were relying on Twitter to share their daily teaching experiences and motivate each other during difficult and uncertain times. In a similar study, Greenhow et al. (2021) who closely examined over 1000 posts including the “#Edchat” hashtag on Twitter and conducted interviews with four teachers who participated in the discussions using the hashtag illustrated how Twitter can be beneficial to teachers in emergency situations. Although Trust et al. (2020) and Greenhow et al. (2021) focused on Twitter, Al-Jarf (2021) examined how English as a Second Language (ESL) teachers were utilising Facebook during the pandemic for their professional development. Like these two studies, Al-Jarf (2021) who conducted a content analysis of 2500 posts shared in different ESL teacher communities on Facebook found that ESL teachers were predominantly using the communities to ask questions, discuss issues, share resources, such as videos and websites, related to teaching. Moreover, the findings of the questionnaire which received a total of 150 responses from teachers participating in the ESL teacher communities on Facebook indicated that they found the teacher communities on Facebook somewhat useful during the pandemic because they were able to discuss topics and issues related to online teaching. From these studies, online teacher communities on SNSs seem to be a viable option for supporting teachers when in-person interactions are limited caused by a crisis. However, considering that there was a serious lack of studies about online teacher communities during a crisis situation prior to the pandemic and only a handful of studies about online teacher communities during the ongoing pandemic are yet to exist, much remains unknown about how teachers can capitalise upon these online teacher communities on SNSs for their professional learning during a crisis situation.



### **2.3 Understanding teacher psychology**

Since the current study focuses on teachers, the relevance of teacher psychology, which helps unveil what teachers think, feel, and act in certain ways, is apparent. A significant body of research has focused on investigating the psychology of language learners (e.g., Dörnyei, 2005; Dörnyei & Ryan, 2015), but comparatively, little attention has been paid to language teachers (Mercer et al., 2016). Considering the lack of scholarship on language teachers, in recent years, the importance of understanding language teacher psychology has been called for by multiple scholars (e.g., Dörnyei & Ushioda, 2021; Mercer & Kostoulos, 2018). As “teachers are in charge of training the next generation of citizens” (Hiver & Dörnyei, 2017, p. 405), their importance is palpable. Teachers face various challenges throughout their professional careers, as evident from the fact that there is currently an alarming rate of teachers leaving the teaching profession (OECD, 2021). Teaching is often considered to be a stressful occupation, and teachers experience burnout sometime during their long careers (Richards et al., 2018). As Dörnyei and Ushioda (2021) suggest, teachers face numerous challenges, including heavy workload, constant pressures from educational authorities, school managers, and parents, and economic issues (e.g., low salaries). Adding onto their already busy and stressful workload, many teachers are currently facing even more pressures to use technologies and learn how to use them for teaching purposes (Townsend & Bates, 2007). Language teachers are not immune to these challenges and may even face additional challenges specifically associated with language teaching (see Section 2.3.3). Understanding the emotional and psychological aspect of language teaching is likely to contribute to supporting the well-being of language teachers, which ultimately could help alleviate some of the aforementioned challenges. Maintaining the well-being of language teachers will not only be beneficial to teachers themselves but also to the learners (Mercer et al., 2016). Studies have shown that teacher well-being is closely linked to student

achievement and outcomes (Zee & Koomen, 2016) and student well-being (Harding et al., 2019). However, despite its obvious importance, within the field of educational research, language teacher psychology is still very much in its infancy.

At present, some concepts central to the field are teacher motivation, teacher identity, and teacher well-being. To obtain a more in-depth understanding of how language teachers learn about technology and their uses of online communities on SNSs, the following sections examine relevant concepts in teacher psychology in relation to the current study.

### **2.3.1. Teacher motivation**

Within the literature of teacher psychology, one of the most researched topics is teacher motivation (e.g., Han et al., 2016), and in the past decade or so, researchers have been directing their attention to the study of language teacher motivation (e.g., Dörnyei & Kubanyiova; 2014; Dörnyei & Ushioda, 2011, 2021; Hiver et al., 2018). The concept of “motivation to teach” has generally been understood through the perspectives of social cognitive theories, namely, self-determination theory, expectancy-value theory, self-efficacy theory, and achievement goal theory (Hiver et al., 2018) (see Section 3.2 for an overview). Grounded in these theories, Dörnyei and Ushioda (2011) conceptualised teacher motivation as holding four main characteristics: (1) It is tied with “contextual factors” which stem from the workplace and the teaching profession itself; (2) it is susceptible to negative influences; (3) it comprises a “prominent intrinsic component” which is closely associated with teachers’ intrinsic interests and joy of teaching; and (4) it is a dynamic and continuous process (p. 160). Based on their conception of teacher motivation, the following sections attempt to understand why teachers are motivated towards using technology in their classes, learning about technology, and using online communities on SNSs for professional learning purposes.

Firstly, it is important to understand why teachers are motivated to use technology in their classes because if they are not motivated to use technology in the first place, they will not be motivated to learn about technology. According to Park and Son (2009), there are contextual factors, such as financial issues, insufficient technical support, and strict school curriculums, which negatively influence technology integration. Without sufficient funds, schools are not able to supply teachers with adequate facilities or materials, which will deter teachers from using technology. As technology is constantly advancing, it becomes easily outdated. Even if schools invest in cutting-edge technological devices, they are inevitably going to become obsolete in the future. Theoretically, schools need to constantly update their equipment, but in reality, not many schools are able to do so, leaving them with outdated technology. Maintaining technological devices and providing technological support to the teachers lead to additional expenses. Thus, the fiscal resources of schools play a crucial role when implementing technology into language classrooms.

Inflexible school curriculums and textbooks may also deter language teachers from using technology in their classes. If language teachers are required to conduct classes according to a strict curriculum, they may not have the freedom or the time to use technology. Even if they are allowed to do so, not all language teachers are motivated to teach due to the stressful nature of many teaching jobs and unsatisfying economic conditions (Dörnyei & Ushioda, 2011). If they are not motivated to teach, they are unlikely to make an effort to change their current teaching style as it takes time to develop new lessons. One teacher from Park and Son's (2009) study, for instance, claimed that using materials from the Internet for their language classes was time consuming, as modifying, editing, and combining the materials according to the level of their students took time and effort. Learning about technology for language teaching purposes is also time consuming. As Hubbard and Levy (2006b) pointed

out, language teachers need to gain the appropriate skills and knowledge to be able to appropriately use technology in their classrooms. Language teachers also need to repeatedly experiment with new technologies once they decide to use them in their classes (Stockwell, 2009). As learning about technology for language teaching purposes is time consuming, language teachers are unlikely to use it in class unless they have the time to invest in such preparation.

Even if the aforementioned contextual factors are mitigated, intrinsic factors which Dörnyei and Ushioda (2011) described as the “main constituent” of teacher motivation come into play. Teachers’ motivation to use technology for language teaching purposes can be affected by their personal beliefs and attitudes towards technology. For instance, Atkins and Vasu’s (2000) study showed that the teachers who held negative attitudes towards the use of technology in language classrooms did not even attempt to use technology in their classes. Moreover, teachers need to see for themselves the potential benefits of using technology in their classes to be motivated to use it (Redmond et al., 2005). Unless they believe that technology will bring positive outcomes to their classes, they are not going to invest their time and effort to use and learn about it. Furthermore, teachers may not be motivated to use technology in their classes due to a lack of self-confidence in using them (Vodanovich & Piotowski, 2005). As teachers are often viewed as “experts,” teachers may refrain from using teaching materials which may reveal that they are not (e.g., Britzman, 1986; Wang, 2021). That is, in fear of losing authority, language teachers who are not confident in using technology may be less willing to use it in front of students who are believed to be better at using technology than they are. However, it must be noted that having a high confidence in using technology does not necessarily lead to actual usage of it in class, as demonstrated in Kessler and Plankans’ (2008) study which found that although teachers need to be confident

to a certain degree, the highly confident teachers used technology less than those who had medium confidence. The mixed results found in prior studies about confidence level suggest that rather than just one sole factor, a combination of different factors influences teachers' decisions to use technology.

Although teachers need to have enough motivation to initiate the use of technology, it is equally if not more important for them to be motivated to maintain their use of technology. As teacher motivation is characterised as not being static (Dörnyei & Ushioda, 2011), teachers need to be continually motivated to use technology throughout their long careers. Their motivation to continue using technology is likely to be affected by similar contextual and intrinsic factors as described above, but, specifically, motivation towards using technology may be stronger if teachers are able to get a promotion or improve their career development as a result of their innovative ways of using technology in classes (Stockwell, 2013). Consequently, only those who are actually motivated to use technology in class will make an effort to train themselves to use technology for language teaching purposes. It is clear that their motivation towards using technology and learning about it comes down to a complex interplay of some of these aforesaid contextual and intrinsic factors.

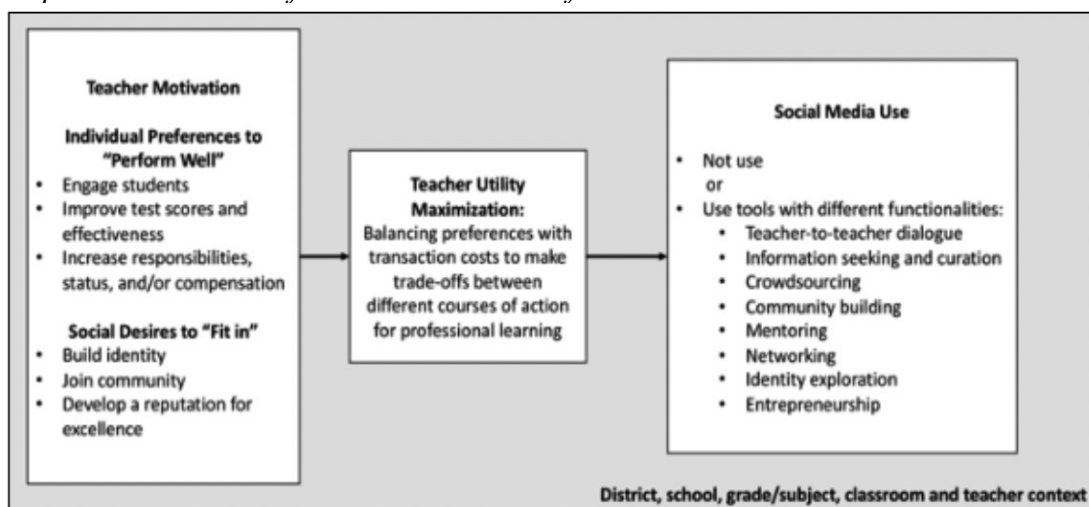
Since the main purpose of the current study is to understand language teachers' uses of online communities on SNSs, the latter half of the present section deals with understanding why teachers are motivated to use SNSs for professional learning purposes. As alluded previously, the literature on online teacher communities on SNSs has grown extensively in the past decade or so, but the field is still rather underexplored (Lantz-Anderson et al., 2018; Maciá & García, 2016). One topic that has not been given much attention until recently is about the conditions that encourage teachers to choose online communities on SNSs for

professional learning purposes over other professional learning options. Hashim and Carpenter's (2019) conceptual framework of "teacher motivation for social media use" was one of the first comprehensive frameworks that attempted to bridge this literature gap. They drew on utility-based theory from economics, which places an emphasis on individuals' preferences, to understand the array of motivational factors that lead teachers to use SNSs. As illustrated in Figure 1, they identified two main categories to differentiate factors that motivate teachers to use SNSs: The first category is "teachers' individual preferences to perform well in his or her professional role as an educator" (Hashim & Carpenter, 2019, p. 8). The first category includes preferences that are closely linked to motivational factors that drive teachers to "perform well" and be effective teachers who support positive student engagement, improve their test scores and effectiveness, and/or increase their own professional responsibilities, status, and compensation. Each individual teacher has to balance expected utility from efforts to perform well with transaction costs (e.g., participation time, effort, and expenses), and the action of balancing makes teachers to "make tradeoffs between courses of action for professional learning" (Hashim & Carpenter, 2019, p. 8). In other words, teachers choose one professional learning activity over another as a result of negotiating between different preferences while considering the expected utility and overall transaction costs. The idea is that teachers may decide to learn through online communities SNSs instead of utilising other professional learning options, including traditional face-to-face formal professional training programmes, when they perceive higher expected utility and lower transaction costs if they learn through such method.

The second category that Hashim and Carpenter (2019) identified in their framework is "teachers' social desires to fit into his or her organizational setting" (p. 8). The second category includes social motivational factors that are driven by teachers' determination to

“fit in,” and this is said to be achieved through actions including building their professional identities at their workplace, joining communities, and/or developing a reputation as an excellent teacher. Using prior studies as evidence (e.g., Daly et al., 2019), Hashim and Carpenter (2019) suggested that SNSs provide teachers with opportunities to develop their professional identity, a sense of belonging in a community, and their professional reputation inside and outside their workplace. In this sense, “teachers’ process for utility maximization” leads teachers to use SNSs for professional purposes (or not use them) (Hashim & Carpenter, 2019, p. 9). As shown in Figure 1, teachers who engage in SNSs are suggested to be attracted to using different functionalities on SNSs which advocate various activities—teacher-to-teacher dialogue, information seeking and curation, crowdsources, community building, mentoring, networking, identity exploration, and entrepreneurship, among others. Since each individual teacher has varying interests and needs, teachers may decide to use specific SNS platforms based on their affordances. For instance, some teachers may be attracted to using Pinterest which is more oriented towards information seeking and curation (e.g., Schroeder et al., 2018), whereas other platforms such as Twitter may appeal to those who want to engage in dialogue with other teachers (e.g., Wesely, 2013).

**Figure 1**  
*Conceptual Framework of Teacher Motivation for Social Media*



**Note.** Source from Hashim & Carpenter (2019, p. 8)

Finally, the conceptual framework acknowledges district-, school-, grade/subject-, classroom-, and teacher-level factors which may influence teachers' motivations towards learning through online communities on SNSs. Hashim and Carpenter (2019) put forward a list of contextual factors which could potentially motivate and demotivate teachers to use SNSs to enhance their professional skills and knowledge. At the district and school level, for instance, they suggest that teachers may feel that they have no choice but to utilise online communities on SNSs because their district or schools do not offer them any alternative professional learning opportunities. On the other hand, teachers may refrain from using SNSs if their districts and schools have strict policies regarding their use. Other teachers may also be inclined to use SNSs because their district or school incentivises and supports their use. Some of the other contextual factors which Hashim and Carpenter (2019) mentioned as potentially influencing teachers' motivations towards using SNSs are school culture, norms and routines for collaborating with other teachers, and teachers' attitudes and confidence towards technology.

Although only three years have passed since the framework was set forth, Hashim and Carpenter's (2019) conceptual framework of teacher motivation for social media provides a useful overview to understand the varying interrelated factors which drive teachers to initiate using online communities on SNSs and continuing using them. Their conceptual framework appear not to be completely unrelated to Dörnyei and Ushioda's (2011) conceptualisation of teacher motivation which was described earlier in the section as some of their identified characteristics overlap with each other: The first two categories of teacher motivation (i.e., individual preferences to "perform well" and social desires to "fit in") from Hashim and Carpenter's (2019) conceptual framework link with the intrinsic component of teacher



motivation identified by Dörnyei and Ushioda (2011). Moreover, both conceptions consider various contextual factors that may positively or negatively influence teachers' motivation.

### **2.3.2. Teacher identity**

Another concept extensively discussed in the teacher psychology literature is teacher identity, which is considered to be closely interwoven with teacher motivation (Kaplan & Garner, 2018) and, consequently, a vital component in teacher professional development and learning (Danielewicz, 2001; Impedovo, 2021). Within the literature of language teacher psychology, there have increasingly been more scholars focusing on exploring the concept of language teacher identity (e.g., Cheung et al., 2016; Elsheikh, 2016; Yazan & Lindahl, 2020) and how it relates to language teacher development and learning (e.g., Liontas, 2020). Like teacher motivation, teacher identity is a complex entity, which inevitably makes it difficult to define. Although scholars generally agree that the concept is multifaceted and multidimensional (Trent, 2015), there is currently no agreed upon definition. In reviewing relevant studies published between 1988 and 2000, Beijard et al.'s (2004) commonly-cited review study identified four vital features of teacher identity: First, teacher identity is seen as a continuing process, which implies that it is subject to constant change. The formation of it is essentially an answer to such questions as "Who am I at this moment?" as well as "Who do I want to become?" (Beijard et al., 2004, p. 122). Hence, it is not something that teachers possess at one point in time but something that continuously develops overtime throughout their whole career. Second, the interaction of this career-long process involves a person and context, meaning that teachers' professional identities are influenced by personal and contextual factors. Another feature is that it is layered with sub-identities which "more or less harmonize" with each other (Beijard et al., 2004, p. 122). Finally, it is closely tied with the notion of agency as teachers play an active role in constructing their identities which emerges from their sense of agency.

A key takeaway from their conception is that teachers' professional identities are influenced by a myriad of individual and contextual factors. While it is not possible to list all the factors that could potentially impact each individual teacher's professional identity, a few of these factors are identified in the literature. Teacher identity is considered to be commonly shaped by factors, such as past experiences, current professional context, and political environment (Zembylas, 2018). For instance, in Jong's (2016) case study of a novice elementary mathematics teacher, the data evidently illustrated how the teacher who transitioned from being a pre-service teacher to in-service teacher developed her mathematics teaching identity based on her past schooling experiences and teacher education experiences. Moreover, Hong et al.'s (2018) small-scale study which used data sources from interviews with six elementary and secondary school teachers found that teachers' identities are particularly unstable in the early years of one's career and that supportive school environments (i.e., support from colleagues and school administrators) played a key role in helping them build positive and stable teacher identities. Furthermore, Zembylas (2018) provided an example of an ethnographic study which focused on examining a group of Greek-Cypriot primary school teachers to illustrate how participating in a series of teacher workshops run by a Turkish-Cypriot teacher on peace education led some of them to rethink and question their identity as a Greek-Cypriot teacher who was "expected to perform a particular 'preferred' role when it came to the unresolved political problem that had kept Cyprus ethnically divided for decades" (p. 82). This example indicates that there is a political dimension to teachers' professional identities, which provides evidence for the importance of examining teacher identity in terms of politics and power structures (Zembylas & Chubbuck, 2018).

In Beauchamp and Thomas' (2009) review of literature on teacher identity, several other contextual factors, including their school environment, the nature of the learner population, and the choice of teaching discipline, were also noted as having an influence on teachers' identities. Moreover, teacher identity is considered to be affected by both personal and professional facets (Day et al., 2006). Personal and professional identities are in times viewed as distinct entities but rather overlap with each other, thereby requiring examinations of teacher identity from a holistic perspective (Bukor, 2014). Furthermore, as teachers are considered to be members of various communities of practice in the school workplace and beyond the workplace (e.g., Brouwer et al., 2012; Wesely, 2013), scholars have been examining the teacher identity formation process through the theoretical lens of communities of practice (e.g., Varghese et al., 2005) (see Section 3.1.1 for further details). The community of practice theoretical framework involves the notion of identity, as in Wenger (1998)'s view, is affected by individuals' participation as well as non-participation in a community, and their actions in the community shape their identity development. Although the communities of practice perspective of identity was originally developed before SNSs existed, Wenger et al. (2009) have since then asserted that the formation of identity can also take place in online environments like SNSs.

Teacher identity and teachers' participation on SNSs therefore go hand-in-hand as SNSs create various possibilities and problems for teacher identity development (Carpenter et al., 2019). Some teachers who are members of online communities on SNSs represent themselves the same way as they would in offline contexts, while others do not. SNSs may provide teachers with opportunities to create new ways to present themselves, and some may prefer to act differently from their private personas or their professional personas at their usual workplace. For instance, teachers who want to take on the role of mentor to novice

teachers or a mentor to LGBTQ+ teachers online may include related language in their SNS profiles (Carpenter et al., 2019). However, at the same time, teachers' online identities may in times be constrained. Some teachers feel that the identity that they present on SNSs are restricted because of their personal beliefs about how teachers should be perceived online. For instance, Kimmons and Velesianos (2014) who conducted interviews and peer focus groups with teacher education students found that some participants tried to intentionally present a particular image of their authentic identities on SNSs while omitting certain facets of their identities to conform to the expectations that they perceived suitable for teachers. In another study, Carpenter et al. (2019) who analysed teachers' profiles and online posts shared by 33184 teacher accounts on Twitter found that the way that teachers self-identified in their profile descriptors on Twitter varied, with one-third identified themselves based on their family roles (e.g., "mother," "wife," "father," "husband"), a few teachers (5.1%) making references to theism (e.g., "God," "Allah"), and even fewer teachers (0.7%) listing their political views and affiliations. They speculated that teachers on Twitter shared their family roles more commonly than their religion and political stances because they felt that it was comparatively more acceptable to share their information about their families. It seemed that they were avoiding to include information about religion and politics because they felt that teachers were expected to be "publicly neutral" on such matters (Carpenter et al., 2019, p. 9).

Related to this point, the open nature of SNSs means that teachers may limit their engagement online, making it difficult for them to fully express themselves (see "context collapse" in Section 2.2.1.). For instance, in Kimmons and Velesianos' (2015) study on teacher education students' perceptions of online participation on SNSs, the participants feared that their interaction with others on SNSs were not completely private. As SNSs, such

as Facebook, often change their privacy policies without warning, some participants felt uncomfortable sharing photos and other information on these platforms. In another study, Fox and Bird (2017) who interviewed 12 teachers using SNSs found that many of their participants felt pressured to befriend and engage with their co-workers on SNSs, though they did not feel comfortable interacting with them because they were afraid of mixing their personal and professional identities. It is therefore clear from these studies that teachers' online identities are just as complex as teachers' offline identities, as they are subject to various personal and contextual factors.

### **2.3.3. Teacher well-being**

As previously pointed out, teachers' mental and physical wellness affect the way they teach, learn, and interact with their colleagues and students (Mercer et al., 2016). Surprisingly, however, it was not only recently that the concept of teacher well-being began to receive attention (cf. Holmes, 2005). From a positive psychology perspective, which is essentially "the scientific study of how people thrive" (McIntyre et al., 2019, p. 28), it is not only important to identify teaching-related stress triggers which negatively influence teachers' well-being but also to understand how teachers can cope with such sources of stress, which, ultimately, enables them to "thrive and flourish" (Jin et al., 2016, p. 28).

Numerous studies have suggested that teachers in general experience high amounts of stress which can have harmful effects on their physical and mental well-being (e.g., Brown, 2012; Johnson et al., 2005). Teaching is widely known as being a demanding and stressful occupation (McIntyre et al., 2017) since teachers are exposed to a number of different stressors daily (e.g., MacIntyre et al., 2019; Piechurska-Kuciel, 2011). Teachers are constantly required to do an excessive amount of work under time pressure. Besides teaching, teachers need to create lesson plans, check homework, evaluate students, and do

administrative work. In addition, to keep up with current teaching methods and societal demands, many teachers are often required to attend seminars, workshops, and conferences on their days off. Adding on to their already heavy workload, many teachers also have to deal with “technostress” (i.e., stress associated with the use of technology) when using technology in the classroom (Al-Fudail & Mellar, 2007). Collegial isolation is said to be another common stressor for teachers (Schlichte et al., 2005). Although it is ideal for teachers to discuss work-related problems and collaborate with other teachers regularly, not all teachers hold relationships with their co-workers and other teachers in the same profession. Without locating a supportive community, they are likely to feel isolated and struggle to cope with the difficulties that they face.

The prevalence of these teacher-related stressors may heighten a teacher’s risk for burnout, which Maslach and Jackson (1986) defined as “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do ‘people work’ of some kind” (p. 1). Burnout threatens not only the physical and mental well-being of the teacher but also the functioning of the school as it has often been associated with a number of negative outcomes, such as decreased work effort, motivation, and commitment by teachers (Ford et al., 2019). Although all teachers are susceptible to burnout, language teachers are said to be especially prone to burnout since they encounter additional stressors unique to language teaching (Piechurska-Kuciel, 2011). Horwitz (1996), for instance, pointed out that some non-native language teachers who are still learning the target language themselves may lack confidence in their language skills and feel anxious about using it in class. Although they can reduce their anxiety through preparation, there is a limit to what they can prepare in advance since it is difficult to predict the exact language which will be used in class. In certain countries, language teachers also struggle with being

paid low wages and having to work on unstable temporary contracts (Mercer et al., 2016). Moreover, in comparison with teachers of other subjects, language teachers, especially those teaching languages other than English, are more likely to experience isolation due to an absence of colleagues teaching the same subject (Borg, 2006). Language teachers who teach internationally may also face challenges which come with living and working in a foreign country as they may feel isolated by local teachers due to language and cultural-related barriers.

Since early 2020, the COVID-19 pandemic has threatened the well-being of numerous language teachers in the world. Despite already being exposed to multiple stressors even in pre-pandemic times, language teachers encountered even more stress triggers as a result of the pandemic. With little warning and preparation, teachers needed to switch to teaching online without much institutional support (MacIntyre et al., 2020). In many cases, teachers who had little or no knowledge and skills in using technology for teaching were given only little time to prepare how to teach online (Kim et al., 2021). Language teachers did not only need to contend with the strains of the new way of teaching, but they also had to cope with other stressors caused by the pandemic itself. Many language teachers feared for their own health as well as for others, were uncertain about their job and future career, and had to work from home, which often led to the blurred boundaries between their work and home (MacIntyre et al., 2020). Since the rollout of vaccinations in 2021, many schools and universities have resumed in-person classes, though many teachers teaching now not only have to face the stressors which existed in pre-pandemic times but also new stressors brought by teaching while wearing a mask (Love & Marshall, 2022), providing care for their students' physical and mental health caused by the pandemic (Morris et al., 2021), and having to conduct hybrid classes (Pressley & Ha, 2022).

As teachers face numerous stressors every day, it seems logical that scholars have been investigating how teachers can cope with their accumulated teaching-related stress (e.g., MacIntyre et al., 2020; Richards, 2012). McIntyre et al. (2020) defined coping as “the process of responding to a stressor using one or more techniques or strategies” (p. 2) and argued that teachers employ various coping strategies as a defence mechanism to ameliorate their stress, which, in turn, protects their overall physical and mental well-being. In the famous Brief-COPE (Coping Orientation to Problems Experienced) Inventory developed by Carver (1997), coping strategies were largely categorised into two groups, namely as “approach” strategies and “avoidant” strategies. Approach coping strategies are behavioural, cognitive, and emotional activities, such as advanced planning, seeking help, advice, and emotional support, and accepting the situation, which aim to actively work towards the threat. On the other hand, avoidant coping strategies include dysfunctional responses such as venting, denial, self-distraction, and substance use. Generally speaking, adopting more approach coping strategies and less avoidant coping strategies are linked to more positive outcomes (Dubow & Rubinlicht, 2011), though Carver et al. (1989) argued that this does not necessarily mean that avoidant coping strategies always work as a negative force. Depending on the situation, such strategies as venting, denial, or distraction may be an effective short-term solution to diffuse stress (MacIntyre et al., 2020).

Although there is a general lack of empirical studies investigating language teachers’ actual uses of strategies to cope with stressful teaching situations, MacIntyre et al. (2020) study recently examined 600 language teachers’ stress and coping responses during the onset of the COVID-19 pandemic through an online survey partially based on the Brief-COPE Inventory. In their study, they found that participants used various coping strategies, most notably, trying to accept the realities of the situation, planning in advance, and using work



as a distraction, to reduce their stress levels which heightened as a result of the pandemic situation. Other fairly common strategies included seeking emotional support, using humour, and venting. In a more recent study, in thoroughly analysing 51 blog posts written by teacher educators on four well-known language education websites during the pandemic, Abdel Latif (2022) found that “teachers’ sharing of online technological and pedagogic experiences with their colleagues and professional community,” “teacher individual and collaborative reflective practices,” and “practising self-care” were the three most common coping strategies which were suggested by teacher educators (pp. 28–29). As outlined in previous sections, past studies have illustrated that online teacher communities on SNSs provide teachers with a place where they can seek emotional support, vent, and write reflection posts (e.g., Carpenter et al., 2020), it seems not too much of a leap to assume that they can be used to enhance teachers’ well-being. The main issue, however, is that there is yet to be a comprehensive study which attempts to understand if and how teachers actually make use of online teacher communities on SNSs to combat their teaching-related stress and enhance their overall well-being.

#### **2.4 Current literature gaps and research questions for the study**

Since the main aim of the study is to uncover the realities of how language teachers are making use of technology-focused online teacher communities on SNSs, the current chapter outlined relevant research in the areas of CALL teacher preparation, online teacher communities, and teacher psychology. It was evident that there were gaps in the literature which needed to be addressed. Firstly, as illustrated in the first part of the chapter, language teachers have numerous options to learn about how to use technology in language teaching and learning. However, what language teachers are actually doing to educate themselves still remains unclear. Considering the heavy workload that teachers face and from a financial

point of view, it is reasonable to assume that learning through informal means comply with their needs better than formal training programmes. As the second part of the chapter demonstrated, researchers have increasingly been recognising the potential value of using online teacher communities on SNSs for professional use, but not many studies which place a focus on examining online language teacher communities (cf. Wesely, 2013) have been undertaken, and in particular, there is a dearth of studies looking at online communities where technology is the main focus of the discussions. Further, the ongoing pandemic has exemplified the need for a space where they can learn how to teach online and obtain emotional support during uncertain and stressful times, and on the surface, it appears that online teacher communities on SNSs may be a possible solution. To obtain a deeper understanding of how language teachers are engaging with other language teachers in technology-focused online language teacher communities on SNSs, the following three main research questions (RQs), each consisting of sub-questions, were formulated:

RQ1. What are language teachers on Facebook doing to learn about how to use technology in language teaching and learning?

RQ1a. Why are some language teachers motivated to learn about technology in language teaching and learning and others are not?

RQ1b. What are the trends towards learning about technology in language teaching and learning and the reasons behind these trends?

RQ2. What is happening in an online community for language teachers who are interested in learning about technology in language teaching and learning?

RQ2a. What types of posts are shared by the online community members?

RQ2b. Why are language teachers participating in such a community?

RQ2c. What are the benefits and challenges associated with using such a community for professional purposes?

RQ3. How has the COVID-19 pandemic affected the observed community?

RQ3a. How are online community members utilising the community during the pandemic?

RQ3b. What are the potential consequences of the pandemic?

As alluded earlier in the chapter, existing theoretical frameworks such as Communities of Practice and motivation theories, such as self-determination theory, expectancy-value theory, self-efficacy theory, attribution theory, and goal theories, are pertinent to the current study. Hence, in the subsequent chapter, the study's theoretical underpinnings are presented in detail.

## Chapter 3. Theoretical Frameworks

Theoretical frameworks, which work as a “blueprint” and help build the foundations of a study, are an essential part in the research process (Grant & Osanloo, 2014, p. 13). Thus, in the current chapter, the main theoretical frameworks which undergird the study are outlined in detail: Specifically, the study is informed by a social theory of learning (i.e., Communities of Practice) and mainstream motivation theories, including self-determination theory, expectancy-value theory, self-efficacy theory, attribution theory, and goal theories. The following sections give an overview of each theory and its relevance to the study.

### 3.1 Theories of learning

Learning is generally understood from three main perspectives, namely a behaviourist perspective, a cognitive perspective, and a socio-constructivist perspective (Segers et al., 2022). Behaviourists view learning of any skill as the formation of habits (e.g., Skinner, 1957; Watson, 1924). According to the behaviourist perspective, all behaviours are learned through interacting with the environment, which is referred to as the process of “conditioning” (Olson & Hergenhan, 2012). Learning, which is seen as the acquisition of new behaviours, is merely a reaction to environmental stimuli (Clark, 2018). Although behaviourism was the dominant theory of learning in the first half of the 20th century, it became widely criticised later in the years for ignoring the connection between learning and the internal mental processes (Segers et al., 2022). This led to the emergence of the perspective of cognitivism, which places a focus on the learners’ mental processes, such as “insights (the moment when a solution to a problem becomes clear), information processing, problem solving, memory, and the brain” (Merriam & Bierema, 2013, p. 32). To understand how the brain acquires information, different cognitive learning theories have been developed: For instance, Piaget’s theory of cognitive development, which is considered to

be one of the earlier theories of cognitivism, proposed that individuals go through a series of stages during their childhood in order to develop their ability to learn (Piaget, 1972). To Piaget, learning is strongly linked to the individuals' mental processes and not only to environmental stimuli. Another dominant theory is the information-processing theory (IPT), which attempts to explain how information is processed and stored in the brain (Lachman et al., 1979). Although each cognitive learning theory focuses on different aspects of learners' mental processes, what these theories have in common is that they largely view learning as an individual activity. As a reaction to this, a collection of theories which are referred to as the social constructivist approach was developed (Segers et al., 2022). In contrast to cognitivism, this approach takes into consideration the social aspect of learning. For instance, Bandura's (1986) social cognitivist theory suggested that individuals learn from observing others' behaviours and consequences of their behaviours. Moreover, Vygotsky's (1978) sociocultural theory views learning as a social process, specifically placing an emphasis on the learners' sociocultural context. Sociocultural theory posits that learning is intertwined with the social setting in which the learner is situated and that social interactions play an important role in learning (Merriam & Bierema, 2013).

### **3.1.1 A social theory of learning: *Communities of Practice***

Drawing from the perspectives of these core theoretical foundations, in the early 1990s, Lave and Wenger (1991) developed a social theory of learning and introduced the theoretical framework of Communities of Practice. Similar to other social theories, in their social theory of learning, learning is fundamentally viewed as embedded in the social interactions among individuals (Lave & Wenger, 1991). The theory is grounded in the premise that learners are social beings and that learning takes place through participation in communities of practice where individuals are able to interact with each other (Wenger, 1998). Wenger (1998)

postulated that “communities of practice are everywhere” (p. 6) and come in a variety of different shapes and forms. However, he also emphasised that not all communities are communities of practice and distinguished them from other types of communities such as communities of interests. Wenger et al. (2002) defined communities of practice as “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 4). More specifically, Wenger et al. (2012) suggested that communities need to possess three core characteristics (i.e., “domain” “community,” and “practice”) to be considered as a community of practice. Communities of practice are not merely groups or networks of friends or colleagues with the same job title, but they consist of individuals who have a “shared domain of interest” (Wenger-Trayner & Wenger-Trayner, 2015, p. 2). The domain is what attracts individuals to come together to form a community in the first place (Mercieca, 2016). The shared domain of interest in a community of practice binds the members together, which creates a sense of belonging and distinguishes the members from non-community members. Members of communities of practice aim to pursue their common interests and goals by discussing, sharing information, and finding solutions to problems together (Wenger, 1998). By collaborating with each other, they develop and maintain “a shared repertoire of resources” (Wenger-Trayner & Wenger-Trayner, 2015, p. 2). In other words, they create a shared practice which Wenger et al. (2002) describe as “a set of frameworks, ideas, tools, information, styles, language, stories, and documents” together (p. 29). Lave and Wenger (1991) also posited that when newcomers join the community of the practice, they first acquire the necessary technical skills, beliefs, rules, and behaviours of the community so that they can eventually contribute in developing the shared repertoire of resources. In theory, through continuous observation and discussions with other members, the newcomer moves from the peripheral of the community to its centre and becomes

accepted as a core member (i.e., an expert) (Radner & Robson, 2012). For learning to take place, newcomers need to go through this process, which Lave and Wenger (1991) called “legitimate peripheral participation (LPP)” in the communities of practice. However, Oguz et al. (2010) noted that not all newcomers fully participate in the community and become experts, and in reality, many remain in the periphery. Wenger et al. (2002) suggested that active “core” members take up 10% to 15% of the total number of members, those who are active but not the “core” members take up 15% to 20%, and the rest are those who are not active. There have even been studies which specifically try to understand the contributing factors for the differences in participation among members in communities of practice (e.g., Baek & Schwan, 2006; Hur & Bush, 2009) (see Section 2.2.1).

Traditionally, when the framework was initially being developed, communities of practice were treated mostly as physical communities where the interactions were in-person at a specific geographical location (e.g., Lave & Wenger, 1991; Wenger, 1998; Wenger et al., 2002). However, as technological advancements have led to the emergence of numerous online communities, Wenger and other scholars have shown that communities of practice can also form online (e.g., Dubé et al., 2005; Watkins et al., 2017). Although members of online communities of practice may interact in-person, the main mode of communication is conducted online (Watkins et al., 2017). In principle, like traditional communities of practice, online communities of practice are formed if the three aforementioned characteristics (i.e., domain, community, practice) are present. Although members of online communities of practice do not generally interact face-to-face, studies have shown that the use of Web 2.0 technologies, such as social networking, forums, and chat rooms, make it possible for online community members to engage with each other and gain mutual trust and a sense of belonging (Mercieca, 2016). However, scholars have also highlighted the issues that arise

due to the specific nature of online communities of practice. For instance, Bourhis et al. (2005) found that some of the online community members' low ICT skills made it difficult for them to interact and engage with others online. Moreover, Haas et al. (2020) noted that one of the main challenges to maintain an online community of practice is to get members to engage with other community members. Although traditional physical communities of practice may similarly struggle with reduced or lack of participation (e.g., Akinyemi & Rembe, 2017), the obstacle seems to be even more relevant in online communities of practice where face-to-face interactions are limited.

### **3.2 Theories of motivation**

As learning is closely related to motivation (Merriam & Bierema, 2013), this section focuses on examining the psychological theories of motivation. Similar to that of learning, motivation is not directly observable (Schunk, 2012). As the construct of motivation involves an intricate interplay of different cognitive, affective, and socio-contextual variables, a unified comprehensive motivation theory is yet to exist (Dörnyei & Ushioda, 2021). As such a single theory is unlikely to develop, a common approach is to take a pluralistic view of theorising the complexities of motivation (Dörnyei & Ushioda, 2021). Hence, the objective of the section is to outline the mainstream motivation theories and connect them to the learning of teachers.

#### **3.2.1 Self-determination theory (SDT)**

One of the most influential motivation theories is Self-Determination Theory (SDT). The theory was formed on the basic idea that individuals are motivated by internal factors, including personal interests, pleasure, and curiosity and external factors, including rewards and grades (Ellis, 2015). Within SDT, three main types of motivation exist, namely intrinsic motivation, extrinsic motivation, and amotivation (Dörnyei & Ushioda, 2021). Ryan and



Deci (2000), who initially put forward the ideas of SDT in the 1980s, defined intrinsic motivation as “the doing of an activity for its inherent satisfactions rather for some separable consequence” (p. 56). To put it simply, an activity is considered to be intrinsically motivating when learners do it because it is enjoyable or fun. On the other hand, extrinsic motivation is “a construct that pertains whenever an activity is done in order to attain some separable outcome (Ryan & Deci, 2000, p. 60). Extrinsically motivated activities refer to the behaviours that are not intrinsically motivated. According to SDT, extrinsic motivation includes four further subtypes, namely external regulation, introjection, identification, and integration, as illustrated in Figure 2 (Ryan & Deci, 2020). The four subtypes of extrinsic motivation reflect the differing degrees of self-determination and are considered to be on a continuum, ranging from external regulation, which is regarded as the least autonomous form of extrinsic motivation out of the four subtypes, and integration, which is regarded as the highest autonomous form (Dörnyei & Ushioda, 2021). External regulation refers to the activities that are motivated entirely from external sources such as rewards and punishments (Ryan & Deci, 2020). For instance, teachers may be motivated to take a course on technology because they will receive a pay raise if they take the course. Moreover, introjected regulation, the second type of extrinsic motivation, refers to the actions that are influenced by externally-driven forces, such as accepted norms and opinions of others as well as internally-driven pressures to enhance one’s self-esteem or reduce guilt, anxiety, or shame (Ryan & Deci, 2020). An example would be teachers may spend a lot of time learning about technology because they do not want to be seen as a teacher who cannot use technology and be looked down on by his or her colleagues. In identified regulation, the second least controlling form of extrinsic motivation, the individual acts on something because he or she values the action and finds it useful (Ryan & Deci, 2020). For example, a teacher may attend a workshop to learn about technology because being able to efficiently

use technology is important to him or her personally. Finally, integrated regulation, which is the most similar form of extrinsic motivation to intrinsic motivation, is when the individual values the activity highly and engages in it because it aligns with his or her overall values and goals (Ryan & Deci, 2020). Teachers may be motivated to learn how to use technology so that they can become a teacher who can promote their students to become global citizens through the use of technology. As shown in the far left of the continuum on Figure 2, SDT also acknowledges amotivation as the third type of motivation. Ryan and Deci (2000) described it as the state of motivation when the individual lacks the intention to act. In other words, amotivation occurs when the individual does not have any form of extrinsic or intrinsic motivation to engage in an action.

**Figure 2**

*Self-Determination Theory's Taxonomy of Motivation*

| Self-Determination Theory's Taxonomy of Motivation |  |  |   |   |  |  |
|--|--|--|---|---|--|--|
| Motivation   | AMOTIVATION  | EXTRINSIC MOTIVATION   |   |   |  | INTRINSIC MOTIVATION   |
| Regulatory Style                                   |  | External Regulation  | Introjection  | Identification  | Integration  |  |
| Attributes   | <ul style="list-style-type: none"> <li>Lack of perceived competence,</li> <li>Lack of value, or</li> <li>Nonrelevance</li> </ul> | <ul style="list-style-type: none"> <li>External rewards or punishments</li> <li>Compliance</li> <li>Reactance</li> </ul> | <ul style="list-style-type: none"> <li>Ego involvement</li> <li>Focus on approval from self and others</li> </ul> | <ul style="list-style-type: none"> <li>Personal importance</li> <li>Conscious valuing of activity</li> <li>Self-endorsement of goals</li> </ul> | <ul style="list-style-type: none"> <li>Congruence</li> <li>Synthesis and consistency of identifications</li> </ul> | <ul style="list-style-type: none"> <li>Interest</li> <li>Enjoyment</li> <li>Inherent satisfaction</li> </ul> |
| Perceived Locus of Causality                       | Impersonal   | External   | Somewhat External   | Somewhat Internal   | Internal   | Internal   |

Internalization →

Note. From the Center for Self-Determination Theory © 2017. Reprinted with permission.

**Note.** Source from Ryan & Deci (2020, p. 2)

SDT, which views the three key types of motivations as a continuum, emphasises that extrinsically motivated goals and actions may be “socialised and gradually internalised” (Dörnyei & Ushioda, 2021, p. 17). According to Ryan et al. (2019), the process of

internalisation does not occur automatically but occurs when three fundamental psychological needs are met: (1) autonomy (i.e., having the feeling that one has a choice and freedom for the action); (2) competence (i.e., having the feeling that one is capable of success and growth); and (3) relatedness (i.e., having a sense of attachment to a community and connection to others). An impediment to any of these three needs is thought to have a negative influence on motivation and well-being (Ryan & Deci, 2020). In other words, learners need to learn in an environment where they can feel autonomous, competent, and a sense of belonging and connection (Dörnyei & Ushioda, 2021). Accordingly, from a STD perspective, it is important for CALL teacher preparation to take into consideration these three basic needs to enhance the learning and well-being of teachers.

### **3.2.2 Expectancy-value theory**

Expectancy-value theory, which was initially proposed by Atkinson (1957; 1964) and further developed by Eccles and other colleagues (e.g., 1983), is another dominant framework for understanding the complex construct of motivation. The basic multiplicative formula underlying the theory is: “motivation = expectancy × value” (Dörnyei & Ushioda, 2021, p. 18). A central notion to the theory is that motivation for a certain action is influenced by two main factors, namely, expectancy and value. As explained by Dörnyei and Ushioda (2021), expectancy refers to the likelihood that the desired outcome will be achieved through a given action, and value refers to the worthiness of the wanted outcome. According to the theory, the more the individual believes that the action can be done successfully and the more the individual places value on the outcome of the action, the more motivated the individual will be towards engaging in the action (Wigfield et al., 2004). Hence, teachers may be motivated to learn about technology because they believe that they are capable of being a high-level user of technology and because it is vital for his or her career advancement.

On the other hand, if teachers do not feel that they would be able to acquire knowledge and skills necessary to be a proficient user of technology and do not see the value in using technology, they would be less motivated to learn.

Extending on Atkinson's (1957, 1964) basic ideas from the earlier forms of expectancy-value theory, Atkinson added two more components in his later framework (Atkinson & Raynor, 1974). According to Dörnyei and Ushioda (2021), the added contrasting components are: (1) need for achievement and (2) fear of failure. This framework posits that individuals who have a high need for achievement are motivated to work towards a goal that they know that they can successfully attain. Moreover, those who have a high fear of failure are likely to be motivated to work towards an easily attainable goal because they are afraid of failing. Although most individuals hold both types of needs, the achievement-related choices are more likely to be influenced by the need which is more dominant (Hsieh, 2011)

The current form of expectancy-value theory is largely guided by Eccles and Wigfield (e.g., 2000, 2020), though the basis originates from the ideas developed by Atkinson. Unlike Atkinson who viewed the components of his model as objective quantities (e.g., probabilities of success), Eccles and Wigfield viewed them as more of subjective entities (Dörnyei & Ushioda, 2021). Instead, Eccles and Wigfield (2000) referred to the components as expectancies for success and subjective task value in their model. Expectancies for success refers to learners' "beliefs about how well they will do the upcoming task" (Eccles & Wigfield, 2000, p. 70), which are influenced by how learners perceive their own ability as well as how they interpret their previous performance. As suggested by Dörnyei (2001), one of the ways to increase learners' expectancies for success is to provide learners with sufficient preparation and support. The relevance of this to the current study is obvious:

Language teachers may be motivated to use technology in their classes if they are well-prepared and have someone or place (e.g., online communities) they can rely on for assistance.

According to Eccles and Wigfield (2000), subjective task value, another vital component in their model, consists of four further subcomponents, that is, attainment value (i.e., how much value the individual places on doing well on a specific task), intrinsic value (i.e., how much enjoyment and interest the individual has from doing the task), utility value or usefulness (i.e., how much the task fits into the individual's future schedule and goals), and cost (i.e., the negative consequences of the task, including loss of time, added efforts, and heightened emotional burden). Overall, the complex interplay of these four subcomponents results in the value of the task (Dörnyei & Ushioda, 2021). In their perspective, one of the best-case learning scenarios in CALL teacher preparation would be if the teachers believe that they are capable of learning about technology for teaching purposes and ultimately mastering the necessary skills and knowledge to use technology for teaching purposes successfully (i.e., expectancies of success). It is also essential for teachers to believe that the learning is important, interesting, and enjoyable, fits well into their set schedule and goals, and does not interfere much with other work and personal-related matters (i.e., subjective task value).

### **3.2.3 Self-efficacy theory**

Closely associated with the concept of expectancies of success from expectancy-value theory (Eccles & Wigfield, 2000), self-efficacy theory which was originally developed by Bandura (e.g., 1977, 1997) is also regarded as one of the prominent theories to explain the complex construct of motivation. Bandura (1977) proposed that self-efficacy, which he described as individuals' beliefs in their capabilities to accomplish a given task, is a central

component in determining individuals' motivations to initiate a task, put effort into the task, and continuously perform the task. Individuals with a strong sense of self-efficacy in a certain area are likely to be motivated to undertake a task, spend more time and effort on it, and continue on with it even in difficult situations (Dörnyei & Ushioda, 2021). On the other hand, those who have a low sense of self-efficacy are likely to focus on their own weaknesses and shortcomings and be easily intimidated by undertaking difficult tasks. Even if they undertake the tasks, they are also prone to giving up more easily (Dörnyei & Ushioda, 2021).

In the perspective of self-efficacy theory, an individual's self-efficacy is formed based on a number of sources. Bandura (1997) posited that mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states are the four main sources of self-efficacy: Firstly, mastery experiences refer to the personal experiences of accomplishment. Successful experiences are considered to heighten mastery experiences, which can ultimately lead to a stronger sense of self-efficacy. On the other hand, repeated experiences of failure prompts mastery experiences to be reduced, which results in a lower sense of self-efficacy. Secondly, vicarious experiences, which are gained from observing others, are another source of self-efficacy. Observing others who perform successfully at a similar task can lead to a stronger sense of self-efficacy. On the other hand, if individuals witness others who fail at a similar task, they are likely to have a lower sense of self-efficacy. Thirdly, through verbal persuasion, which includes words of encouragement and praise, individuals are convinced by others that they are capable of achieving a given task and enhance their self-efficacy. Finally, individuals' physiological (e.g., sweating, fatigue, shaking) and affective states (e.g., anxiety) can influence their sense of self-efficacy. Hence, individuals can improve their efficacy beliefs through enhancing their physical and mental well-being. The relevancy of self-efficacy theory to CALL teacher preparation is obvious: Enhancing

language teachers' efficacy beliefs by taking into consideration the aforementioned four major sources of self-efficacy will ensure their learning.

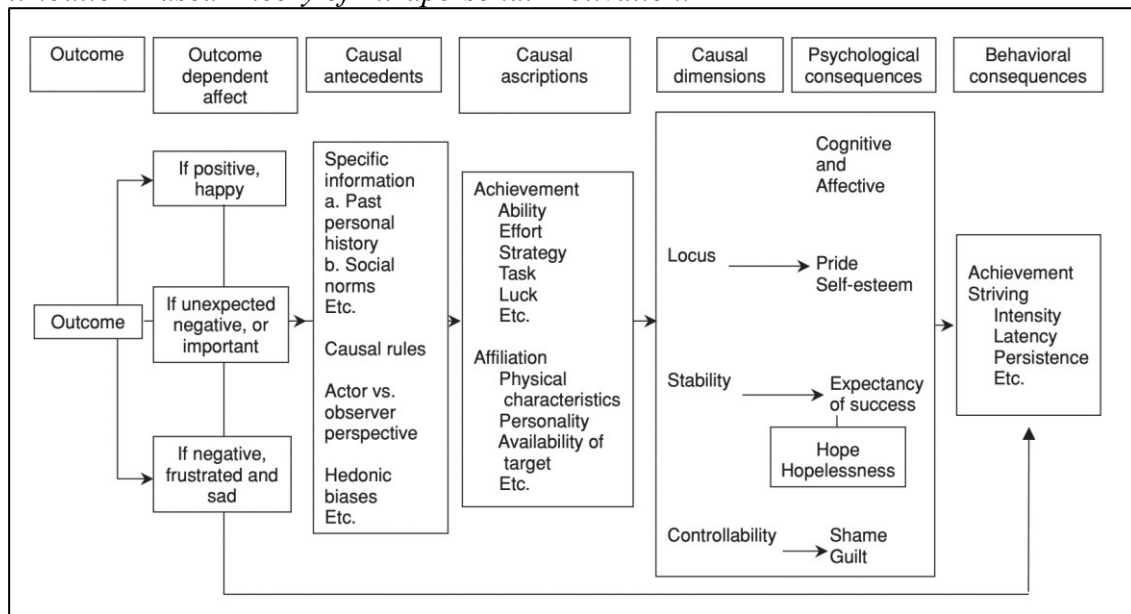
#### **3.2.4 Attribution theory**

Attribution theory, which is also closely linked with SDT, Atkinson's achievement theory and expectancy-value theory, is considered to be another mainstream motivation theory (Weiner, 2010). The foundations of the theory are largely influenced by the works of Heider (e.g., 1958) and Weiner (e.g., 1986, 2010). Although the theory has undergone several revisions over the years since it was first proposed in the second half of the 20th century, the core notion of the theory has remained unchanged (Wiener, 2010). The theory postulates that individuals' future behaviours are influenced by their attempt to understand the factors contributing to their past successes and failures (Dörnyei & Ushioda, 2021). Typical factors underlying the individuals' behaviours (i.e., attributions) in learning environments include "ability," "effort," "task difficulty," "luck," "mood," "family background," and "help or hindrance from others" (Dörnyei & Ushioda, 2021, pp. 22–23). Wiener (1995) suggested that individuals try to understand such causes of behaviours based on three main dimensions (i.e., locus, stability, controllability). Locus, which was originally adapted from the construct put forward by Rotter (1966), is generally understood as the degree to which individuals believe that the cause of the behaviour is external or internal-related. The second dimension, stability, refers to whether or not the cause of the behaviour is continuously stable over time. Finally, controllability, the third dimension, refers to whether or not the cause of the behaviour is controllable.

Attribution theory also considers the psychological consequences (e.g., emotions) of specific causal attributions. For instance, Weiner (2010) suggested that the three main dimensions

(i.e., locus, stability, controllability) are closely associated with different emotions: (1) the locus dimension is connected to pride and self-esteem; (2) the stability dimension is connected to the feeling of hope and hopelessness; and (3) the controllability dimension is connected to the feeling of shame and guilt. As indicated in Figure 3, Weiner (2010) viewed motivation as a sequential process, including a process of attributions and emotional reactions. For instance, when an individual fails an exam, he or she may feel unhappy. Because he or she feels unhappy, the individual may try to find the reasons for the negative outcome. If an individual blames the negative outcome on his or her low ability, it means the cause of failing the exam is attributed to an internal, stable, uncontrollable factor, which may lead to a lower sense of self-esteem and the feeling of hopelessness, shame, and guilt. Such negative emotions may in turn hinder the motivation to work hard in the future. On the other hand, if an individual blames the negative outcome on his or her lack of preparation the night before the exam, the cause of failing is attributed to an external, unstable, controllable factor. Although the negative outcome may lead to a feeling of a lower sense of self-esteem, shame, and guilt, since the individual believes that outcomes in the future will be positive if more effort is put in, the individual is likely to be motivated to work harder in the future (Weiner, 2010).



**Figure 3***Attribution-Based Theory of Intrapersonal Motivation.*

**Notes.** Source from Wiener (2010, p. 34)

All in all, in the context of CALL teacher preparation, attribution theory suggests that the teachers who show high motivation towards learning about technology attribute their successes to internal, stable, controllable causes, and the negative outcomes to be ascribed to external, unstable, controllable causes. On the other hand, those who show low levels of motivation towards learning about technology attribute their successes to external, unstable causes which they do not have any control over, and the negative outcomes to be ascribed to internal, stable causes which they do not have any control over. Based on the core notions of this theory, teacher educators can help teacher learners to understand their own behaviours and the causes of particular outcomes. They can then persuade teacher learners to attribute their learning successes and failures to causes like effort which are controllable and internal.

### 3.2.5 Goal theories

Replacing the concepts of “needs” and “drive,” often used in traditional motivation theories, goal theorists pay attention to the links between one’s goals and motivation (Dörnyei &

Ushioda, 2021). One of the prominent goal theories developed in the past three decades is Locke and Latham's (1990) goal setting theory, which proposed that goal setting is closely associated with one's task performance. Locke (1996) viewed goals to have an internal and external aspect. The internal aspect of a goal is the "ideas (desired ends)," and the external aspect is the "object or condition sought (e.g., a job, a sale, a certain performance level)" (Locke, 1996, p. 118). In his perspective, individuals' actions are guided by the ideas in order to achieve the object. Similar to the ideas from expectancy-value theory (cf. expectancy and value), one of the main conceptions of goal setting theory is that when individuals believe that the goal is achievable and important, they devote their time and effort to achieve it (Dörnyei & Ushioda, 2021). Locke (1996) identified five primary findings from past studies about goals in terms of three domains, namely difficulty, specificity, and goal commitment: (1) individuals gain a greater sense of accomplishment when the goal is more difficult; (2) individuals' performance is more accurately accomplished when the goals are clearer and more defined; (3) individuals' performance is most enhanced when the goals are defined and challenging; (4) individuals commit to goals when they are defined and challenging; and (5) individuals commit to the goals the most when they believe that the goal is important and achievable. These five main findings illustrate how goal setting is an essential aspect of achieving success. In relation to CALL teacher preparation, when teachers are learning about technology in language teaching and learning, it is important for them to set goals which are clearly specified and challenging enough.

Another prominent goal theory relevant to the concept of motivation is goal-orientation theory. Unlike goal setting theory which focuses on the content of the goals, goal-orientation theory focuses on the reasons why an individual chooses a particular goal. As illustrated by Ames (1992), two contrasting goal orientations are primarily discussed in the literature:

Firstly, mastery orientation refers to when individuals are working towards a mastery goal to acquire a new skill or improve their competence (e.g., “I want to learn about technology to become a better version of myself”). In contrast, performance orientation refers to when individuals are working towards a performance goal to prove that their ability, grades, or performance are superior to others (e.g., “I want to learn about technology because I want to become a better teacher than my colleagues”). A fundamental difference between the two orientations is that with a mastery goal, individuals hold the belief that learning will contribute towards their success and achievement, whereas with a performance goal, individuals see learning as a method to reach a goal and gain public recognition (Dörnyei & Ushioda, 2021). According to Ames (1992), in comparison to a performance orientation, a mastery orientation is regarded as a more effective way of enhancing one’s motivation and quality of learning.

Although goal setting theory and goal-orientation theory are the two dominant perspectives within most educational goal research, new perspectives have also been put forward (Dörnyei & Ushioda, 2021). Extending on previous works on goal theories, the multiple goals perspective asserts that individuals are constantly juggling multiple goals at the same time in their lives (Neal et al., 2017). In the context of CALL teacher preparation, teachers are likely to hold multiple goals, including goals aimed to learn about technology and other teaching related skills and knowledge and other personal goals which are not necessarily directly related to their work. Wentzel (e.g., 2000, 2007) who predominantly focused on examining learners’ multiple goals in educational settings suggested that learning goals are affected by a number of parallel goals, including “social goals (e.g., to make friends or to maintain solidarity with peers)” (Dörnyei & Ushioda, 2021, p. 27). As individuals typically simultaneously work on attaining multiple goals (Unsworth et al., 2014), the dynamic

interplay of pursuing multiple goals has been increasingly the subject of research (e.g., Neal et al., 2017).

### **3.3 Summary**

The fact that multiple learning theories currently exist illustrates the multifaceted nature of the concept of learning. Although the current study takes the stance that various learning practices exist for teachers, the main focus of the study is concerned with how teachers are learning through (online) communities of practice. Hence, the first half of the chapter focused on outlining Lave and Wenger's (1991) theoretical framework of Community of Practice. In the latter half, as learning is closely connected with motivation, the dominant theories understanding the complex construct of motivation and their ties with the current study were examined in depth. In sum, considering that the current study's foundations are shaped by multiple existing formal theories, this demonstrates the complex nature of the study, and these theories have provided some valuable insights into how teachers are motivated towards using online communities for professional learning purposes. Based on these theories which inform the core premise of the study, the subsequent chapter describes the actual details of the methodology employed for the study.

## Chapter 4. Methodology

The methodology was determined based on the study's aim, research questions, and relevant literature, which were previously articulated. In this chapter, the research design, data collection methods, data analysis techniques, research quality, and ethical issues associated with the study are explained in detail.

### 4.1 Research design

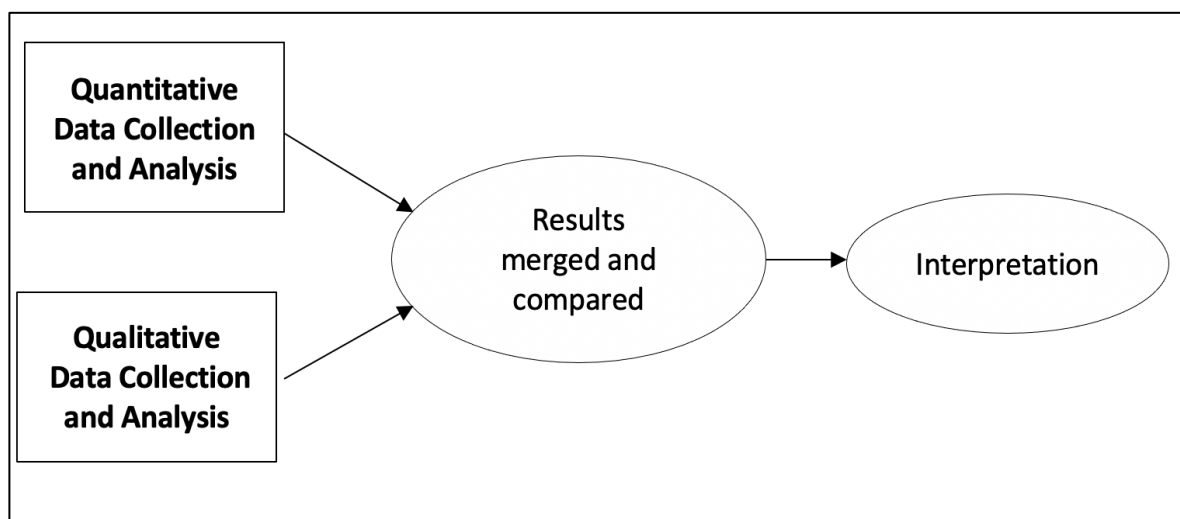
The current study adopted a mixed methods approach, meaning that a combination of quantitative and qualitative data collection and analysis methods was involved throughout the research process (Creswell & Plano Clark, 2007). This approach benefitted the current study in three main ways: Firstly, numerous scholars (e.g., Creswell & Plano Clark, 2007, 2018; Dörnyei, 2007) have pointed out that mixed methods research produces a more complete understanding of a complex phenomenon than either method would alone. For the current study, the quantitative methods were mainly used to identify trends of the nature of the technology-focused language teacher communities on SNSs and the qualitative methods were mainly used to obtain specific details of them. In addition, the potential weaknesses of one method can be overcome by the strengths of another method (Dörnyei, 2007). As no method is completely flawless, the limitations associated with each method can be minimised by mixing quantitative and qualitative methods within a single study. For instance, since data obtained from qualitative methods alone is often criticised for being “too context specific” and data obtained from quantitative methods to be “overly simplistic,” employing two types of methods is thought to neutralise this issue (Dörnyei, 2007, p. 45). A further advantage of mixed methods research relates to the issue of research quality. Through converging and corroborating the results from the two types of methods, it is considered to increase the validity of the study (Dörnyei, 2007). That is, the results obtained from the

quantitative methods can be validated with the results obtained from the quantitative methods, which ultimately creates a more solid interpretation (see Section 4.5).

Out of the three major types of mixed methods design, that is, the convergence design, the explanatory sequential design, and the exploratory sequential design, described by Creswell and Plano Clark (2018), the current study followed the convergence design. According to Creswell and Plano Clark (2018), this design is used when “the researcher wants to compare quantitative statistical results with qualitative findings for a complete understanding of the research problem” (p. 68). As illustrated in Figure 4 which outlines the design procedures of “the Convergence Design” (Creswell & Plano Clark, 2018, p. 66), after collecting and analysing the quantitative and qualitative data separately, the overall results were interpreted through converging and corroborating the data sets.

**Figure 4**

*The Convergence Design*



**Note.** Source from Creswell & Plano Clark (2018, p. 66)

## 4.2 Data collection

Three main data collection instruments were employed in the study. Firstly, a technology-focused language teacher community on Facebook was observed for a period of over two years since October 2018. The posts and comments that were generated by the community members were observed and recorded to identify different types of activities occurring within the community. Secondly, two questionnaires were employed to understand what language teachers in online communities were doing to learn about how to use technology in language teaching and learning and how they were using SNSs for professional purposes in two different time periods. Finally, in order to obtain a deeper understanding of language teachers' views of the different learning methods and experience in learning about how to use technology in language teaching and learning, interviews with language teachers in online communities, including members from the observed Facebook community, were conducted.

As existing literature on self-organised online teacher communities before 2019 has predominantly used questionnaires, interviews, and online observations of communities, these data collection instruments were deemed most suitable (see Table 1). Unlike studies which relied upon a single data collection method (e.g., Bissessar, 2014; Carpenter & Krutka, 2015; Duncan-Howell, 2010), the current study employed multiple data collection methods. Through the use of questionnaires and interviews, it was possible to examine language teacher communities on SNSs from a teacher's point of view, and the online observation offered "a more nuanced perspective" (Curwood & Biddolph, p. 88). In the following sections, each of these data collection instruments are thoroughly described:

**Table 1***Overview of Key Studies on Online Teacher Communities*

| Study                     | Online platform | Main methods  | Length of observation   |
|---------------------------|-----------------|---|---|
| Bissessar (2014)          | Facebook        | Interviews with group administrators (n=4) and group members (n=22)   | No observation  |
| Britt & Paulus (2016)     | Twitter         | Observations of education related tweets<br>Interviews<br>Archival documents  | A total of seven hours and eleven minutes of observations (five days) |
| Carpenter & Krutka (2014) | Twitter         | Questionnaire (n=755)   | No observation  |
| Carpenter & Krutka (2015) | Twitter         | Questionnaire (n=494)   | No observation  |
| Curwood & Biddolph (2018) | Twitter         | Questionnaire (n=64)<br>Semi-structured interviews (n=8)<br>Observation of education related tweets (n=530)   | Not specified   |
| Davis (2015)              | Twitter         | Archived Twitter data (n=15,120)<br>Interviews with teachers who participated in the discussions on Twitter (n=19)<br>Twitter bio and Tweet data of the 19 interviewees | 3 months of archived data   |
| Kelly & Antonio (2016)    | Facebook        | Phase 1:<br>Observation of posts and comments shared in a Facebook group for teachers<br>Phase 2:<br>Observation of the same group and four additional groups           | Phase 1: 12 weeks<br>Phase 2: One week                                |
| Patahuddin & Logan (2019) | Facebook        | Observation of Facebook responses to four posts about mathematics examples (n=117)  | 10 days   |
| Rutherford (2010)         | Facebook        | Analysis of 1867 discussion posts of a Facebook group   | One year  |
| Wesely (2013)             | Twitter         | Participant observation of interactions among language teachers using specific hashtags<br>Interviews (n=9)   | At least two years  |
| Yildirim (2019)           | Facebook        | Observation of posts shared in a Facebook group for mathematics teachers (n=2442)<br>Interviews (n=14)  | One month   |



#### 4.2.1 Online observations

Observation is considered to be one of the most common data collection instruments used in social science research (Lewis-Beck et al., 2004). The main aim of this data collection instrument is to “generate first-hand reports: to see, hear, feel, and ‘be there’ personally” (Wästerfors, 2018, p. 314). Unlike self-report measures like questionnaires and interviews which rely on what respondents say they do, observation allows researchers to directly examine the targeted phenomenon (Dörnyei, 2007). Researchers are able to obtain “a more objective account of events and behaviours than second-hand self-report data” (Dörnyei, 2007, p. 185).

With the advent of the Internet, individuals’ lives do not only exist in the physical world, but their lives have also been extended to the online world. In recent years, there has been an increase of observation data being collected via the Internet (Bryman, 2016). In existing literature on online communities, a number of researchers have been observing teacher communities formed online (e.g., Britt & Paulus, 2016; Curwood & Biddolph, 2018; Hur & Brush, 2009; Wesely, 2013). To obtain an in-depth understanding of what is happening in technology-focused language teacher communities on SNSs, the current study predominantly observed one Facebook community for an extended period of time.

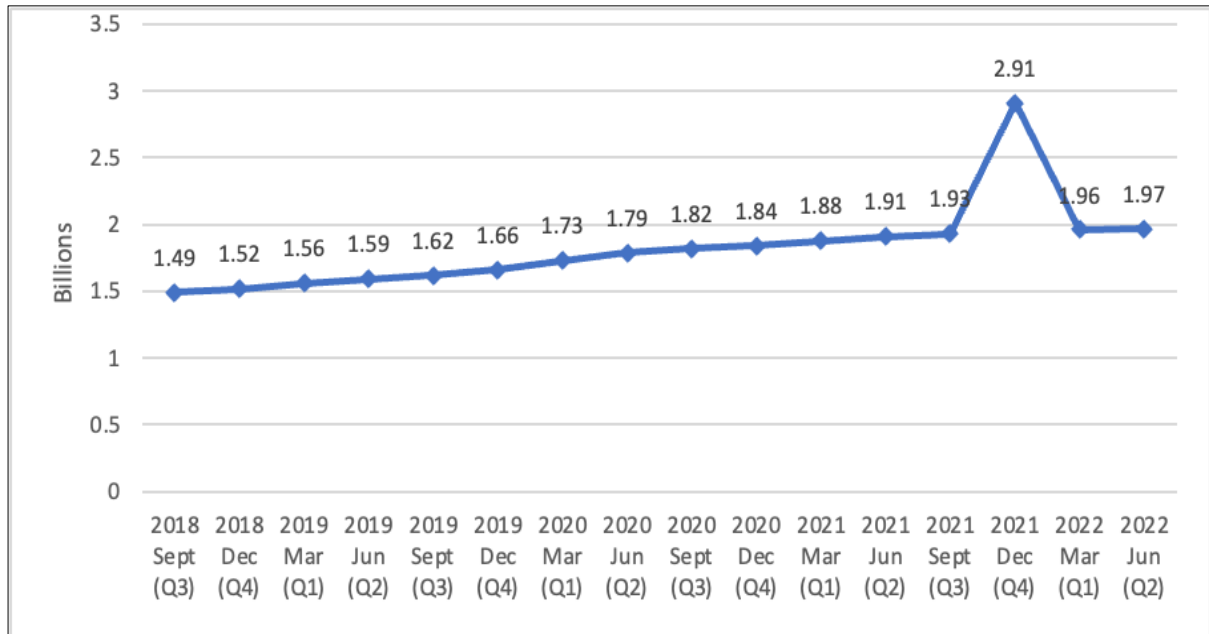
##### ***Facebook as a research context***

Founded in 2004, Facebook was originally limited to students attending Harvard University, but since 2006, it has been made accessible to the general public. With currently close to two billion Daily Active Users (DAUs), Facebook has been considered to be one of the most popular SNSs in the world (Meta, 2022). As shown in Figure 5, the past three years have witnessed a notable increase in the number of DAUs on Facebook, most likely due to the COVID-19 pandemic. Specifically, there were roughly 1.49 billion DAUs in the third

quartile of 2018 when the current study had first begun, and three years later in the third quartile of 2021, there has been an additional 440 million DAUs.

**Figure 5**

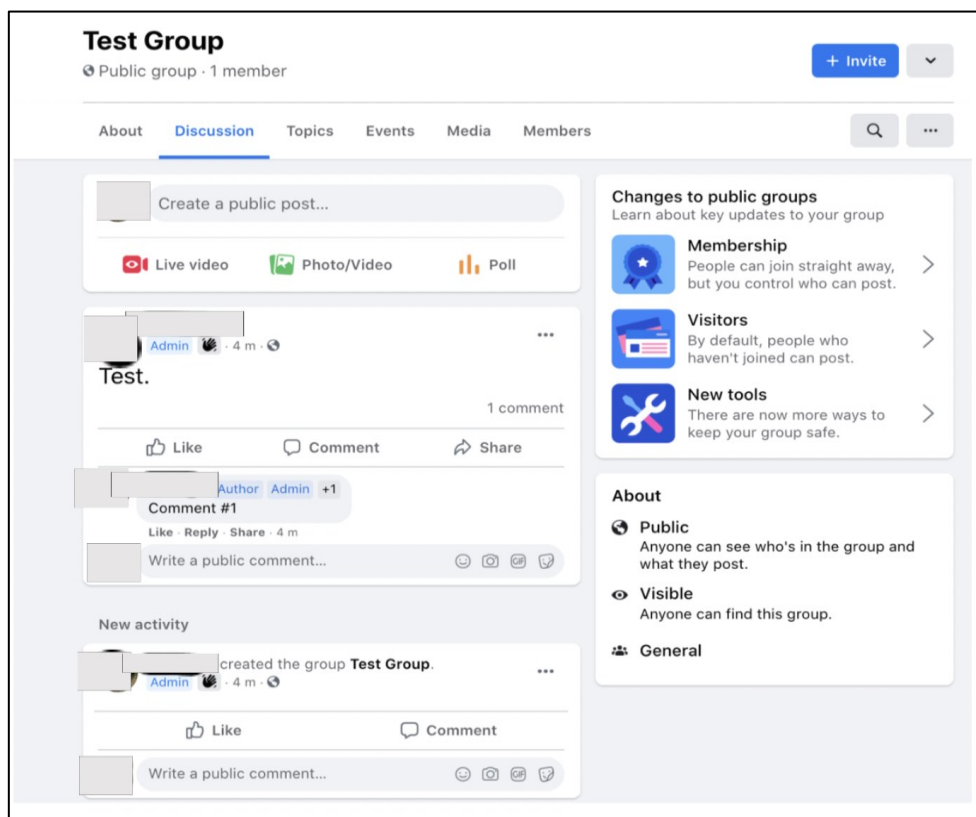
*Number of Daily Active Users (DAUs) on Facebook*



**Note.** Source from the quarterly reports published by Meta.

As stated on Facebook’s official website, Facebook is used “to stay connected with friends and family to discover what’s going on in the world, and to share and express what matters to them” and their mission is “to give people the power to build community and bring the world closer together” (Meta, n.d.-a). In order to use Facebook, all users need to create an account. Since the platform adopts a real-name policy, users must register under their real name. After completing the registration, they are able to connect with others and join groups which they are interested in. The three main types of groups that exist on Facebook are “public,” “private,” and “secret” groups. Public groups are open to all Facebook users, and the content shared within the groups is visible to anyone, even those who are not a Facebook user. Private groups are searchable on Facebook like public groups, but in order to view the content shared in the groups, users need to become a member. In order to become a member

of a private group, users need to be accepted by the administrators of the group. Unlike public and private groups, secret groups are completely hidden from non-members, and new members can only join if they are invited by group members or administrators. Once accepted into a group, members can write new posts, share photos and videos, create poll questions, and start a live video, as indicated in Figure 6. On each post, they can like it, comment on it, or share it to their friends, though the sharing feature is only enabled in public groups. By pressing the “like” button, users can indicate that they enjoyed the post without leaving a comment. In early 2015, the “like” button was redesigned to add five new ways to react to a post or comment, including “love,” “haha,” “wow,” “sad,” and “angry.” More recently, in 2020, Facebook added the “caring” reaction to show their support during the COVID-19 pandemic. Facebook frequently updates its platform, with the interface, features, and the site’s app are constantly under development. The redesign of the “like” button was one of the many updates that have occurred since the current study started in 2018. Although there have not been any drastic changes in the basic functions of Facebook since the study had commenced, the dynamic nature of the platform should be noted.

**Figure 6***Preview of a Facebook Group****Primary online community***

A public online community on Facebook for language teachers who have an interest in technology in language teaching and learning was selected for observation. “Facebook community 1 Japan” (a pseudonym, hereafter “FBC-1-JP”) was selected as the primary online community for observation since it met five certain criteria which were developed based on the research questions and existing literature which were described in detail in Chapter 2. Firstly, the aim of the study was to understand what is happening in an online language teacher community where the central discussion is on technology, so the online community for observation needed to fit this description. Secondly, the main language for communication was to be English. Thirdly, the online community was to be found on Facebook since previous research (e.g., Kelly & Antonio, 2016; Rutherford, 2010; Yidirim, 2019) has revealed that many teachers relied on Facebook communities for help with their

teaching. Fourthly, due to ethical and legal considerations, the online community needed to be set as a “public” group (see Section 4.4.2 for further details). Finally, the online community was to be large since larger groups tend to generate more posts and interactions among community members. FBC-1-JP can be categorised as a “large” online community since there are more than 200 members and less than 2000 members (Hur & Brush, 2009). Although “massive” online communities (i.e., those which have more than 2000 members) tend to have more posts and interactions, too much participation and activity in “massive” communities may lead to information overload (Schoberth et al., 2006). Since FBC-1-JP met the five criteria, it was selected as the primary online community for this study. It should however be noted that the selection was not the result of a “truly exhaustive search” (Kelly & Antonio, 2016, p. 143) since the results within the Facebook search engine are biased in favour of the Facebook user conducting the search. The commercial platform takes into consideration such information as the user’s friends, preferences, physical locations, and membership to existing communities on Facebook. Hence, it is expected that if a different user did the same search, the results would have been slightly different.

FBC-1-JP is officially organised by a non-profit organisation in Japan that holds an annual conference related to technology and language teaching and learning. It was created on May 17<sup>th</sup>, 2009, and has over 1000 members as of October 2022. The majority of the community members are language teachers and researchers who are located in Japan, but membership is not limited to only those living in Japan. Since FBC-1-JP is set as a public group, anyone, even those who are not on Facebook can read the posts and comments written by community members, though one must join the group in order to post and write comments within the community.

Using Microsoft Excel, an observation journal has been kept since October 1st, 2018 for a period of 24 months (see Figure 7). The purpose of the observation journal was to keep a record of the content of new posts and comments, number of new posts, and comments, likes, and shares. Since October 1st, 2019, 12 months after the observation started, the number of newly joined members in FBC-1-JP were also recorded for a period of 24 months. As indicated in Table 1, past studies which employed an observation element varied in length of the observation period. Typically, the observation periods were less than four months, with a few studies conducted less than a month (e.g., Patahuddin & Logan, 2019). Wesley's (2013) study was one of the few exceptions that observed an online community of teachers for more than a year, though the study did not examine the actual content shared in the community. In a more recent study, Nelimarkka et al. (2021) examined eight years' worth of content shared in the community. As their study was conducted between 2010 and 2017, the authors were able to automatically collect the content via the Facebook application programming interface (API). However, as Facebook has made it more difficult for academic researchers to access the content shared in their groups using API since 2018, most likely caused by the 2018 Cambridge Analytica data scandal (Tromble, 2021), the current study had to record the content manually. Considering the feasibility of the study and past studies, it was deemed appropriate to observe the community for two years.

Figure 7

*Sample of the Observation Journal*

| Date      | Name | Post  | Number of likes | shares | comments |
|-----------|------|---|-----------------|--------|----------|
| 01-Oct-18 |      | This is not necessarily related to CALL but here is great | 14              | 0      | 4        |
| 02-Oct-18 |      | Full-time teaching position available from 2019 at my     | 3               | 1      | 4        |
| 03-Oct-18 |      | Calling all Japanese teachers of English and other langu  | 4               | 0      | 0        |
| 10-Oct-18 |      | Anyone who is interested in doing a review for            | 9               | 0      | 0        |
| 20-Oct-18 |      | I have a rather obscure request for help ... A reading cl | 0               | 0      | 2        |
| 31-Oct-18 |      | FB Live: Digital tools to enhance writing skills          | 5               | 0      | 2        |
| 01-Nov-18 |      | I'm very pleased to share details of an up-coming JALT    | 16              | 4      | 0        |
| 02-Nov-18 |      | I'm hoping to launch a new Beta version of Apps 4 EFL     | 16              | 2      | 3        |
| 06-Nov-18 |      | s Hey everyone, I am an English teacher in Kyushu and I r | 9               | 2      | 0        |
| 11-Nov-18 |      | Anyone in the Fukuoka area, or looking for a reason to    | 3               | 0      | 3        |
| 14-Nov-18 |      | Searching for an e-learning or similar conference to pro  | 1               | 0      | 9        |
| 17-Nov-18 |      | Hi, does anyone have a good way of testing if a studen    | 3               | 0      | 38       |
| 17-Nov-18 |      | Hi, does anyone have a good way of testing if a studen    | 5               | 0      | 38       |
| 20-Nov-18 |      | Sharing a post from (ONE MONTH TO GO! Don'                | 7               | 1      | 0        |
| 23-Nov-18 |      | Satori Reader is a great graded reader website/app th     | 6               | 0      | 2        |
| 23-Nov-18 |      | is a Special Interest Group (SIG) of                      | 7               | 0      | 4        |
| 26-Nov-18 |      | 25 Tech Tips from ): Automatic closed captior             | 24              | 4      | 6        |
| 27-Nov-18 |      | Hey all! I am starting a study on visual Input Enhancem   | 3               | 0      | 8        |

**Comparison cases**

To test out the repeatability and increase the validity of the study, a cross-case analysis was conducted. In the cross-case analysis, similar language teacher communities on Facebook were examined. The same five criteria developed to select FBC-1-JP were used for the search. Three technology-focused self-organised language teacher communities on Facebook which were opened to the public and were similar in size to that of FBC-1-JP were justified to be used for comparison. Since FBC-1-JP is an online community which is mainly based in Japan, it would have been ideal for the comparison cases to be selected from every continent, but this was not possible due to accessibility and language constraints. In addition to the three comparison cases, a fourth online community was selected for observation since it was revealed from the interviews and questionnaire that many of the FBC-1-JP members joined this community after it was created in March 2020. Since this online community was specifically created for those interested in the use of technology for teaching online during the COVID-19 pandemic, it differs from FBC-1-JP and the other three online communities in this regard. Nonetheless, the commonality of the five online communities is that they all

serve as a place where language teachers can discuss matters related to technology in language teaching and learning. The general information about the six communities is summarised in Table 2. The five comparison communities were observed for a total period of three months (i.e., October 2021–December 2021).

**Table 2**

*General Information about FBC-1-JP and the Comparison Cases*

| Name                    | FBC-1-JP     | FBC-2-EUR        | FBC-3-PK      | FBC-4                   | FBC-5-JP       |
|-------------------------|--------------|------------------|---------------|-------------------------|----------------|
| Number of members*      | 1105         | 1794             | 3475          | 660                     | 2834           |
| Size of the community** | large        | large            | massive       | large                   | massive        |
| Date of inception       | May 17, 2009 | January 15, 2010 | June 29, 2017 | February 12, 2021       | March 29, 2020 |
| Main region             | Japan        | Europe           | Pakistan      | No specific regionality | Japan          |
| Privacy setting         | Public       | Public           | Public        | Public                  | Private        |

**Note.** \*As of January 25, 2022 \*\*Based on Hur & Brush's (2009) categorisation

#### 4.2.2 The initial questionnaire

Questionnaires are “written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers” (Brown, 2001, p. 1). The current study employed a questionnaire due to a number of reasons. Firstly, as illustrated by Dörnyei and Taguchi (2010), questionnaires “can yield three types of data about the respondent: *factual*, *behavioral*, and *attitudinal*” (p. 5). Factual questions are used to find out about the respondents’ background characteristics (e.g., age, gender, occupation) which may be relevant to interpreting the findings from the questionnaire. Behavioural questions are used to find out about respondents’ current and past behaviour. Attitudinal questions are used to find out what respondents think, including their attitudes, beliefs, opinions, interests, and values. Since all



three types of data were needed to address the research questions, it seemed most appropriate to utilise a questionnaire. Secondly, considering the efficiency in terms of time, effort, and financial resources that questionnaires offer (Dörnyei & Taguchi, 2010), it was the most convenient option for gaining as many responses as possible in a short period of time with limited financial resources. Since technological devices and Internet access have become more ubiquitous than ever before, many researchers have been increasingly administering questionnaires online (e.g., Carpenter & Krutka, 2015; Son, 2014). Considering the benefits associated with online questionnaires, for the current study, an online questionnaire was administered. Google Forms, a questionnaire administrating software, was used in this study since it is free, has a user-friendly interface, and allows respondents' answers to be automatically recorded, which allows for the tedious and time-consuming task of data-entering to be skipped. By administering the questionnaire online, it was also possible to reach out to a larger and more diverse participant sample. In other words, the online format enabled language teachers all around the world who would otherwise be difficult to reach to be involved in the study. Furthermore, distributing the questionnaire online enabled questionnaire respondents to stay anonymous, though some of the participants voluntarily wrote their email addresses to indicate that they would be willing to be interviewed (see Section 4.2.3 for further details).

Like with any type of data collection instrument, questionnaires are not without limitations. They have often been criticised for producing superficial results as the questions tend to be simple and most respondents only spend a short period of time to fill them out (Dörnyei & Taguchi, 2010). Although the questionnaire questions need to be clear and straightforward so that everyone can understand them, it is difficult to yield deep and meaningful answers, which may then restrict “the depth of the investigation” (Dörnyei & Taguchi, 2010, p. 7).

Researchers may try to overcome this limitation by adding more questions in general or including more open-ended questions which require longer answers. However, if the questionnaire takes too long to complete, the answers that respondents give may become inaccurate and unreliable (Dörnyei & Taguchi, 2010). Such a questionnaire may also deter respondents from responding to it, which lowers the response rate and threatens the overall quality of the results (Coxhead, 2017).

Bearing in mind the aforementioned caveats, several precautions were taken when constructing and administering the questionnaires for the current study. Firstly, the initial questionnaire included both closed-ended questions and open-ended questions. Closed-ended questions were used because they require less effort from the respondent's side as well as the researcher's side. That is, it is easier for respondents to answer closed-ended questions than open-ended questions, and it is easier for researchers to analyse the results objectively (Dörnyei & Taguchi, 2010). However, closed-ended questions limit the respondents' responses and may even suggest ideas that they might otherwise not have. Hence, instead of only relying on closed-ended questions, several open-ended questions were also employed to add more depths to the answers. Secondly, to reduce questionnaire fatigue, the questionnaires were designed to be within four pages so that it would only take less than 30 minutes to fill out, as suggested by Dörnyei and Taguchi (2010). Overall, the initial questionnaire ended up including only about 30 questionnaire items and took less than 10 minutes to complete. Moreover, to avoid misunderstandings of the questions, the questions were formulated so that they were simple and straightforward. Loaded words, negative constructions, double-barrelled questions, and leading questions were excluded, and the questions were made to be short and concise.

The initial questionnaire questions were formulated based on the focus of the research questions while taking into consideration existing studies in relevant literature (e.g., Carpenter & Krutka, 2018; Curwood & Biddolph, 2013; Duncan-Howell, 2010; Son, 2018). The questions were mainly about the language teachers' background information (e.g., age, nationality, place of living), their technology uses, their ways of learning about technology in language teaching and learning, and their experiences of using Facebook for professional purposes (see Appendix A). To test out the questionnaire items, a pilot study was carried out before conducting the initial questionnaire. In total, 37 language teachers participated in the pilot study, which not only highlighted the problematic and ambiguous questions but also potential problems concerning the data collection and processing stage. Based on the results from the pilot study, the initial questionnaire was fine-tuned and made available from the second week of June 2020 until the end of September 2020.

As language teachers on Facebook were the main target population, the questionnaire was distributed via language teacher communities on SNSs such as Facebook and LinkedIn and a mailing list. After the administrators of the communities approved the questionnaire, the invitations were posted in the language teacher communities. Most of the responses were collected via Facebook ( $n=332$ ), and the other responses were collected via LinkedIn ( $n=77$ ) and a mailing list ( $n=73$ ).

A total of 482 language teachers on Facebook participated in the study, of which approximately 67 percent were female. As Table 3 illustrates, the initial questionnaire respondents were from 78 different countries. The top five common countries of residence were Japan (37.1%), the USA (17.2%), Turkey (3.5%), Malaysia (2.1%), and the UK (1.7%). The wide range of countries of residence seem to reflect the general trend that SNSs

including Facebook are being widely used all over the world. Most of the questionnaire respondents were under the age of 60, most notably in their 30s and 40s (see Table 4). This seems to follow the general trend of SNSs usage that the working age population use SNSs more than the older generation who have retired (Poushter et al., 2018).

**Table 3**

*Questionnaire Respondents' Countries of Residence (n=482)*

| Country of residence   | Frequency |                           |     |
|------------------------|-----------|---------------------------|-----|
| <b>Americas</b>        |           | <b>Asia</b>               |     |
| <b>North America</b>   |           | <b>Central Asia</b>       |     |
| Canada                 | 6         | Kazakhstan                | 1   |
| USA                    | 83        | <b>Western Asia</b>       |     |
| <hr/>                  |           | Azerbaijan                | 1   |
| <b>Caribbean</b>       |           | Georgia                   | 2   |
| Dominican Republic     | 1         | Jordan                    | 2   |
| Puerto Rico            | 1         | Oman                      | 1   |
| <b>Central America</b> |           | Saudi Arabia              | 6   |
| Costa Rica             | 1         | Turkey                    | 17  |
| Guatemala              | 1         | UAE                       | 3   |
| Mexico                 | 5         | <hr/>                     |     |
| <b>South America</b>   |           | <b>Eastern Asia</b>       |     |
| Argentina              | 3         | Hong Kong                 | 2   |
| Brazil                 | 5         | Japan                     | 179 |
| Chile                  | 1         | South Korea               | 3   |
| Colombia               | 3         | Taiwan                    | 1   |
| Ecuador                | 2         | <b>Southern Asia</b>      |     |
| Peru                   | 1         | Afghanistan               | 1   |
| <hr/>                  |           | India                     | 9   |
| <b>Europe</b>          |           | Iran                      | 4   |
| <b>Northern Europe</b> |           | Nepal                     | 1   |
| Denmark                | 2         | Pakistan                  | 6   |
| Iceland                | 1         | Sri Lanka                 | 2   |
| Ireland                | 3         | <hr/>                     |     |
| Finland                | 3         | <b>South-Eastern Asia</b> |     |
| Latvia                 | 1         | Cambodia                  | 1   |
| Sweden                 | 3         | Indonesia                 | 6   |
| UK                     | 8         | Malaysia                  | 10  |
| <hr/>                  |           | Myanmar                   | 2   |
| <b>Eastern Europe</b>  |           | Philippines               | 6   |
| Bulgaria               | 1         | Thailand                  | 3   |
| Moldova                | 1         | Vietnam                   | 3   |
| Poland                 | 3         | <hr/>                     |     |
| Romania                | 6         | <b>Africa</b>             |     |
| Russia                 | 2         | <b>Northern Africa</b>    |     |
| Ukraine                | 1         | Algeria                   | 2   |
| <hr/>                  |           | Egypt                     | 1   |
| <b>Western Europe</b>  |           | Morocco                   | 1   |
| Austria                | 2         | Sudan                     | 1   |
| Belgium                | 2         | Tunisia                   | 3   |
| France                 | 1         | <hr/>                     |     |
| Germany                | 2         | <b>Western Africa</b>     |     |
| Netherlands            | 5         | Benin                     | 1   |
| Switzerland            | 1         | Nigeria                   | 1   |
| <hr/>                  |           |                           |     |
| <b>Oceania</b>         |           |                           |     |
| Australia              | 3         |                           |     |
| Fiji                   | 1         |                           |     |
| New Zealand            | 1         |                           |     |
| Tahiti                 | 1         |                           |     |

**Table 4**  
*Age of Questionnaire Respondents (n=482)*

| Age range | Percentage (%) |
|-----------|----------------|
| 20–29     | 11.2           |
| 30–39     | 24.5           |
| 40–49     | 26.8           |
| 50–59     | 16.8           |
| 60–69     | 5.8            |
| 70–       | 0.4            |

#### 4.2.3 Interviews and post-interview questionnaire

##### *Semi-structured interviews*

To obtain a deeper understanding of how language teachers are learning about technology in language teaching and learning through language teacher communities on Facebook, interviews which “provide a unique access to the lived world of the subject, who in their own words describe their activities, experiences and opinions” were conducted (Brinkmann & Kvale, 2018, p. 10). They brought about numerous benefits to the study: Firstly, since there is a limit to what can be asked in a questionnaire, interviews can be used to add depths and breadth to the results obtained from a questionnaire (Dörnyei, 2007). By conducting interviews with the initial questionnaire respondents, it was possible to ask them about their questionnaire responses in detail. Moreover, interviews are useful in that they allow respondents to answer questions in a conversational format. Since not everyone is comfortable with writing, some may prefer to provide answers verbally (Mackey & Gass, 2016). Furthermore, interviews, particularly semi-structured interviews and unstructured interviews, enable respondents to elaborate on their responses more freely and in a more flexible manner.

Considering the scope of the study, the semi-structured interview format was taken. In a semi-structured interview, it is typically guided by a pre-set of broad questions and prompts, but interviewers are able to ask further questions depending on the responses given (Mackey

& Gass, 2016). As the semi-structured format is open-ended, it leaves room for unexpected perspectives and opinions to emerge during the interview (Dörnyei, 2007). By creating an interview guide, it ensures that “the domain is properly covered and nothing important is left out by accident” (Dörnyei, 2007, p. 137). For the current study, the interview guide was carefully prepared based on the aforementioned initial questionnaire, past studies, and the research questions and was piloted in advance in July 2020 before conducting the main interviews. As suggested by Dörnyei (2007), the interview guide included initial ice-breaker questions, content questions, probes, and final closing questions (see Appendix C). The main content questions were about the ways in which language teachers were using language teacher communities on SNSs, their views towards using them as a source of professional learning, and the ways in which they were using and learning about technology in language teaching and learning.

The interviews were conducted with FBC-1-JP members and other language teachers using other similar online communities on SNSs for professional purposes. All the interviewees were the questionnaire respondents as they were recruited using the questionnaire, so they were all language teachers using Facebook. At the end of the questionnaire, the respondents were asked if they wanted to participate in the interviews, and only those who agreed left their email addresses. An invitation email was sent to the respondents who were willing to be interviewed, and a total of 31 questionnaire respondents took part in the interviews. Among the 31 interviewees, 13 were FBC-1 community members and 18 were language teachers in other similar Facebook communities. Apart from José who was teaching Spanish, the other 30 interviewees were teaching English as a second or foreign language.

As shown in Table 5 which includes details about the FBC-1-JP community members who were mainly asked about their experiences in the online community, all 13 interviewees who were FBC-1-JP members were foreign nationals teaching English in Japan, and the majority of them were from English-speaking countries, which seems to reflect the current demographic of the FBC-1-JP community. The 13 interviewees were living in different parts of Japan: Six were living in the Kanto region (i.e., Tokyo, Kanagawa, Chiba), three were in the Kyushu region (i.e., Fukuoka, Kumamoto), two were in the Kinki region (i.e., Osaka), and two were in the Chubu (i.e., Aichi) region.

**Table 5**  
*Demographic Information of the Interviewees (FBC-1-JP Community Members)*

| Pseudonym (sex) | Date          | Time (mins) | Age group | Nationality                | Place of residence | Number of years teaching | Teaching context                                |
|-----------------|---------------|-------------|-----------|----------------------------|--------------------|--------------------------|---|
| 1. Arthur (M)   | Aug 4, 2020   | 40          | 40-49     | British                    | Osaka, Japan       | 16-20 years              | Private university                              |
| 2. Matthew (M)  | Aug 7, 2020   | 42          | 30-39     | American                   | Osaka, Japan       | 11-15 years              | Private university                              |
| 3. Lucy (F)     | Aug 12, 2020  | 48          | 40-49     | American                   | Tokyo, Japan       | 16-20 years              | Private university                              |
| 4. Aiofe (F)    | Sept 5, 2020  | 120         | 40-49     | Irish                      | Kanagawa, Japan    | 21-25 years              | Private university                              |
| 5. Daniel (M)   | Sept 9, 2020  | 51          | 30-39     | American                   | Tokyo, Japan       | 11-15 years              | Private university                              |
| 6. Hung (M)     | Sept 17, 2020 | 75          | 40-49     | American                   | Kumamoto, Japan    | 11-15 years              | Language School (Business owner)                |
| 7. Seth (M)     | Sept 18, 2020 | 106         | 60-69     | American                   | Aichi, Japan       | More than 30 years       | Private university                              |
| 8. Chiharu (F)  | Jan 21, 2021  | 43          | 50-59     | Australian                 | Fukuoka, Japan     | More than 25 years       | Junior high school/ teacher training programmes |
| 9. David (M)    | Feb 15, 2021  | 41          | 40-49     | British                    | Aichi, Japan       | 16-20 years              | Private university                              |
| 10. Farhana (F) | Mar 18, 2021  | 59          | 30-39     | Malaysian                  | Fukuoka, Japan     | 11-15 years              | Public university                               |
| 11. Rynelle (F) | Apr 8, 2021   | 43          | 20-29     | Trinidadian and Tobagonian | Tokyo, Japan       | 1-5 years                | Private high school                             |
| 12. Lily (F)    | May 28, 2021  | 57          | 40-49     | Australian                 | Chiba, Japan       | 21-25 years              | Private university                              |
| 13. Gemma (F)   | Jun 23, 2021  | 69          | 40-49     | American                   | Kanagawa, Japan    | 15-20 years              | Private elementary school                       |

The 18 interviewees who were non-FBC-1-JP members were living in different parts of the world at the time of the interview (see Table 6). Six were living in Eastern Asia (i.e., Japan,



South Korea), four were in South-Eastern Japan (i.e., Indonesia, Sri Lanka, Thailand), three were in North America (i.e., USA), two were in Europe (i.e., Albania, Netherlands), one was in Central America (i.e., Mexico), one was in South America (i.e., Brazil), and one was in Northern Africa (i.e., Algeria).

It should also be noted that out of the 31 interviewees, the employment statuses of 24 of them were full-time, five were part-time, and two were self-employed. The diverse backgrounds of the interviewees are thought to bring richer insights about language teachers' experiences and perspectives. Further, although the interviewees were asked similar questions in the interviews, the FBC-1-JP members were mainly asked about their experiences of being in the FBC-1-JP community and their views about learning about technology for language teaching purposes through the community. On the other hand, the questions for the non-FBC-1-JP members mainly focused on their experiences and perspectives of using language teacher communities as well as their methods of learning about technology in language teaching and learning.

**Table 6***Demographic Information of Interviewees (Other Facebook Community Members)*

| Pseudonym (sex)   | Date          | Time (mins) | Age group | Nationality | Place of residence    | Number of years teaching | Teaching context          |
|-------------------|---------------|-------------|-----------|-------------|-----------------------|--------------------------|---------------------------|
| 1. Theodore (M)   | Jul 29, 2020  | 56          | 50-59     | Canadian    | Seoul, South Korea    | More than 25 years       | Private university        |
| 2. Mei (F)        | Jul 30, 2020  | 67          | 30-39     | Mexican     | Sinaloa, Mexico       | 1-5 years                | Public university         |
| 3. Mohamed (M)    | Aug 10, 2020  | 51          | 50-59     | Algerian    | Adrar, Algeria        | More than 25 years       | Public university         |
| 4. Johan (M)      | Aug 13, 2020  | 50          | 30-39     | Dutch       | Deventer, Netherlands | 11-15 years              | University                |
| 5. Amelia (F)     | Aug 25, 2020  | 39          | 30-39     | American    | Ohio, USA             | 16-20 years              | Public university         |
| 6. José (M)       | Sept 2, 2020  | 42          | 20-29     | Spanish     | California, USA       | 1-5 years                | Private university        |
| 7. Indah (F)      | Sept 14, 2020 | 37          | 30-39     | Indonesian  | Aceh, Indonesia       | 11-15 years              | High school               |
| 8. Tessah (F)     | Nov 18, 2020  | 61          | 40-49     | American    | Ibaraki, Japan        | 21-25 years              | Private university        |
| 9. Archer (M)     | Nov 19, 2020  | 58          | 40-49     | Australian  | Shizuoka, Japan       | 16-20 years              | Private university        |
| 10. Charlotte (F) | Feb 2, 2021   | 42          | 50-59     | Canadian    | Tokyo, Japan          | More than 25 years       | Private university        |
| 11. Punya (F)     | Feb 8, 2021   | 38          | 30-39     | Sri Lankan  | Colombo, Sri Lanka    | 11-15 years              | Private university        |
| 12. Preedah (F)   | Feb 11, 2021  | 48          | 50-59     | Thai        | Khon Kaen, Thailand   | 16-20 years              | Public university         |
| 13. Chloe (F)     | Feb 17, 2021  | 49          | 40-49     | Canadian    | Saitama, Japan        | 16-20 years              | Private university        |
| 14. Anna (F)      | Feb 22, 2021  | 39          | 40-49     | British     | Chiba, Japan          | 11-15 years              | Self-employed             |
| 15. Carlos (M)    | Feb 25, 2021  | 53          | 30-39     | Brazilian   | Parnaíba, Brazil      | 11-15 years              | Public junior high school |
| 16. Tom (M)       | Mar 3, 2021   | 53          | 30-39     | American    | Arizona, USA          | 11-15 years              | Public university         |
| 17. Zjarra (F)    | May 30, 2021  | 36          | 20-29     | Albanian    | Tierana, Albania      | 1-5 years                | Private language school   |
| 18. Nur (M)       | Jun 3, 2021   | 52          | 30-39     | Indonesian  | Sri Lanka             | 6-10 years               | Private language school   |

All 31 interviews were conducted online using a videoconferencing tool (i.e., Zoom). The main benefit of online interviews is the fact that they can be conducted without the need to travel. Another beneficial aspect is the cost effectiveness of conducting online interviews since travel costs and time can be reduced. Furthermore, conducting interviews online can expand and diversify the target sample since anyone can participate as long as they have the necessary environment to take part in the online interviews (Saarijärvi & Bratt, 2021). As the study was conducted during the COVID-19 pandemic when social distancing measures were imposed and international and domestic travelling was difficult, the only option was to conduct the interviews online. Realistically speaking, if the interviews had been conducted in-person, it would have been close to impossible to interview 31 language teachers from 13 different countries considering the short timeframe and limited funds for the study.

Although there are many positive aspects of conducting interviews online, the negative aspects should be noted as well. One obvious limitation is the dependence on the Internet which can often be unreliable. Internet connectivity issues can cause videos to freeze or get blurry or the audio to lag (Oliffe et al., 2021), which may disrupt the flow of the conversation or cause misunderstandings between the interviewer and interviewee. For the current study, most of the interviews were conducted without any problems, but there were a few instances when such minor technical problems arose. In addition, online interviews can exclude certain individuals from participating. As online video interviews require stable Internet connection, basic equipment, like cameras and microphones, and basic digital literacy skills, some individuals may have opted out from taking part in the study for not having access to reliable technologies and confidence in utilising them. Another obvious but important concern is that online interviews can be easily disrupted due to noise (e.g., nearby traffic, construction work) and other distractions (e.g., parcel deliveries, notifications on computers

and mobiles phones), especially when taking place at one's home or office. Although disruptions can occur even in face-to-face offline settings, online interviews are more prone to these issues as the researcher is unable to control the interviewee's environment to minimise the risks. Despite these issues, the interviews were conducted online as it was the most viable option given the circumstance at the time.

### ***A post-interview questionnaire***

A post-interview questionnaire was conducted in March 2022, approximately one year after the interviews were conducted. The main aims for the follow-up questionnaire were: (1) to see the changes in behaviour with regards to their ways of learning about technology in language teaching and learning and their uses of online language teacher communities and (2) to ask additional questions which arose after all the interview data were analysed. To get the maximum number of interviewees to respond, a questionnaire format was employed instead of conducting a second interview. Taking into account all of the aforementioned precautions when formulating questionnaires outlined in the preceding section, the post-interview questionnaire consisted of a total of 14 main questions, including both closed-ended questionnaire items and opened-ended questionnaire items. The closed-ended questions were mostly followed with an open-ended question asking the respondents to explain their answers. The main questions asked were about the interviewees' expectations of their membership to online language teacher communities, their teaching practice, their uses and views of online communities, and their preferred ways of learning about how to use technology in language teaching and learning (see Appendix D for more details). The post-interview questionnaire was created on Google Forms and was checked for errors and given advice from a colleague who is an expert in the field. An email which requested their participation was sent out to all 31 interviewees in March 2022 and were asked to fill it out

within 3 weeks. In all, 29 interviewees out of 31 participated in the post-interview questionnaire.

#### **4.3 Data analysis**

The study adopted a mixed methods data analysis approach. The data generated from each research instrument were analysed separately and later merged and interpreted together. The main data analysis technique employed was content analysis, which has been commonly used to analyse textual data, such as observation data, interview transcripts, and responses to open-ended questionnaire items (Given, 2008). It can be defined as “a research technique for the objective, systematic and quantitative description of the manifest content of communication” (Berelson, 1952, p. 18). As illustrated in Berelson’s (1952) well-known definition, the data analysis technique originates from quantitative research (Bryman, 2016). However, more recently, content analysis has also been associated with qualitative research (Dörnyei, 2007). Schreier (2013) refers to qualitative content analysis as “the intellectual process of categorizing qualitative textual data into clusters of similar entities, or conceptual categories, to identify consistent patterns and relationships between variables or themes” (p. 120). Quantitative and qualitative content analysis share similarities in that they both involve the systematic coding of the collected data, but the overall aims are different. Quantitative content analysis aims to produce a numerically-based summary (i.e., frequency) of the chosen data set (Neuendorf, 2017). On the other hand, qualitative content analysis is often employed to reduce the amount of the overall data set so that a detailed description of the chosen data can be more easily obtained (Schreier, 2013).

Considering that “quantitative content analysis can be helpful in answering ‘what’ questions, and qualitative content analysis can be helpful in answering ‘why’ questions and analyzing

perceptions” (Given, 2008, p. 120), the term “content analysis” is used in the current study to include both quantitative and qualitative types of content analysis. An inductive approach to content analysis was taken, meaning that the identified codes, categories, and themes derived directly from the entire data set (Kyngäs, 2020).

In the current study, the data analysis process consisted of five main steps: “preparing the data for analysis, exploring the data, analyzing the data, representing the analysis, and validating the data” (Creswell & Plano Clark, 2007, p. 129). The raw data obtained from each of the three data collection instruments were first converted into a form so that the analysis would be conducted smoothly (Creswell & Plano Clark, 2007). The observation data were prepared for data analysis by adding new columns, including “word count,” “pseudonym,” “category,” “sub-category,” “language,” and “cost” in the observation journal kept in the Microsoft Excel file. The questionnaire responses which were collected from Google Forms were downloaded as a Microsoft Excel file. The interview data were prepared by transcribing the text from interviews into a word-processing file. Using Zoom’s audio transcript feature, the recorded interviews were transcribed automatically into a text file. Since automatic transcription software is not fully accurate, the audio transcripts were manually checked and corrected. It should be noted that in the audio transcripts, pauses, and hesitations were not marked as they were not part of the focus of the study. The audio transcripts only included the text of the actual content and timestamps, which were used to identify when a certain text was spoken.

After they were prepared for analysis, the data were explored and analysed. The quantitative data were used to identify broad trends by calculating the descriptive statistics (e.g., mean, range, standard deviations) of the data sets. For the observation data, the descriptive statistics

of the number of members, posts, likes, shares, and comments were calculated, and for the questionnaire and interview data, the descriptive statistics of the closed-ended questions were calculated. The rest of the data (i.e., initial posts, comments from the observation data and the open-ended question responses from the questionnaire and interviews) were coded. Specifically, the coding process consisted of three main phases: (1) pre-coding; (2) initial coding; and (3) second-level coding (Dörnyei, 2007). In the pre-coding phase, the data were read through several times to obtain a broad understanding of the database, and initial thoughts and ideas were noted (Creswell & Plano Clark, 2007). To organise all the codes, a coding frame was created for each of the data sets, and at this stage, a rough outline of the coding frames was developed. In the initial coding phase, any part that was relevant to the research topic was highlighted, and an informative label was added coding (Dörnyei, 2007). In the second-level coding phase, all the codes identified in the initial coding phase were listed and examined if any of the codes needed to be revised coding, and the codes were subsequently categorised into broader themes (Creswell & Plano Clark, 2007).

Once the data were analysed, the summary of results of the analysis were presented (Creswell & Plano Clark, 2007). The quantitative results were summarised in a visual form using tables, charts, and figures. The qualitative results were presented and discussed in terms of the emerged themes and categories. As for the final step, the quality of the data and results were taken into consideration (see Section 4.5 for further details).

#### **4.4 Ethical considerations**

Any type of social research which involves people's lives requires careful considerations of research ethics (Dörnyei, 2007). Since this study closely examined language teachers' lives,

experiences, and perceptions, the following section describes the ethical issues and dilemmas associated with the current study.

#### ***4.4.1 Ethical issues and dilemmas in social research***

Most ethical guidelines in social research emphasise the need to consider the issue of informed consent (Israel & Hay, 2006). Although many researchers would agree that gaining informed consent is necessary when conducting research, there are varying understandings of what informed consent entails. In general, researchers should ensure that their participants are provided with enough information so that they can make informed and voluntary decisions about whether or not to participate in the research study (Owens, 2010). However, it is debatable whether how much information should actually be disclosed to the participants in order to remain ethical.

In the current study, informed consent was obtained from all the questionnaire respondents and the interviewees but not for the online observations (see Section 4.4.2 for a discussion). The consent forms for the initial questionnaire and post-interview questionnaire included information about the questionnaire, the purpose of the study, the voluntary nature of the study, and how respondents were able to withdraw from the study at any stage (see Appendix A and Appendix D). The consent form was included in the front page of the online questionnaires, and all recipients had the option to either accept or decline the invitation to participate in the questionnaire. The interview consent form was similar to that of the questionnaire but included a permission statement for audio or video recordings of the interviews (see Appendix B). The digital version of the written consent form was emailed to all the interviewees prior to the interview, and the recipients who agreed with the terms were asked to write their full names and email addresses.



Another crucial aspect of research ethics is the importance of ensuring participants' right to remain anonymous and right to confidentiality (Dörnyei, 2007). To protect the participants' privacy, all the collected data went through a de-identification process. All participants were given pseudonyms and any unique information which could be potentially used to identify the participants were excluded. All the collected data were stored in an external SSD device with all identifiable traces removed. To prevent data and security breaches, the SSD device was password protected, and all the data on the SSD device are planned to be erased after the research has been fully completed for a certain period of time.

#### ***4.4.2 Ethical issues and dilemmas in Internet-based research***

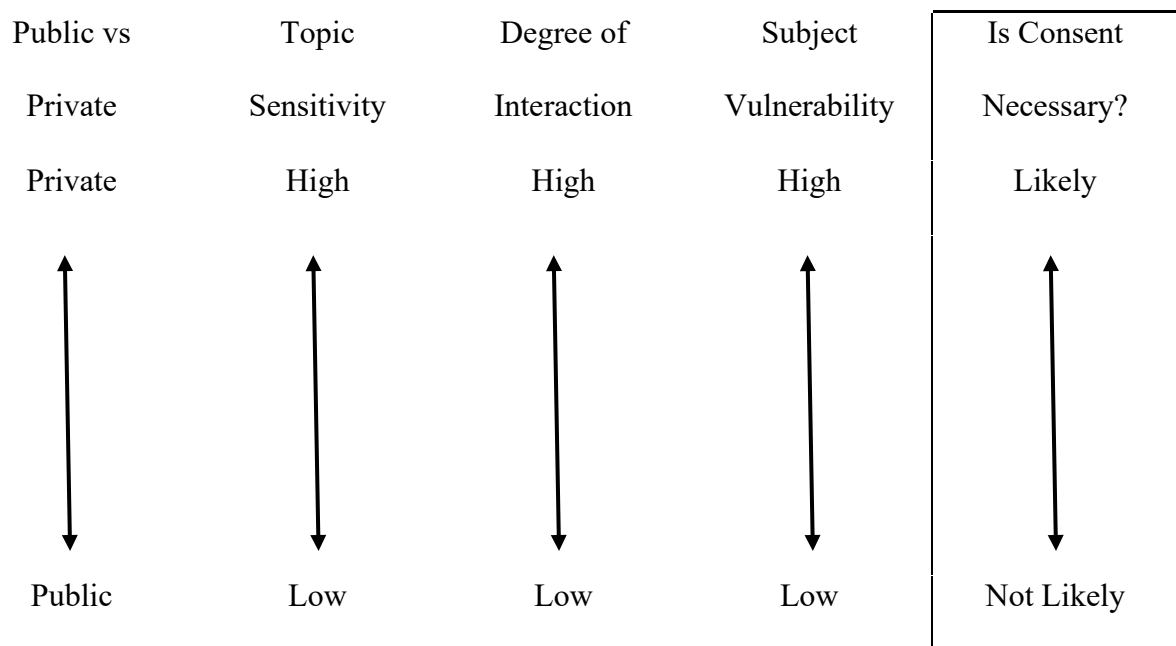
There seems to be a general consensus around the need to take into particular consideration of the ethical issues and dilemmas linked with Internet-based research (Zimmer & Kinder-Kurlanda, 2017). One of the main ongoing debates is on the ethicality of using data obtained from SNSs for research purposes (Bishop & Gray, 2017). When users sign up for an account on an SNS, they often have to accept the online platform's terms of services, which often grants permission for third-party sharing. Facebook is no exception as users are required to agree to Facebook's terms and data policy when they register for an account. Under the terms and data policy, public information, which includes "[a user's] name, Facebook and Instagram username, profile picture and activity on public Facebook Pages and groups," can be seen by the public and is subjected to third-party sharing (Meta, 2022c). On their webpage about privacy policy, Facebook states that they provide information to "external researchers" who "use it to conduct research that advances scholarship and innovation, and to promote safety, security and integrity" (Meta, 2022c). Although it appears that Facebook grants permission to researchers to use the data obtained from its platform if the purpose is for non-

commercial, non-profit research, there are certainly ethical issues which need to be considered.

What users share to the general public on Facebook depends on the privacy settings that they have individually set. Due to the default setting, the content shared by users is accessible to the public, if they do not restrict access to their accounts themselves. Although the users hold the responsibility for choosing on their own where to post and how privately to post, it is questionable whether they are making conscious decisions about their privacy settings. It is also unclear if Facebook users are aware or have considered the ramifications of agreeing to such disclosure for third-party sharing. Therefore, researchers are morally obligated to seek informed consent for data access and analysis even if they are not legally required to (e.g., Woodfield & Iphofen, 2017). However, receiving informed consent from everyone in a large online group is impractical and unrealistic. Contacting each member and waiting for a response is not only time consuming but may also be close to impossible since it is unlikely that users will respond to messages sent by an unknown user. In addition, some would even argue that the act of individually contacting online community members itself may be viewed as an invasion of privacy (Sugiura et al., 2017).

**Figure 8**

*Research Variables Affecting the Question of Whether Informed Consent is Necessary*



**Note.** Based on McKee & Porter's (2009, p. 88) heuristic for determining informed consent in online research.

The current study referred to McKee and Porter's (2009) visual heuristic to determine whether or not informed consent is necessary (see Figure 8). Based on their view, it is ethically justifiable to use data from publicly open online communities without informed consent given that the discussion topics are not sensitive, and the subjects are not particularly vulnerable. Hence, considering that the main online community, FBC-1-JP, is a public Facebook group and the discussion topics are not particularly sensitive and mostly limited to topics pertaining to language teaching and technology, the online observation was conducted without seeking informed consent from the online community members.

It goes without saying that ensuring subjects' privacy and anonymity is important in all research contexts, but it is particularly important to take proper precautions when it comes

to using data collected from the Internet. Breaches of subjects' privacy and anonymity in online research are not uncommon, as found in Dawson's (2014) study which examined the prevalence of such breaches in the educational technology research literature. To overcome such challenges associated with protecting subjects' privacy and anonymity, several measures were taken in this study. Firstly, the names of the Facebook communities and their members were all given pseudonyms. Merely removing the names of the online groups and their members, however, will not suffice. As Zimmer (2010) stresses, researchers need to adopt additional strategies to remove unique traces which may link back to the subjects when describing the subjects' background. Any information which could have been potentially used to identify the individuals were excluded. When describing online posts and interactions, additional precautions were taken. Although directly quoting online posts and interactions can be useful, it is often possible to link direct quotations back to their original sources, especially if they are in the public domain (Robson, 2017). Hence, all identifying information in the quotations were omitted and occasionally paraphrased. The direct and paraphrased quotations were also checked in a variety of search engines to see whether the original sources were traceable.

#### **4.5 Research quality**

In any kind of research study, it is important to ensure its quality. The two concepts, "reliability" and "validity," are widely used to assess the quality of research. Although the concepts originated in quantitative research, they have also been applied in mixed methods research contexts (Dörnyei, 2007). According to Nunan (1992), reliability refers to "the extent to which (a) an independent researcher, on analysing one's data, would reach the same conclusions and (b) a replication of one's study would yield similar results" (p. 231), and validity refers to "the extent to which one has really observed what one set out to observe, and the extent to which one can generalise one's findings from the subjects and situations to

other subjects and situation” (p. 232). In short, the study would be regarded as reliable if the results are consistent under similar circumstances. Studies which have high validity means that the employed instruments and procedure accurately measured what they have intended to measure, which, in turn, indicates that the interpretations and conclusions drawn from the results are trustworthy. Although the threats to reliability and validity cannot be completely avoided, they can be minimised if certain measures are taken (Cohen et al., 2011). The following precautions were taken at different stages of the current study to ensure the reliability and validity of the study.

Before carrying out the data collection methods, the threats to reliability and validity for each data collection instrument were considered. Specifically, in observations, one of the main threats is the presence of the observer (Dörnyei, 2007). As the presence of the observer has the potential of altering the observed subjects’ behaviours (i.e., the Hawthorne effect), when observing FBC-1-JP and the other four communities, apart from posting about the questionnaire invitations, the researcher did not participate in any other way. This was to ensure that the researcher presence was reduced to a minimum to avoid any potential influences on the dynamics of the communities. Moreover, unlike cross-sectional studies, longitudinal studies, which can reveal the dynamic nature of the observed phenomenon over time, are considered to potentially enhance the validity of the inferences drawn from the results (Duff, 2006). Hence, for the current study, the main observation was conducted over two years. As for questionnaires, the reliability and validity may be threatened due to a number of causes, including a small sample size, the wording of the questionnaire questions, and the content, format or length of the questionnaire (Cohen et al., 2011). To address these issues, the main questionnaire was carefully constructed based on the literature (e.g., Dörnyei, 2007; Dörnyei & Taguchi, 2010), and was piloted and refined based on the pilot

study results (see Section 4.2.2). Another way of ensuring the quality of the questionnaire results is by conducting follow-up interviews with the questionnaire respondents (Creswell & Plano Clark, 2007). Similar to that of a questionnaire, interviews also require careful planning and consideration (Brinkmann & Kvale, 2018). As previously indicated, the interview guide was created based on the literature and piloted to identify any potential flaws.

The issues of reliability and validity do not only reside in the data collection process but also in the data analysis process. Although a case-study approach was taken to conduct an in-depth and thorough investigation of the FBC-1-JP community, a cross-case analysis was conducted for a period of three months on four comparison cases, which reinforced greater validity and generalisability (Mills et al., 2010). In addition, the study's quality was improved by incorporating peer checking of the data (Dörnyei, 2007). For the content analysis of the posts shared in the observed online community, a second rater was asked to code and categorise 10% of the initial posts and the replied comments, as recommended by Neuendorf (2008). To measure the extent to which the researcher and the second rater agreed on the codes and categories, inter-rater reliability, which is also referred to as "inter-coder reliability" in the context of content analysis, was calculated (Gwet, 2014, p. 7). The percentage agreement was 77.6%, indicating that there was substantial level of agreement between the main researcher and external coder (Graham et al., 2012). Furthermore, the reliability and validity of the interpretations and conclusions drawn from the findings were verified through triangulation (Cohen et al., 2011; Dörnyei, 2007; Duff 2006). Using multiple data sources to corroborate the findings improves the overall quality of the research.

#### **4.6 Summary**

The methodology of the study was presented in detail in the current chapter. In the first section, the rationale for employing the longitudinal mixed methods research design was outlined. The subsequent sections went on to describe the three main data collection instruments (i.e., online observations, questionnaires, interviews) involved in the study, discussing the benefits and drawbacks of each instrument. Moreover, the details of the participants, including the sample size and their personal information and backgrounds were described. The data collection and analysis procedure were then outlined to illustrate how exactly the data were collected and analysed to answer the study's key research questions. Subsequently, the ways in which the current study dealt with the ethical dilemmas surrounding the use of questionnaires, interviews, and Internet data were extensively discussed. Finally, in the last section of the chapter, the actual methods to ensure the quality of research were stated, touching upon relevant concepts such as reliability and validity. In the subsequent chapter, the results of each of the four data collection methods are described.

## Chapter 5. Results

In this chapter, the main results of the online observations, the initial questionnaire, interviews, and the post-interview questionnaire are described. Structurally, this chapter is divided into four main sections based on the data-collection methods: The first section describes the data collected from the two-year observations of the FBC-1-JP community and three-month observations of the other similar technology-focused language teacher communities. The second section reports on the results of the initial questionnaire which received a total of 482 responses from language teachers around the world. The third section focuses on describing the main themes derived from the results obtained from the 31 semi-structured interviews with FBC-1-JP members and other questionnaire respondents. Finally, the fourth section describes data collected through the post-interview questionnaire which was distributed to all the interviewees approximately a year after the interviews were conducted.

### 5.1 Online observations

The following sections describe the details of the descriptive data (e.g., number of members, posts, and comments), the content analysis of the posts collected in FBC-1-JP during the two-year period, the types of posts shared before and during the pandemic, the users who posted in the community, and the cross-case analysis.

#### 5.1.1 Descriptive data of FBC-1-JP

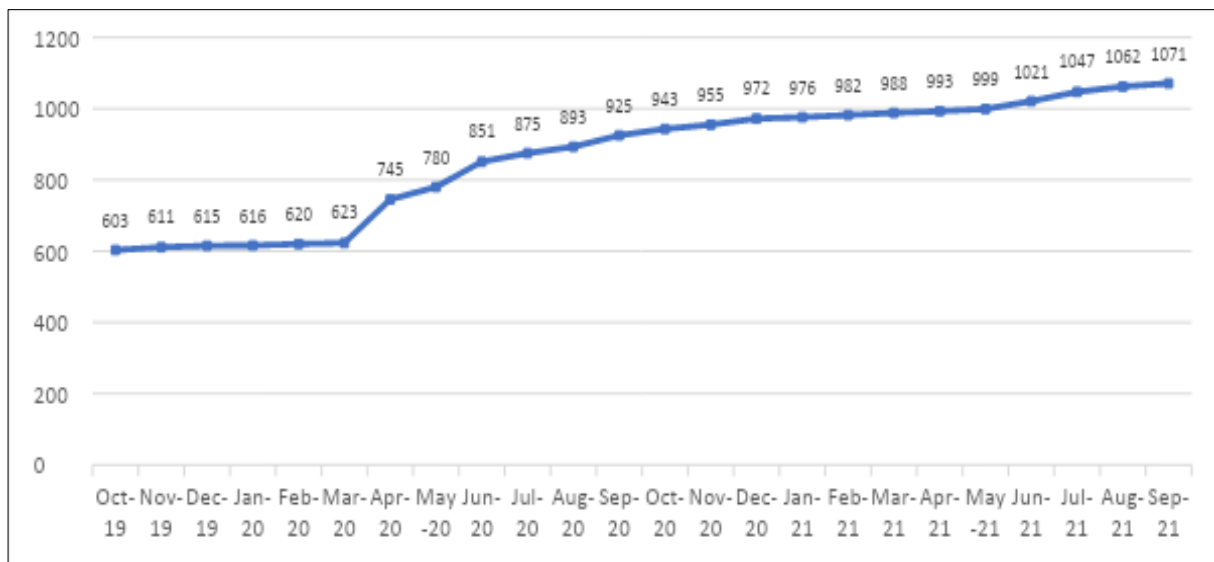
A monthly record of the number of members in FBC-1-JP was kept for 24 months from October 2019. On average, approximately 20 Facebook users joined the community every month. As can be seen in Figure 9, there has been a continuous increase in the number of



people joining FBC-1-JP during the 24-month period. The largest increase in membership occurred during the first wave of the pandemic: An additional 122 people joined FBC-1-JP in the period between March 2020 and April 2020. After the peak period between April 2020 and June 2020, there was a gradual decrease in the number of members joining the community each month. However, the average monthly increase of members for each quarter still seemed to be higher than the same period in the previous year in 2019 (see Table 7), which seems to be indicating that the popularity of the community was still growing, although it may not be as popular as the peak time in the second quarter of 2020.

**Figure 9**

*FBC-1-JP Membership Growth*



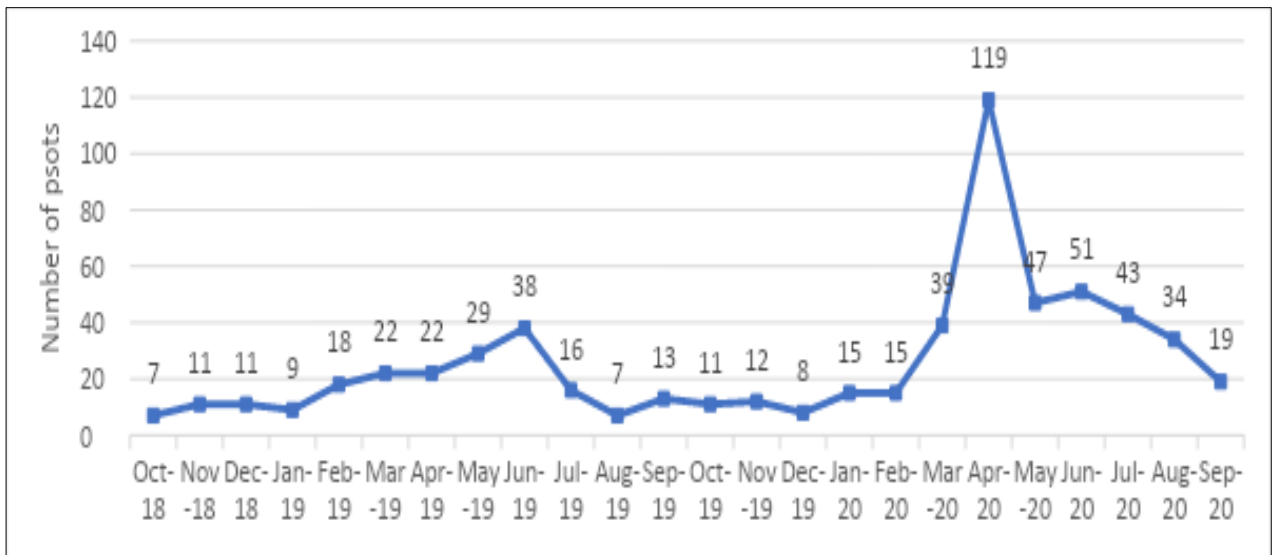
**Table 7**

*Quarterly Membership Growth*

| Period             | Average increase of members per month |
|--------------------|---------------------------------------|
| 2019 Oct–Dec (Q4)  | + 5.00                                |
| 2020 Jan–Mar (Q1)  | + 2.67                                |
| 2020 Apr–Jun (Q2)  | + 42.7                                |
| 2020 Jul–Sept (Q3) | + 24.7                                |
| 2020 Oct–Dec (Q4)  | + 15.7                                |
| 2021 Jan–Mar (Q1)  | + 4.67                                |
| 2021 Apr–Jun (Q2)  | + 11.0                                |
| 2021 Jul–Sept (Q3) | +16.7                                 |
| 2021 Oct–Dec (Q4)  | +20.7                                 |

**Figure 10**

*Number of Posts per Month in FBC-1-JP*



In the two-year period, a total of 616 initial posts (i.e., a monthly average of 25 initial posts) were shared in the FBC-1-JP community. Similar to the observation of the number of FBC-1-JP members, the month which had the biggest increase of initial posts was also in April 2020 (see Figure 10). In March 2020, there were 39 posts in total, and in April 2020, there was an increase of 80 posts. In the following month, there were 72 less posts than the previous month. The majority of the initial posts (94.5%) written in the two-year period had at least one like, share, or comment. As indicated in Table 8, the response rates of each post at the start of COVID-19 pandemic (i.e., March 2020–May 2020) and during the COVID-19 pandemic (i.e., June 2020–September 2020) were more or less the same as the previous year’s response rates. At the start of COVID-19 pandemic (i.e., March 2020–May 2020), the average number of comments for each post increased by 56.7% in comparison to the same time in the previous year.

**Table 8a**

*Descriptive Statistics of the Posts and Responses Before and During the COVID-19 Pandemic*

| Period   | Average number of posts per month | Response rate per post (i.e., at least one like, share, or comment) | Average number of likes per post | Average number of shares per post | Average number of comments per post |
|--|-----------------------------------|---|----------------------------------|-----------------------------------|-------------------------------------|
| October 2018–<br>September 2020                  | 25                                | 94.5%   | 7.48                             | 0.93                              | 4.94                                |
| Mar 2019–<br>May 2019<br>(Before the pandemic)   | 27.5                              | 94.6%   | 6.35                             | 0.95                              | 4.66                                |
| Jun 2019–<br>Sep 2019<br>(Before the pandemic)   | 18.5                              | 94.7%   | 8.34                             | 0.85                              | 3.59                                |
| Mar 2020–<br>May 2020<br>(Start of the pandemic) | 68                                | 95.1%   | 7.48                             | 1.00                              | 7.30                                |
| Jun 2020–<br>Sep 2020<br>(During the pandemic)   | 36.5                              | 92.7%   | 8.39                             | 0.91                              | 4.06                                |

### **5.1.2 Content analysis of initial posts shared in FBC-1-JP**

Out of all 616 initial posts which were posted during this period, 459 posts (74.3%) were about sharing information or resources and 149 posts (24.2%) were about asking for assistance. The other eight posts (1.46%) included both types of posts. The details of each type of posts are described in the following sections:

#### **5.1.2.1 Sharing information or resources**

A content analysis of the initial posts about sharing information or resources (n=466) resulted in the 13 main categories, which are summarised in Table 9.

**Table 9**  
*Categorisation of Posts about Sharing Information and Resources (n=466)*

| Types of posts   | Frequency (%)  | Example  |
|--|----------------|--|
| Upcoming events<br>(e.g., conferences, seminars, lectures, social gatherings)      | 129<br>(28.2%) | "Hi XXX [personal name] here, apologies for posting. YYY [academic organisation] is doing an online conference..."   |
| Reading materials<br>(e.g., Journals, books, blogs, listicles, newsletters, memes) | 57<br>(12.5%)  | "We are delighted to announce our new journal entitled XXX."   |
| Websites and online applications   | 54<br>(11.8%)  | "Perhaps a good way to clean up your audio for online teaching..."   |
| Videos<br>(e.g., How-to videos, conference recordings)                             | 47<br>(10.1%)  | "I hope no one minds that I drop this here. A video I made just today that helps users go over the more complex settings in ZOOM"  |
| Call for papers/chapters/books   | 41<br>(9.0%)   | "Here is a call for chapters for an upcoming book on CALL. The editors seem to be interested in a pretty wide variety of topics, so this could be applicable to a number of folks here."   |
| Personal remarks<br>(e.g., advice, thoughts, rants)                                | 36<br>(7.9%)   | "Teachers in Japan: read this before you start planning your online classes..."  |
| Admin related  | 23<br>(5.0%)   | "Apologies if you were affected by the most subtle bug ever on the server..."  |
| Event-related resources<br>(e.g., photos, slideshows)                              | 22<br>(4.7%)   | "Some photos from Sunday afternoon at XXX [Conference]. Please add yours! Feel free to tag yourself."  |
| News   | 18<br>(3.9%)   | "English site for latest news and updates on typhoon Hagibis. Check here if you need this info and *share* for others who might need it..."  |
| Courses  | 8<br>(1.8%)    | "A free MOOC course on Linguistics offered by the University of Birmingham, UK."   |
| Grants/Scholarships  | 8<br>(1.8%)    | "I'd like to share a post on scholarship opportunities for XXX [conference name]. Good luck to those who apply!"   |
| Other (e.g., survey results)   | 8<br>(1.8%)    | "For anyone who helped out with my recent survey or is just interested in the results, I've put the charts on this file..."  |
| Communities/online communities   | 7<br>(1.5%)    | "Hey, lots of us in Korea are having to teach online, as we hear are you all. Zoom seems to be what many are going to use. so, we're teaching ourselves how to do that. We have an active Facebook self-help group. feel free to join--even though it says "Korea" in the name." |
| Job information  | 5<br>(1.1%)    | "Full-time teaching position available from 2019 at my university..."  |

***Top five types of posts about sharing information or resources***

The most common type of posts about sharing information or resources was about upcoming events (n=129) Like the extract below, FBC-1-JP members promoted conferences, seminars, and lectures which were typically related to language, teaching, and/or technology.

You can see the XXX conference schedule and register here: <https://...>We are looking forward to seeing you next weekend! It is free for attendees (and we kept costs as low as possible for presenters). (Post #468)

Approximately 81.4 percent of events were held online. It appeared that prior to the COVID-19 pandemic, most events were held at a physical location, but during the pandemic, they were mostly held online. For instance, in April 2020, one FBC-1-JP member promoted an online conference on TESOL hosted by an organisation in Korea:

Hi XXX here, apologies for cross-posting. YYY is doing an online conference. Registration is not live yet, but it will be free for attendees: <https://...> I'm doing a presentation, so we'll see how it works. (Post #274)

Although most of the events which were promoted in the community were academic conferences and seminars, there were a few posts about online social events for language teachers offered by a different Facebook teacher community during the pandemic (twice in April 2020 and once in July 2020):

XXX FB group is hosting a social Zoom meeting at 8 pm tonight! Bring snacks and drinks and join us! (Post #395)

As indicated in this post shared in April 2020, some of the social events were hosted by other technology-focused language teacher communities on Facebook. The online social

events during the pandemic may have provided the FBC-1-JP members with an opportunity to connect with other language teachers experiencing similar teaching struggles and problems.

In July 2019 before the pandemic, there was also a post advertising a writing retreat held in a resort area located Southwest of Tokyo.

Looking for a chance to finish that book or write that paper? My wife is organising a writer's (and other types) retreat in Ito, Shizuoka in October! (Post #178)

Although most of the events held online, including the social Zoom meetings, were free of charge, the events held in a physical location, like the writing retreat, were at times not.

The second highest number of posts within the category of sharing information or resources were related to reading materials, including books, blogs, journals, listicles, newsletters, and memes. Similar to the posts about upcoming events, the reading materials were mostly related to language, teaching, and/or technology. As illustrated in the following extract, one FBC-1-JP member shared information about a new open-access journal about technology in language teaching and learning.

We are delighted to announce our new journal entitled XXX. We hope you enjoy the inaugural issue! (Post #124)

During the COVID-19 pandemic, a number of reading materials related to Emergency Remote Teaching and online teaching were shared by the FBC-1-JP members. For instance, as demonstrated in the extract below, one member shared an article about using a videoconferencing tool for teaching online.

Don't rush into Zoom. Think about the big picture. Plan for your students' success.

<https://www.chronicle.com/article/...> (Post #247)

All the reading materials shared in the FBC-1-JP community were free and did not require any registration or login to read the materials.

The third most common type of posts were about sharing videos (n=47). The FBC-1-JP members shared links to how-to-videos and recordings of past events, which were mostly uploaded to YouTube:

I did a workshop on Adapting F2F Tasks for Online Classrooms last week. It mainly focuses on how I gave writing feedback (Screencast-o-matic/YouTube) & adapted a discussion project (Zoom/Flipgrid). Here's the recording if you're interested:  
<https://youtu.be/...> (Post #597)

Like this example, most of the videos shared were about language, teaching, and/or technology.

Event-related resources consisted of photos, slideshows, and other related materials for past conferences, workshops, and seminars. Video recordings of past events were included in the previous "video" category. As indicated in the following extract, an FBC-1-JP member shared a link to slideshows used in a past conference related to technology in language teaching and learning.

Hi XXX [FBC-1-JP members]! I am in Belgium after YYY—an amazing four-day conference—and want to share some conference resources with you all. First, there is a Dropbox link for presentations at the event. I expect more will trickle in once people get home. I haven't added my slides yet and think others are still catching up

too. I saw there are over a dozen already though so check out the link: <http://...> (Post #193)

Although attending physical events, especially in international contexts, may be difficult due to a variety of reasons, including financial and time constraints, the free slideshows shared by some of the presenters allowed those who were interested in the event to view the content.

The fourth most common types of posts were sharing websites and online applications related to language, teaching, and/or technology (n=54):

Google is releasing its own reports originality checker (think TurnItIn, but free!)  
<https://...> (Post #189)

As shown in this post, the majority of the shared websites and online applications were free of charge.

There were quite a few FBC-1-JP members and professional organisations inviting members to submit abstracts, proposals, and articles for a conference, journal, or book (n=41). As shown in the following post which invites FBC-1-JP members to submit their chapter proposals for a book on CALL, most of these types of posts included information about the details about the publication and deadline for the submission.

Here is a call for chapters for an upcoming book on CALL. The editors seem to be interested in a pretty wide variety of topics, so this could be applicable to a number of folks here. Chapter proposals are due on... (Post # 62)



***Moderately frequent types of posts about sharing information or resources***

Posts which included news-related articles and websites were fairly common (n=18). Like the example post below, the news were mostly concerned about language, teaching, and/or technology (n=15).

Interesting perspective from Mark Cuban about how AI might eventually make programmers obsolete... <https://www.cnbc.com/>... (Post #153)

There were also English news updates and information on natural disasters (e.g., typhoons) and the COVID-19 pandemic (n=3), though in less frequent instances:

English site for latest news and updates on typhoon Hagibis. Check here if you need this info and \*share\* for others who might need it. Info about areas to be/being evacuated, power outages, flooding and also a free wifi service. (Post #207)

Personal remarks (n=36), including advice, thoughts, and reflections, were also posted in FBC-1-JP. Several FBC-1-JP members were giving teaching and technology-related advice. For instance, one member gave his personal advice about online teaching during the pandemic, as indicated in the following excerpt from a post shared in April 2020.

Teachers in Japan: please read this before you start planning your online classes. Please also remember that our students are not tech savvy in general. Students often only have smartphones with limited data plans, and the Japanese Internet infrastructure is going to be overloaded when the country shuts down. Plan for your students to be ABLE to pass your class in the worst-case scenario. This is EMERGENCY REMOTE TEACHING, not normal online teaching... (Post #308)

A few FBC-1-JP members also shared their experiences about the events that they had attended, as shown in the following extract:

CALL SIG Forum at XXX (conference)! Very interesting and informative! (Post #115)

In several cases, FBC-1-JP members included complaints and rants in their posts. As illustrated below, one FBC-1-JP member complained that the updates on certain technology have made it more difficult to use.

I can still recall when explaining the steps of how to upload a video to YouTube was easy! Now it's a nightmare. Each year tech becomes harder to use and less intuitive. (Post #222)

Approximately five percent of the posts (n=23) were sharing information regarding the FBC-1-JP webpage, journal website, and details about the annual conference written by the FBC-1-JP community administrators.

In addition, as the following example post illustrates, the administrators of the FBC-1-JP community gave the FBC-1-JP members updates on the technical aspects of the community's related webpages and servers.

Apologies if you were affected by the most subtle bug ever on the server. Yep, if you tried to update something that the server thought was between 2am and 3am today server local time, it gave an error, because those times don't exist. Clocks went forward in EST. I have a year to fix this bug... (Yes, I know about UTC but TimeStamps don't work like DateTime) (Post #258)

***Less frequent types of posts about sharing information or resources***

On less frequent occasions, there were posts sharing other information and resources. For instance, as illustrated in the following example, there were some posts about grants and scholarships aimed at FBC-1-JP community members (n=8).

I'd like to share a post on scholarship opportunities for XXX. Good luck to those who apply! (Post #63)

The scholarship opportunity in this particular context was a fee-waiver for an international conference related to language teaching and learning.

Moreover, there were a few posts sharing information about communities and online communities on SNSs (n=7). As clearly indicated in the following post, several Facebook communities were specifically created during the COVID-19 pandemic for teachers who were struggling to teach online.

Hey, lots of us in Korea are having to teach online, as we hear you are all as well. Zoom seems to be what many are going to use, so we're teaching ourselves how to do that. We have an active Facebook self-help group. feel free to join—even though it says “Korea” in the name. <https://www.facebook.com/groups/...> (Post #195)

In total, eight posts were about sharing information about courses. All the courses were held online and most of them (i.e., six out of eight) were free. Apart from one course which was about linguistics, the other seven courses were related to technology and teaching. For instance, in the following post, an FBC-1 member is sharing a free course on how to teach online in early 2020.

A course about online teaching: <https://www.edx.org/course/...> (Post #284)

Finally, there were a few posts advertising jobs, particularly teaching-related jobs (n=5). Three of the job advertisements were for university-teaching positions, one was for a private technology company, and one was for a journal reviewer:

Full-time teaching position available from 2019 at my university (XXX). Please note application is by registered mail (Hope this does not violate posting rules...please delete if it does) (Post #2).

#### **5.1.2.2 Asking for assistance**

The second main type of initial posts was about asking for assistance (n=158). As shown in Table 10, the posts about asking for assistance were further subcategorised into the following 11 categories.

**Table 10***Categorisation of Posts About Asking for Assistance (n=158)*

| Types of posts  | Frequency (%) | Example  |
|---|---------------|--|
| Asking for technological assistance                   | 59 (37.3%)    | "I teach a TOEFL class for 12th graders and they have to get over 430 to enter university (school policy). Many students are asking me for advice for Podcasts so that they can work on their listening skills while on the train or bus. Do you have any recommendations for Podcasts for lower-level learners to work on listening?" |
| Survey and poll requests                              | 32 (20.3%)    | "Dear Colleagues, I wonder if I could receive your cooperation in filling this questionnaire. This would be a great help. Best"  |
| Asking for volunteers                                 | 19 (12.0%)    | "Looking for a volunteer to moderate the chat in an "Intro to Quizlet" Zoom meeting tomorrow at 10:30 am!"   |
| Admin-related   | 15 (9.5%)     | "Is the full program for the upcoming XXX conference [annual conference] going to be posted online soon? Or, is it already up somewhere? I can't seem to find it."   |
| Asking for information about research and publication | 11 (7.0%)     | "I wrote a teaching with technology using podcasts paper for the XXX conference proceedings, but they are not going to publish the proceedings now. There were not enough submissions. It is a teaching idea and how to paper rather than a research or theoretical paper. Any ideas about a place to publish such a paper?"           |
| Asking for technical support                          | 10 (6.3%)     | "Any Teacherkit users out there? The email function is not working for me, and their support seems to be offline. Just wondering if anyone else can successfully send an email through the app."   |
| Asking to connect with others                         | 4 (2.5%)      | "Do we have any members in Hawaii or someone who has an academic contact in Hawaii?..."  |
| Asking for opinions                                   | 3 (1.9%)      | "What do we think? <a href="https://www.theguardian.com/XXX...">https://www.theguardian.com/XXX...</a> "   |
| Asking for information about study abroad             | 2 (1.3%)      | "Regarding study abroad programs at your university/high school, can you briefly describe what steps your institution takes to limit the liability to the institution (and more importantly) teacher participants."  |
| Asking for conference recommendations                 | 2 (1.3%)      | "Searching for an e-learning or similar conference to present at/budget for spring 2020, preferably in Florida. Anyone have a favourite site to search?"   |
| Asking for information about exams                    | 1 (0.6%)      | "Hello, I was wondering if anyone has any information or experience regarding the GTEC Academic exam?"   |

***Top three types of posts about asking for assistance***

The most frequent type of posts was about asking for techno-pedagogical assistance (n=59). FBC-1-JP members frequently asked questions related to technology and/or teaching. For instance, as indicated in the following extract, members asked for advice on how to use certain technologies for teaching purposes.

Does anybody have a PowerPoint or instructions on how to use zoom to teach a class online? (Post #338)

FBC-1-JP members also asked for suggestions for technology resources and materials for teaching:

Hi everyone, I am hoping to get some good information from the collective. I teach a TOEFL class for 12th graders and they have to get over 430 to enter university (school policy). Many students are asking me for advice for Podcasts so that they can work on their listening skills while on the train or bus. Do you have any recommendations for Podcasts for lower-level learners to work on listening? I honestly don't know one to recommend to them, so I am hoping y'all might know some! Thank you for your help in advance! (Post #73)

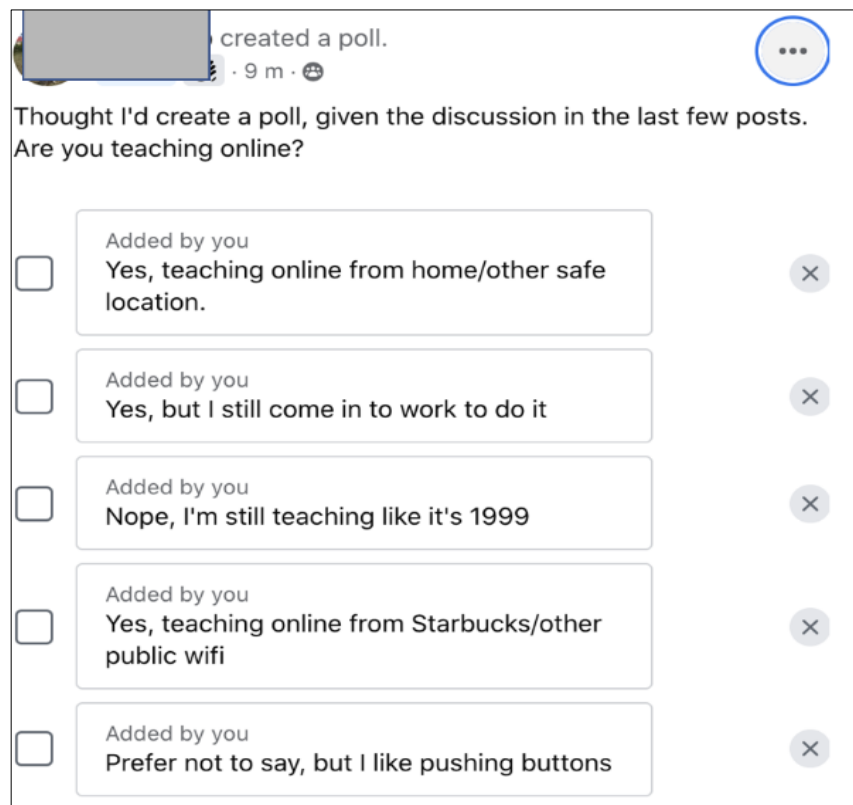
The second most common type of post was about asking FBC-1-JP members to participate in surveys and polls (n=32). Similar to the following post, the surveys shared in the community were mainly used for research purposes.

Dear Colleagues, I wonder if I could receive your cooperation in filling this questionnaire. This would be a great help. Best. (Post #208)

Moreover, using the Facebook poll feature, some FBC-1 members asked questions on several occasions, as shown in Figure 11.

**Figure 11**

*Example of a Poll Question*



**Note.** Created based on Post #91

In this poll question, an FBC-1-JP member is asking to see how other members were teaching in April 2020.

Another common type of post was asking for volunteers (n=19). FBC-1-JP members sought volunteers to help out at events, including conferences and seminars:

Looking for a volunteer to moderate the chat in an “Intro to Quizlet” Zoom meeting tomorrow at 10:30 am! (Post #345)

As there are many technology experts in the FBC-1-JP community, some community members were asking for the skilled members to volunteer, as indicated in the following post.

This message is being posted for XXX, who is the Conference Co-ordinator of a joint YYY event. He is looking for someone who can help with the event's website. Please refer to the photo for more details and contact him directly if you have any questions or would like to volunteer. (Post #213)

***Moderately frequent types of posts about asking for assistance***

On fairly moderate occasions, FBC-1-JP members asked questions aimed at the administrators of the community. Most of the questions asked were about the annual conference organised by the FBC-1-JP community:

Is the full program for the upcoming XXX conference [annual conference] going to be posted online soon? Or is it already up somewhere? I can't seem to find it. (Post #30).

Another moderately common type of posts was about asking for information about research and publication (n=11). Since the community predominantly consisted of university language teachers who are also researchers, some of the members sought their expertise in research and publication. For instance, one FBC-1-JP member asked the members to offer some publishing advice:

Hello everyone! I wrote a "teaching with technology using podcasts" paper for the XXX conference proceedings, but they are not going to publish the proceedings now. There were not enough submissions. It is a teaching idea and how to paper rather



than a research or theoretical paper. Any ideas about a place to publish such a paper?

(Post #121)

Several members also asked for technical support (n=10). As indicated in the following post, members occasionally asked questions about technology, such as apps, websites, and software.

Any Teacherkit users out there? The email function is not working for me, and their support seems to be offline... Just wondering if anyone else can successfully send an email through the app. (Post #80).

***Less frequent types of posts about asking for assistance***

In a few instances, FBC-1-JP members asked to connect with another FBC-1-JP member or researcher (n=4). As the following example shows, one member was trying to find out whether there were any members or colleagues who were at a specific location during his/her stay for an academic conference and meeting.

Do we have any members in Hawaii or someone who has an academic contact in Hawaii? I will be in Honolulu from December XX to January YY. I have some appointments and a conference scheduled during that time but I'm looking to arrange a few other meetings with researchers/educators involved with educational technology during that time. Does anyone have a recommendation or an introduction they could arrange? (Post #206)

Moreover, there were a few posts about asking for the FBC-1-JP members' opinions (n=3):

What do we think? [https://www.theguardian.com/...](https://www.theguardian.com/) (Post #3)

In this example, an FBC-1-JP member included a link to a news article about e-learning and asked his/her fellow community members to express their opinions on it.

On rare occasions, FBC-1-JP members asked for information about conference recommendations (n=2). For instance, as shown in the following post, which was shared in November 2018, an FBC-1-JP member asked for suggestions for conferences to present.

Searching for an e-learning or similar conference to present at/budget for spring 2020, preferably in Florida. Anyone have a favourite site to search? (Post #11)

In another instance, when the COVID-19 pandemic made it difficult to travel, an FBC-1-JP member asked in March 2020 for suggestions for conference held online:

Hi guys, so my research budget came in and I'm thinking it might not be a good idea to plan on attending conferences with everything so up in the air. Does anyone have some recommendations for virtual conferences?... (Post #300)

Finally, there were a few FBC-1-JP members who asked for information about study abroad (n=2) and an examination (n =2), as shown in the following two posts respectively.

Study Abroad, full-service providers (minimum effort on the part of your school, like Benesse). Who do you use for your programs that you like? PM if you feel more comfortable. Thanks in advance. (Post #229)

Hello, I was wondering if anyone has any information or experience regarding the GTEC Academic exam? Practices in preparing? Recommended textbooks to use? How does it compare score-wise to other exams or CEFR? Comparisons to TOEIC or TOEFL exams? (Post #135)

### 5.1.3 Content analysis of the comments shared in FBC-1-JP

The comments shared between October 2018 and September 2020 in FBC-1-JP (n=2824) were roughly sorted into 15 categories, as described in Table 11. It should be noted that unlike the categorisation of the initial posts described above, the majority of comments were categorised into two or more categories, thus the figures included in the table below should be interpreted as the frequencies of each occurrence.

**Table 11**

*Main types of comments shared in FBC-1-JP (n=2824)*

| Types of comments   | Frequency | Example   |
|---|-----------|---|
| Showing appreciation  | 415       | "Thank you for the timely advice 😊"   |
| Asking a question/<br>requesting for more<br>information                          | 456       | "Can I ask, what app did you have the students use to give each other feedback for their Flipgrid presentations?"   |
| Answering questions<br>(factual responses)  | 482       | "You can usually set your screen capture settings from the 'Settings' menu."  |
| Expressing opinions/<br>giving advice and recommendations/<br>sharing experiences | 1536      | "Moodle and BigBlueButton are better, in my opinion. Skype works well too"  |
| Giving additional information   | 319       | "1 am start time in Japan... FYI"   |
| Apologising   | 37        | "Sorry for the delayed response"  |
| Stating a positive comment  | 242       | "Nice idea!"  |
| Agreeing  | 109       | "I completely agree with XXX (A member of FBC-1-JP)"  |
| Disagreeing   | 15        | "I can't speak to that. All my interaction have been positive"  |
| Offering to help  | 7         | "If you want to Team or Zoom about it, let me know!"  |
| Wrapping up a discussion/<br>concluding remark                                    | 8         | Based on some constructive criticism, I have edited it to make it more of a suggestion and offered some ideas to help: Here is the current rewrite: <a href="https://docs.google.com/...">https://docs.google.com/...</a> |
| Greeting  | 44        | "Hi everyone"   |
| Giving generic responses  | 34        | "No worries"  |
| Announcing to follow thread   | 10        | "Following!!!!"   |
| Responding to a survey and<br>recruitment   | 24        | "Completed ✅"   |

The most frequent types of comments were the ones which were expressing their opinions, giving advice, and sharing their own experiences (n=1536). Such comments were often made to initial posts asking for advice, making recommendations, and sharing websites, online applications, and other resources. For example, when an online community member shared a link to an online course about online teaching, one member commented to indicate how they thought about a particular online course which was recommended by a different FBC-1-JP member:

Just did this [online course] in a few hours today and it was very informative.

By leaving such a comment, it makes the shared online course seem more credible than simply having one person recommending it.

In numerous instances, FBC-1-JP members were giving advice and recommendations for certain technologies. When a member (Arthur) asked in the FBC-1-JP community to suggest free alternatives to “Turnitin” which is a paid Internet-based plagiarism detection software, several members joined in the conversation and gave him recommendations. For instance, one member recommended “Edmodo” which is a free LMS which has a built-in plagiarism checker:

Edmodo? But it might be too late to adopt a new LMS? I’m doing everything you mentioned with MS Teams: efficient content delivery, assignment collection, grading, feedback, grade book. I believe Edmodo has all that.

In response to the member’s suggestion, Arthur, the original author of the post, expressed his appreciation towards the suggestion and indicated that he would “look into Edmodo” on his own. As the commenter who advocated the use of “Edmodo” was already experienced in using the platform, he even offered to help him in a one-to-one session on Zoom:

If you want to Zoom about Edmodo, I'd be happy to show you what I know.

Such offers to help beyond the original Facebook platform were fairly common on FBC-1-JP, as in total, there were seven similar comments.

Moreover, it was common for members to openly disagree with suggestions and give a different recommendation. In the same thread, another member commented that she prefers a different LMS to Edmodo:

Google classroom is better in some ways than Edmodo imho [in my humble opinion].

I like how it looks and how easy it is to access all the student assignments in one handy window...

Having options to choose from is better than having no other option. Such responses are likely to help the original author and other FBC-1-JP members who are reading the discussion thread to determine which recommendation is better fitting for their own teaching context.

Another frequent type of comment was asking questions and requesting for further information (n=456). These comments were often made to clarify the explanations and ideas raised in the conversation. For instance, a member (i.e., Hung) responded to a comment in which he did not understand what the commenter meant by “hard coded subtitles”:

Hard coded? You mean the text is on top of the video image? Do you need subtitles that match up with CC turned on?

In another example, an online community member asked the community to share their experiences with teaching children using digital tools, and one member replied, “Phonics

apps are great.” In response to this comment, the original author requested, “Are there any you recommend?” so that the commenter would provide actual examples, and at the end, he recommended the app “Jolly Phonics.” Like this, it was fairly common for online community members who asked for advice to request commenters to elaborate on their responses.

Approximately a tenth of the posts were about “giving additional information” (n=319). The comments which fell into this category contained supplementary details about the previous post. For instance, when an FBC-1-JP member (i.e., Aiofe) shared information about an online international conference held in Europe, a different member left a comment stating the starting time in Japan Standard Time, as indicated in Table 11.

It should also be noted that on rare occasions, the original authors left comments to summarise what they had gained from interacting with other community members in the discussion thread (n=8). For example, a member asked the FBC-1-JP community how he could make a “dictation exercise that is self-grading.” He received a number of recommendations, such as “Moodle,” “Google Forms,” “H5P,” “LingoLab,” and “Teacher Tools,” from multiple members and after discussing the tools with them, he wrapped up discussion and told them what he decided to do at the end:

I’ve decided to use multiple choice questions in GF but to add a bunch of distractors to make it a bit more difficult.

These types of comments which were asking questions, requesting for more information, sharing opinions, giving advice, giving additional information, and wrapping up the discussions enriched the conversation and, in times, led to heated discussions about certain topics.

Other frequent comments included in the data set contained words of appreciation (n=415), apologies (n=37), greetings (n=44), and generic responses, like “you’re welcome” (n=34). There were also extremely short comments, including one or two words. For example, when online community members were interested in a particular thread, they would write comments like “following!” (n=10). In response to survey requests, members would also write comments such as “completed” to indicate that they had filled in the survey.

The 2824 comments observed during the two-year main observation period shows how various types of engagement occurred. It was found many of the comments contained URL links (n=247), images/photos (n=43), and emojis/Graphics Interface Formats (GIFs) (n=209).

#### ***5.1.4 The content before and during the pandemic***

As described in the previous section, during the two-year observation of FBC-1-JP, the community was most active during the early months of 2020 (i.e., March 2020–May 2020). The nature of the posts and comments during pre-pandemic times (i.e., December 2019–February 2020), the start of the pandemic (i.e., March 2020–May 2020), and during the pandemic (June 2020–August 2020) slightly differed. Specifically, the frequency and types of posts and comments were compared and contrasted to see if there were any differences among the three time periods immediately before and during the pandemic. As illustrated in Table 12, in all three time periods, the initial posts were about asking for assistance and sharing information or resources. During pre-pandemic times, approximately one-third of the posts were about asking for assistance (30.7%), and the other two-thirds were about sharing information or resources (69.5%). The top 5 most common types of posts were call for papers/chapters/books (n=10), event-related resources (n=7), asking for techno-

pedagogical assistance (n=4), and personal requests, including survey requests (n=4). The start of the pandemic, which was most active in terms of the number of posts and comments, also saw approximately one-third of posts about asking for assistance (25.4%), and the other two-thirds about sharing information or resources (74.6%). At the start of the pandemic, posts about sharing information about future events (n=27), asking for techno-pedagogical assistance (n=26), websites and applications (n=24), reading materials (n=17), and sharing videos (n=17) were most common. Finally, the following three months similarly witnessed approximately one-third of posts about asking for assistance (29.2%), and the other two-thirds were about sharing information or resources (70.8%). During this period, the most frequent type of posts was sharing information about future events (n=47), which is 36.2% of the entire number of posts. The other fairly frequent types of posts included sharing videos (n=11), asking for techno-pedagogical assistance (n=9), sharing information about reading materials, and Call for Papers (n=9). Although the ratios between the number of posts about asking for assistance and sharing information or resources were similar across all three time periods, the common subcategories seem to be slightly different.



**Table 12***Types of the Posts Before and During the COVID-19 Pandemic*

| Period                                       | Main category                    | Percentage (Frequency) | Subcategory   | Percentage (Frequency) |
|--|----------------------------------|------------------------|---|------------------------|
| Pre-COVID<br>(Dec 2019–<br>Feb 2020)         | Asking for assistance            | 32.4%<br>(12)          | Asking for techno-pedagogical assistance              | 33.3% (4)              |
|  |                                  |                        | Personal requests                                     | 33.3% (4)              |
|  |                                  |                        | Asking for technical support                          | 8.3% (1)               |
|  |                                  |                        | Asking for information about study abroad             | 8.3% (1)               |
|  |                                  |                        | Asking for volunteers                                 | 8.3% (1)               |
|  |                                  |                        | Admin related   | 8.3% (1)               |
|  | Sharing information or resources | 67.6%<br>(25)          | Call for papers/chapters/books                        | 37.0% (10)             |
|  |                                  |                        | Event-related resources                               | 25.9% (7)              |
|  |                                  |                        | Admin-related   | 11.1% (3)              |
|  |                                  |                        | Websites and online applications                      | 7.4% (2)               |
|  |                                  |                        | News  | 7.4% (2)               |
|  |                                  |                        | Personal remarks                                      | 3.7% (1)               |
| Start of COVID-19<br>(Mar 2020–<br>May 2020) | Asking for assistance            | 25.4%<br>(44)          | Asking for techno-pedagogical assistance              | 59.1% (26)             |
|  |                                  |                        | Asking for volunteers                                 | 13.6% (6)              |
|  |                                  |                        | Personal requests                                     | 9.1% (4)               |
|  |                                  |                        | Admin related   | 4.5% (2)               |
|  |                                  |                        | Asking for information about research and publication | 4.5% (2)               |
|  |                                  |                        | Asking for opinions                                   | 4.5% (2)               |
|  |                                  |                        | Asking for technical support                          | 2.3% (1)               |
|  |                                  |                        | Asking for conference recommendations                 | 2.3% (1)               |
|  |                                  |                        | Sharing information and resources                     | 74.6%<br>(129)         |
|  | Websites and online applications | 18.6% (24)             |   |                        |
|  | Reading materials                | 17.1% (22)             |   |                        |
|  | Videos                           | 13.2% (17)             |   |                        |
|  | Personal remarks                 | 12.4% (16)             |   |                        |
|  | News                             | 4.7% (6)               |   |                        |
|  |                                  |                        |   | Admin related          |
|  |                                  |                        | Courses   | 2.3% (3)               |
|  |                                  |                        | Communities/online communities                        | 2.3% (3)               |
|  |                                  |                        | Call for papers/chapters/books                        | 2.3% (3)               |
|  |                                  |                        | Other   | 1.6% (2)               |
| During COVID-19<br>(Jun 2020–<br>Aug 2020)   | Asking for assistance            | 29.2%<br>(38)          | Asking for techno-pedagogical assistance              | 23.7% (9)              |
|  |                                  |                        | Asking for volunteers                                 | 18.4% (7)              |
|  |                                  |                        | Personal requests                                     | 18.4% (7)              |
|  |                                  |                        | Admin related   | 13.2% (5)              |
|  |                                  |                        | Asking for technical support                          | 10.5% (4)              |

|                                   |            |   |            |
|-----------------------------------|------------|---|------------|
|                                   |            | Asking for information about research and publication | 5.3% (2)   |
|                                   |            | Asking to connect with others                         | 5.3% (2)   |
|                                   |            | Asking for information about exams                    | 2.6% (1)   |
|                                   |            | Asking for opinions                                   | 2.6% (1)   |
| Sharing information and resources | 70.8% (92) | Future events   | 51.1% (47) |
|                                   |            | Videos  | 12.0% (11) |
|                                   |            | Reading materials                                     | 9.8% (9)   |
|                                   |            | Call for papers/chapters/books                        | 9.8% (9)   |
|                                   |            | Websites and online applications                      | 6.5% (6)   |
|                                   |            | Personal remarks                                      | 5.4% (5)   |
|                                   |            | Event-related resources                               | 2.2% (2)   |
|                                   |            | Courses   | 1.1% (1)   |
|                                   |            | News  | 1.1% (1)   |
|                                   |            | Communities/online communities                        | 1.1% (1)   |

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### **5.1.5 Number of users involved in each post**

In all, 140 different FBC-1-JP members posted at least one initial post during the two-year observation, thus indicating that less than 25 % of the members posted at least one initial post. Those who posted wrote on average approximately three initial posts ( $\bar{x}$  =3.64, SD=10.8). As shown in Table 13, there is great variability in the number of initial posts posted by each member. More than half of the 616 initial posts (52.1%) which were shared during the two-year period were written by the 10 most active members. More specifically, Frank and Tara (pseudonyms), the two most active members who posted, accounted for 28.2% of the posts. Although the top five frequent types of posts seem to vary among the 10 members, there were some commonalities. The majority of these members posted at least one post about sharing future events (80%), and half or more posted at least one post about sharing videos (60%), sharing reading materials (50%), and asking for techno-pedagogical information (50%).

**Table 13***Details of the Top 10 FBC-1-JP Members who Posted an Initial Post*

| Rank | Pseudonym                              | Year of membership | Number of initial posts | Types of posts (Top 5 most frequent types)   |
|------|--|--------------------|-------------------------|--|
| 1    | Frank                                  | 2016               | 88                      | Sharing reading materials (n=16); sharing personal remarks (n=12); sharing videos; (n=10); sharing websites and online applications (n=9); sharing future events (n=9); asking for techno-pedagogical information (n=9)                        |
| 2    | Tara<br>(Administrator<br>/Moderator)  | 2014               | 86                      | Sharing future events (n=23); sharing call for papers/chapters/books (n=18); sharing conference-related resources (n=10); sharing grants/scholarships (n=7); sharing admin-related information (n=7)   |
| 3    | Peter                                  | 2017               | 27                      | Sharing techno-pedagogical information (n=4); asking for techno-pedagogical information (n=4); sharing reading materials (n=4); sharing websites and online applications (n=3); sharing news website (n=3)                                     |
| 4    | Farida                                 | 2016               | 26                      | Sharing future events (n=20); sharing videos (n=3); sharing personal requests (n=3)  |
| 5    | Henry<br>(Administrator<br>/Moderator) | 2012               | 25                      | Sharing admin-related information (n=11); sharing future events (n=5); sharing call for papers (n=2); sharing personal remarks (n=2); sharing other information (n=2); sharing videos (n=1); personal request (n=1); asking for opinions (n=1) |
| 6    | William                                | 2013               | 17                      | Sharing personal remarks (n=6); asking for techno-pedagogical information (n=5); asking for technical support (n=3); sharing news websites (n=1); sharing reading materials (n=1); sharing websites and online applications (n=1)              |
| 7    | Hugo                                   | 2014               | 15                      | Sharing future events (n=5); sharing videos (n=5); sharing techno-pedagogical information (n=3); personal request (n=1); asking techno-pedagogical information (n=1)   |
| 8    | Taro                                   | 2015               | 15                      | Sharing conference-related resources (n=8); sharing videos (n=6); sharing future event (n=1)   |
| 9    | Ben                                    | 2019               | 13                      | Sharing techno-pedagogical information (n=4); sharing reading materials (n=3); sharing news websites (n=2); asking for technical support (n=2); asking for techno-pedagogical information (n=2)  |
| 10   | Simon                                  | 2018               | 10                      | Asking for volunteers (n=3); sharing personal remarks (n=2); sharing future event (n=1); sharing techno-pedagogical information (n=1); sharing video (n=1); sharing community/online community (n=1); sharing reading materials (n=1)          |

A total of 260 members posted at least one comment during the two-year period. Each of these members posted an average of 11 comments ( $\bar{x} = 10.6$ ,  $SD = 22.8$ ). Frank, who posted the greatest number of initial posts, commented the most and wrote 204 comments in total. The top five commenters accounted for 24.6% of the total number of comments. It was also

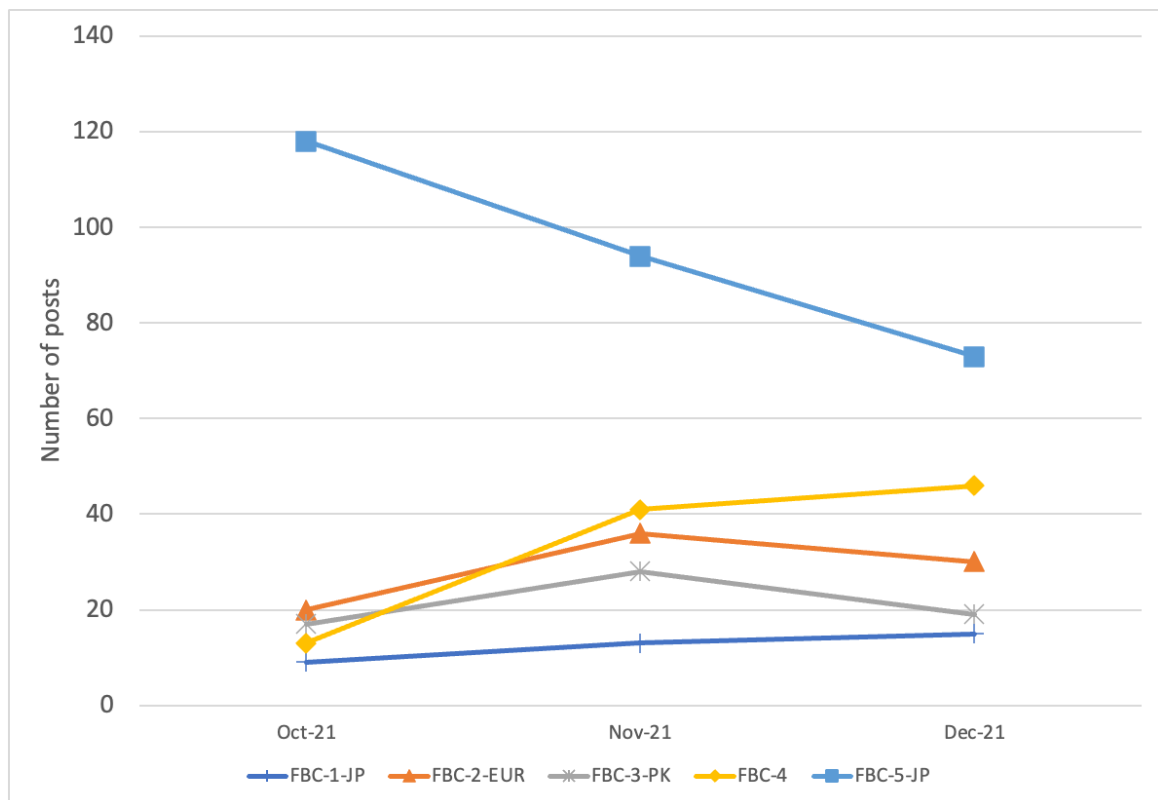
found that all of the 10 most active members who frequently posted an initial post often commented in the community. In particular, apart from Frank (n=204), Tara (n=192), William (n=91), Hugo (n=75), Henry (n=54), and Peter (n=53) commented frequently. On the other hand, the third most frequent commenter (n=115), Seth, who was one of the interviewees and the fourth most frequent commenter (n=93), and the seventh frequent commenter (n=66) did not write many initial posts but frequently commented in FBC-1-JP. Out of 260 commenters, approximately half (n=109) posted at least one initial post during the post, and 151 commenters did not post any initial post. This meant that a total of 291 members posted at least one initial post and/or comment.

#### **5.1.6 Comparison cases**

In addition to the FBC-1-JP community, four other technology-focused language teacher communities on Facebook were observed for a period of three months in 2021. Like the main observation of FBC-1, the content of the posts, the number of comments, likes, and shares per post were recorded between October 1<sup>st</sup> 2021 and December 31<sup>st</sup> 2021. As described in Table 14, which summarises the total number of initial posts per month, response rate per post, and number of likes, shares, and comments per month of the five comparison cases during the three-month period, more than 80 percent of the initial posts had at least one like, share, or comment in all five cases. The descriptive statistics of the five observed communities clearly show that FBC-5-JP was the most active in terms of the number of posts per month, response rate per post, and number of likes, shares, and comments out of all five observed communities. The least active community seems to be FBC-1-JP in most categories, although FBC-3-PK had the least number of shares per post.

**Table 14***Descriptive Statistics of the Five Observed Communities*

| Group name | Total number of posts       | Response rate per post (i.e., at least one like, share, or comment) | Number of likes per post                              | Number of shares per post                            | Number of comments per post                           |
|------------|-----------------------------|---|---|--|---|
| FBC-1-JP   | n = 37<br>$\bar{x}$ = 12.3  | 81.1%   | $\bar{x}$ = 4.43<br>SD = 5.0<br>Max = 21<br>Min = 0   | $\bar{x}$ = 2.51<br>SD = 12.0<br>Max = 73<br>Min = 0 | $\bar{x}$ = 0.43<br>SD = 1.01<br>Max = 4<br>Min = 0   |
| FBC-2-EUR  | n = 86<br>$\bar{x}$ = 28.7  | 96.5%   | $\bar{x}$ = 7.64<br>SD = 10.2<br>Max = 70<br>Min = 0  | $\bar{x}$ = 3.28<br>SD = 5.72<br>Max = 40<br>Min = 0 | $\bar{x}$ = 0.547<br>SD = 1.21<br>Max = 6<br>Min = 0  |
| FBC-3-PK   | n = 64<br>$\bar{x}$ = 21.3  | 98.4%   | $\bar{x}$ = 3.14<br>SD = 2.49<br>Max = 15<br>Min = 0  | $\bar{x}$ = 0.61<br>SD = 1.06<br>Max = 5<br>Min = 0  | $\bar{x}$ = 0.19<br>SD = 0.50<br>Max = 2<br>Min = 0   |
| FBC-4      | n = 100<br>$\bar{x}$ = 33.3 | 98.0%   | $\bar{x}$ = 10.16<br>SD = 9.20<br>Max = 45<br>Min = 0 | $\bar{x}$ = 2.54<br>SD = 6.13<br>Max = 44<br>Min = 0 | $\bar{x}$ = 2.13<br>SD = 4.66<br>Max = 32<br>Min = 0  |
| FBC-5-JP   | n = 286<br>$\bar{x}$ = 95.3 | 99.0%   | $\bar{x}$ = 11.1<br>SD = 17.2<br>Max = 114<br>Min = 0 | n/a<br>(Function disabled for private groups)        | $\bar{x}$ = 12.8<br>SD = 18.0<br>Max = 138<br>Min = 0 |

**Figure 12***Number of Posts During the Three-Month Period*

From Figure 12, it is possible to see that the number of posts per month in each community differed and that it was not static in most communities during the three-month period. Out of the five communities, FBC-5-JP had the greatest number of posts for every month, though it had a downward trend. On the other hand, FBC-4 and FBC-1-JP had an upward trend, with December 2021 having the greatest number of posts. The other two communities (i.e., FBC-2-EUR and FBC-3-PK) both reached its highest level in November 2021. The following sections describe the content of the posts in each of the five observed communities in detail.

#### **FBC-1-JP**

A total of 37 posts were recorded in the three-month period. During the three-month period, 16 FBC-1-JP members posted a post, indicating that they posted an average of 2.31 posts. All but one fell into the sharing information and resources category. Out of the 26 subcategories identified from the two-years' worth of posts during the main observations of FBC-1-JP, seven of the same subcategories were identified during the three-month period (See Table 15). Similar to the main observations of FBC-1-JP, the most frequent type of posts was sharing information about upcoming events (37.8%). The second most frequent type of posts was sharing calls for papers/chapters/books (24.3%). Other fairly frequent types of posts were about sharing reading materials (10.8%), videos (10.8%), and courses (5.4%). There was only one instance each for the posts about asking for volunteers and sharing information about jobs. The two posts that did not fit into the 26 subcategories shared a list of deadlines for several journal submissions. In October and November 2021, one FBC-1-JP member reminded the other members about upcoming submission deadlines for journals related to language teaching.

**Table 15***Categorisation of Posts Shared in FBC-1-JP (n=37)*

| Type   | Frequency (%) | Example  |
|--|---------------|--|
| Sharing: Upcoming events (e.g., conferences, seminars, lectures, social gatherings)      | 14 (37.8%)    | "Come along to the XXX webinar this Thursday at 8pm to hear about 5 practical (& locally made) resources for online teaching! Details here: [URL link]"  |
| Sharing: Call for papers/chapters/books  | 9 (24.3%)     | "The deadline for submissions for XXX is Dec 31st https://YYYY"  |
| Sharing: Reading materials (e.g., journals, books, blogs, listicles, newsletters, memes) | 4 (10.8%)     | "Dear colleagues, friends and students, I am very delighted to share with you a new paper entitled XXX... To have access to this paper, will you click on the following link: [URL link]"  |
| Sharing: Videos (e.g., How-to videos, conference recordings)                             | 4 (10.8%)     | "For those who couldn't attend XXX on Nov 3, here's the recording: [URL link]"   |
| Sharing: Courses   | 2 (5.4%)      | It is a pleasure to announce the Call for Participation for the XXX 2022. A project of YYY Computer-Assisted Language Learning Interest Section (CALL-IS), YYY has been offering free, open online professional development sessions and workshops to teachers of English around the globe..." |
| Sharing: Other (i.e., list of deadlines for journal submissions)                         | 2 (5.4%)      | "Hi group members! I'm here to spread the word about some publishing deadlines coming up this month..."  |
| Asking for volunteers  | 1 (2.7%)      | "XXX Conference<br>Zoom hosts wanted for YYY!<br>We need two different types of volunteers:<br>* Room Hosts (who do room hosting only) and<br>* Room Host Supervisors (who are on call during certain time slots to troubleshoot and be back-up Room Hosts)<br>Sign up here: [URL link]"       |
| Sharing: Job information   | 1 (2.7%)      | "Hello everyone!... I just wanted to share our recent job posting for any interested EFL educators. Feel free to share the PDF with anyone you know who may be interested."  |

**FBC-2-EUR**

There was a total of 86 posts shared in the FBC-2-EUR community during the three-month period. In all, 23 FBC-2-EUR members posted at least one post. All 86 posts fell into the sharing information and resources category, and 83 of them were further sub-categorised into six of the categories identified during the two-year observation of the FBC-1-JP community, as illustrated in Table 16. Approximately half of the posts were sharing information about upcoming events, covering a wide variety of topics in technology in

language teaching and learning. Most prominently, a free online seminar series on corpus technology for language learning was promoted every week (n=19) by an FBC-2-EUR member who posted the greatest number of posts during the three-month period. There were also posts sharing about courses (10.5%), reading materials (10.5%), and event-related resources (2.3%). As can be seen in the two examples provided in Table 16, the two types of subcategories which were not included in FBC-1-JP were holiday greeting messages (n=2) and advertisement (n=1).



**Table 16***Categorisation of Posts Shared in FBC-2-EUR (n=86)*

| Type of posts  | Frequency (%) | Example   |
|--|---------------|---|
| Sharing: Upcoming events (e.g., conferences, seminars, lectures, social gatherings)      | 39 (45.3%)    | "Hey all, registration to attend the 2nd FREE XXX webinar is now open. Join four language learning and ed-tech experts for a discussion of the question: AI: The Language Teacher's Friend or Foe?..."  |
| Sharing: Videos (e.g., How-to videos, conference recordings)                             | 13 (15.1%)    | "The recording of the recent XXX Webinar can be viewed here: <a href="https://sites.google.com/XXX">https://sites.google.com/XXX</a><br>Thanks again to everybody who presented and everybody (well, almost everybody 😊) who attended."   |
| Sharing: Call for papers/chapters/books  | 11 (12.8%)    | The 1st call for papers for the next hybrid XXX 2022 conference...is out! Submission deadline is.... Please share among your groups. We look forward to both receiving your contributions and welcoming you to online or on-campus conferences at XXX.  |
| Sharing: Courses   | 9 (10.5%)     | New fully online course in Spanish on Content and Language Integrated Learning (CLIL). The course is fully free....The course serves as a general introduction to Content and Language Integrated Learning (CLIL) while also delivering training in how to create digital materials to support learners and plan lessons using CLIL methodology.... |
| Sharing: Reading materials (e.g., journals, books, blogs, listicles, newsletters, memes) | 9 (10.5%)     | "Dear colleagues, It is a pleasure to announce here that a new volume, co-edited by XXX, has been published in the Journal of Language and Education. I hope you find it interesting. [URL link]"   |
| Sharing: Event-related resources (e.g., photos, slideshows)                              | 2 (2.3%)      | "Some photos of today's XXX Webinar: Thanks to all the presenters and attendees (and YYY the organiser) for making it a very enjoyable event. Apologies to anybody who could not attend the second part of the meeting. More events to follow next year. Enjoy your holidays everybody."  |
| Sharing: Other (i.e., holiday greeting message)  | 2 (2.3%)      | "Wishing all XXX [FBC-2 EUR members] a lovely rest. Let's hope for a healthy New Year 2022."  |
| Sharing: Other (i.e., advertisement)   | 1 (1.2%)      | "“Regalo natale maestre 2021, un pensiero originale che resterà nel loro cuore! Solo 12 Euro più spese di spedizione” (Original text in Italian)<br>[Translated using Facebook's automatic translation function: "Teacher Christmas gift 2021, an original thought that will stay in their hearts! Only 12 Euro plus shipping costs"]               |

**FBC-3-PK**

In FBC-3-PK, there were 64 posts, which were posted by 22 different members. Out of 26 subcategories found in the main observations of FBC-1-JP, ten were also found in FBC-3-PK. Apart from one post which was asking for technical support, 63 of them were posts

about sharing information and resources. The most frequent type of post was sharing reading materials (15.6%), and the second most frequent types of posts were sharing videos (14.1%), calling for papers/chapters/books (14.1%), and jobs (14.1%). Other fairly common posts included sharing websites and online applications (10.9%), grants and scholarships (9.4%), and upcoming events (7.8%). On less frequent occasions, FBC-3-PK members were sharing about courses (3.1%) and news (3.1%). As indicated in Table 17, three additional subcategories were found in FBC-3-PK. Specifically, there were two posts advertising graduate school programmes, a post which included a holiday greeting message, and a post which was promoting a sale on software.

**Table 17**  
*Categorisation of Posts Shared in FBC-3-PK (n=64)*

| Type  | Frequency (%) | Example  |
|---|---------------|--|
| Sharing: Reading materials<br>(e.g., Journals, books, blogs, listicles, newsletters, memes) | 10<br>(15.6%) | "We are pleased to announce that XXX - A Journal of Linguistics has published its Volume 3 Issue 2 2021...."   |
| Sharing: Videos<br>(e.g., How-to videos, conferences videos)                                | 9<br>(14.1%)  | "We're constantly improving Sketch Engine to make it easier to use. Today, we're presenting ⚡ concordance macros ⚡ for automating a sequence of operations carried out on a concordance ...Watch this short video to see how it works. [URL link]"   |
| Sharing: Call for papers/chapters/books   | 9<br>(14.1%)  | "Call for Submissions!<br>XXX 2022 - IV International Conference on Language Studies, Translation and Education in the premises of XXX University in Antalya, Turkey.<br>Early registered participants receive 2 nights accommodation included into the registration fee.<br>Follow the link to submit your abstract [URL link]" |
| Sharing: Job information  | 9<br>(14.1%)  | "XXX University (YYY Campus) is looking for a full time Lecturer/ Senior Lecturer who will teach undergraduate courses in the Department's TESL Certificate program and manage a teaching practice. View more details here..."   |
| Sharing: Websites and online applications   | 7<br>(10.9%)  | "If you select a subcorpus before your first search, you can then easily see results from other sub corpora using this subcorpus selector. No need to input the search criteria again.<br>This works with the subcorpora that we built but also the ones that you build yourself. 🌐 [URL link]"                                  |
| Sharing: Grants/Scholarships  | 6<br>(9.4%)   | "Colleagues, three doctoral fellowships are available at my department. Application deadline: 28 Feb 2022..."  |
| Sharing: Upcoming events<br>(e.g., conferences, seminars, lectures, social gatherings)      | 5<br>(7.8%)   | "Join the free online event: Introducing the Written British National Corpus 2014 (BNC2014)...The event will feature mini lectures from leading experts in corpus linguistics."  |
| Sharing: Other<br>(Graduate school programmes)  | 2<br>(3.1%)   | "Call for applications:<br>The XXX Graduate School ..."  |
| Sharing: Courses  | 2<br>(3.1%)   | "Higher Education Commission (HEC) of Pakistan has signed a contract with the world's most popular Massive Open Online Courses (MOOCs) service provider, Coursera International, and acquired 50,000 licences for two years at a discounted price...For further details, please click..."  |
| Sharing: News   | 2<br>(3.1%)   | [URL link to news source]  |
| Asking for technical support  | 1<br>(1.6%)   | "Software for "Syntactic Error Analysis" is direly needed. If any person knows about it, kindly guide me on how to find it."   |
| Sharing: Other<br>(Holiday greeting message)  | 1<br>(1.6%)   | "From all our team our warmest greetings and best wishes to all our colleagues and students for Merry Christmas and New 2022 Year!"  |
| Sharing: Other<br>(advertisement)   | 1<br>(1.6%)   | "Halloween Sale on your favourite software/saas XXX. Offer ends 31st Oct 2021. Grab the best deal on your favourite software to grow your business..."   |

**FBC-4**

During the three-month period, FBC-4 witnessed a total of 100 posts, and only 12 members posted a post. The most frequent member, who was the creator of the Facebook community, posted 84% of the posts. Out of the total number of posts, 97 of them were about sharing information and resources. In total, 12 out of 26 subcategories found in the main observations of FBC-1-JP were also found in FBC-4. As described in Table 18, the most frequent types of posts were sharing videos (30%), upcoming events (24%), and reading materials (13%). In less frequent instances, FBC-4 members were sharing websites and online applications (9%), admin-related posts (6%), news related to both language teaching and non-language teaching issues (5%), and personal remarks (5%). There were only two instances of posts which were sharing about courses and asking for opinions. Subcategories which had only one instance were asking for techno-pedagogical assistance and survey and poll requests. One post which did not fit into the 26 subcategories was the post which welcomed newly joined FBC-4 members and tagged their names.

**Table 18***Categorisation of posts shared in FBC-4 (n=100)*

| Type   | Frequency (%) | Example   |
|--|---------------|---|
| Sharing: Videos (e.g., How-to videos)  | 30 (30.0%)    | "Here's a great video that shows you how to import auto-graded assignments and quizzes using a platform called, "XXX"   |
| Sharing: Upcoming events (e.g., conferences, seminars, lectures, social gatherings)      | 24 (24.0%)    | "Hey all, delighted to announce the next XXX event for February 2022: [URL link]"   |
| Sharing: Reading materials (e.g., journals, books, blogs, listicles, newsletters, memes) | 13 (13.0%)    | "The book recommendations from Jon Gee's presentation..."   |
| Sharing: Websites and online applications  | 9 (9.0%)      | "This also looks really cool for learning Japanese.. [URL link]"  |
| Sharing: Admin related   | 6 (6.0%)      | "Changed the name of the group "YYY" to "[FBC-4]"."   |
| Sharing: News  | 5 (5.0%)      | Not directly connected to language teaching... but still interesting! [URL link]"   |
| Sharing: Personal remarks (e.g., advice, thoughts, rants)                                | 5 (5.0%)      | "Wow. Just wow. Back in the 80s - people worried about computers taking their jobs. About computers controlling them (rather than vice-versa), the privacy implications of computers, including mass surveillance by governments... So many of these fears became reality..."   |
| Sharing: Courses   | 2 (2.0%)      | "Hello everyone, Teaching with Technology course is for anyone interested in learning new technologies, overcoming technophobia, the purposeful use of technology, and how to build your own toolkit that is right for you. I hope to see you in class. You will earn a certificate upon completion. Registration Link: https://..."              |
| Asking for opinions  | 2 (2.0%)      | "Anyone ever played XXX, the language learning RPG?"  |
| Sharing: Event-related resources (e.g., photos, slideshows)                              | 1 (1.0%)      | "A sneak peak of my slides for tonight's presentation 😊 [URL link]"   |
| Sharing: Other (Welcoming new members)   | 1 (1.0%)      | "Let's welcome our new members... [Tags of 40 new members' FB accounts]"  |
| Asking for techno-pedagogical assistance   | 1 (1.0%)      | "Hi I'm looking for a way to record pupils speaking in pairs using headphones and mics on Chromebooks. I have done Google meets and put pupils into breakout rooms in pairs but there is no option to record the breakout rooms, only the main call. Other than setting up multiple Google meets is there another way that any of you have used?" |
| Survey and poll requests   | 1 (1.0%)      | "Which of these will most likely be your attitude to technology if/when you return to face-to-face language teaching?"  |

**FBC-5-JP**

As briefly described in the previous chapter, the FBC-5-JP community differs from the other comparison cases as the main focus of the community is specifically for online teaching. Moreover, unlike the other communities which are set as a public group, FBC-5-JP is set as a private group. Despite these differences, FBC-5-JP was included as a comparison case since it was clear from the two-year observation of FBC-1-JP and responses from the initial questionnaire and semi-structured interviews that many of the FBC-1-JP members were also members of FBC-5-JP. However, since the privacy settings of the community differ, ethically speaking, it was difficult to justify including the specific content of each post shared in the community. Thus, it was deemed appropriate to only report on the number of members, number of posts and likes, and simple descriptions of the posts shared during the three-month period.

There were a total of 286 posts, which were posted by 120 different FBC-5-JP members during the three-month period. The most frequent member who posted a post wrote 28 different initial posts. Out of 286 initial posts, approximately half of the posts were sharing information and resources (51.0%) and the other half were asking for assistance (49.0%). Out of the 24 subcategories identified from the two-year observation of the initial posts in FBC-1-JP, 19 of them were also identified in FBC-5-JP. As indicated in Table 19, the most common type of posts was asking for technical support (21.0%). Since FBC-5-JP was an online community which focuses on topics related to online teaching, there were many members who were asking about how to use certain online interaction tools often used for online teaching, like Zoom, Google classroom, and Moodle. Other main types of posts were sharing personal remarks, including teaching experiences and advice (15.7%), asking for

opinions (12.2%), asking for techno-pedagogical assistance (10.8%), sharing information about upcoming events (9.4%), and sharing videos (7.7%).

On less frequent occasions, there were posts sharing the news (1.7%), sharing admin-related information, like group rules (1.0%), asking for information about exams (1.0%), and survey and poll requests (1.0%). As for the “other” category for sharing information and resources (1.7%), there were posts sharing about content intended for students (n=1), survey results (n=1), a holiday greeting message (n=1), information about a donation (n=1). There was also one post describing the countries of residences of the FBC-5-JP members posted by the community administrator. For the “other” category for asking for assistance (n=3), there was a post which requesting someone to sell something (n=1), a post which asked a Japanese-English translation question (n=1), and a post written by the group administrator which asked job listings to be posted (n=1).

**Table 19***Categorisation of Posts Shared in FBC-5-JP (n=286)*

| Types  | Frequency | Percentage |
|--|-----------|------------|
| Asking for technical support   | 60        | 21.0%      |
| Sharing: Personal remarks  | 47        | 16.4%      |
| Asking for opinions  | 35        | 12.2%      |
| Asking for techno-pedagogical assistance   | 31        | 10.8%      |
| Sharing: Upcoming events (e.g., conferences, seminars, lectures, social gatherings)                                  | 27        | 9.4%       |
| Sharing: Videos (e.g., How-to videos, conference recordings)   | 22        | 7.7%       |
| Sharing: Reading materials (e.g., Journals, books, blogs, listicles, newsletters, memes)                             | 20        | 7.0%       |
| Sharing: Websites and online applications  | 15        | 5.2%       |
| Sharing: News  | 5         | 1.7%       |
| Sharing: Other (i.e., a student contest, survey results, holiday greeting messages, donation, group characteristics) | 5         | 1.7%       |
| Sharing: Admin related   | 3         | 1.0%       |
| Asking for information about exams   | 3         | 1.0%       |
| Survey and poll requests   | 3         | 1.0%       |
| Asking: Other  | 3         | 1.0%       |
| Asking for volunteers  | 2         | 0.7%       |
| Sharing: Call for papers/chapters/books  | 1         | 0.3%       |
| Asking for information about research and publication  | 1         | 0.3%       |
| Asking for conference recommendations  | 1         | 0.3%       |
| Asking to connect with a member/researcher   | 1         | 0.3%       |

It is clear that there were a wide variety of types of posts shared in FBC-5-JP in comparison to the other four communities. Considering that the FBC-5-JP members were asking many questions regarding the digital tools that they were using and sparking discussion questions, this may explain why there is a significant difference in the number of comments for each post ( $\bar{x}=12.8$ ) in comparison to the other four communities during the same time period (see Table 14).

#### **An overview of the five observed communities**

As shown in Table 20, out of the 26 subcategories identified in the main observations of FBC-1-JP, the two types of posts which were observed in the five communities during the three-month period were sharing about upcoming events, reading materials, and videos. In four out of five communities, posts about sharing courses and call for papers/chapters/books were observed. In three out of five communities, there were posts sharing about websites



and online applications and news. In all five communities during the three-month period, posts sharing about communities/online communities and asking for information about study abroad were not found. There were several instances when the posts did not fit in the 26 subcategories. In FBC-2-EUR, FBC-3-PK, and FBC-5-JP, a post about sharing a holiday greeting message in December was found. There was a total of two posts advertising merchandise in FBC-2-EUR and FBC-3-PK. As the two posts did not receive any reactions from the members and one was not in English, they may have been spam. Moreover, there were several posts that were only identified in a single community. For instance, posts sharing a list of deadlines for journal submissions (n=2), sharing information about graduate school programmes (n=1), sharing information about a student contest (n=1), sharing information about a donation (n=1), welcoming new members (n=1), and describing the backgrounds of the members (n=1) were identified in one of the five communities. In FBC-5-JP, three posts which were categorised as asking for assistance (i.e., requesting someone to sell something, asking someone to translate something, requesting job listings) did not fit into any of the 11 subcategories.

**Table 20***Summary of Each Type of Post Across the Five Observed Communities*

| Main observations:<br>FBC-1-JP                        | FBC-1-JP  | FBC-2-EUR | FBC-3-PK  | FBC-4      | FBC-5-JP   |
|---|-----------|-----------|-----------|------------|------------|
| <b>Sharing information and resources</b>              | <b>36</b> | <b>86</b> | <b>64</b> | <b>97</b>  | <b>145</b> |
| Upcoming events                                       | 14        | 39        | 5         | 24         | 27         |
| Event-related resources                               | 0         | 2         | 0         | 1          | 0          |
| Courses   | 2         | 9         | 2         | 2          | 0          |
| Websites and online applications                      | 0         | 0         | 7         | 9          | 15         |
| News  | 0         | 0         | 2         | 5          | 5          |
| Reading materials                                     | 4         | 9         | 10        | 13         | 20         |
| Videos  | 4         | 13        | 9         | 30         | 22         |
| Communities/online communities                        | 0         | 0         | 0         | 0          | 0          |
| Personal remarks                                      | 0         | 0         | 0         | 5          | 47         |
| Call for papers/chapters/books                        | 9         | 11        | 9         | 0          | 1          |
| Job information                                       | 1         | 0         | 9         | 0          | 0          |
| Grants/Scholarships                                   | 0         | 0         | 6         | 0          | 0          |
| Admin related   | 0         | 0         | 0         | 6          | 3          |
| Other   | 2         | 3         | 4         | 1          | 5          |
| <b>Asking for assistance</b>                          | <b>1</b>  | <b>0</b>  | <b>1</b>  | <b>3</b>   | <b>141</b> |
| Asking for techno-pedagogical assistance              | 0         | 0         | 0         | 1          | 31         |
| Asking for technical support                          | 0         | 0         | 1         | 0          | 60         |
| Asking for opinions                                   | 0         | 0         | 0         | 2          | 35         |
| Asking for information about research and publication | 0         | 0         | 0         | 0          | 1          |
| Asking for information about study abroad             | 0         | 0         | 0         | 0          | 0          |
| Asking for information about exams                    | 0         | 0         | 0         | 0          | 3          |
| Asking for conference recommendations                 | 0         | 0         | 0         | 0          | 1          |
| Asking for volunteers                                 | 1         | 0         | 0         | 0          | 2          |
| Asking to connect with others                         | 0         | 0         | 0         | 0          | 1          |
| Survey and poll requests                              | 0         | 0         | 0         | 0          | 4          |
| Admin-related   | 0         | 0         | 0         | 0          | 0          |
| Other   | 0         | 0         | 0         | 0          | 3          |
| <b>Total number of posts</b>                          | <b>37</b> | <b>86</b> | <b>64</b> | <b>100</b> | <b>286</b> |

In analysing the posts shared in the five observed communities, there was an indication of some community membership overlap. During the three-month period, in four out of five communities, at least one member wrote a post posted in another community. The community with the greatest number of overlapping was FBC-5-JP: Apart from FBC-3-PK, an overlap was found in the other three observed communities. In particular, 20 of the FBC-5-JP members posted in FBC-1-JP during the main observations. It is also worth noting that three out of the 20 FBC-5-JP members were the top ten most frequent members who posted in FBC-1-JP during the main observations. Moreover, the community with no overlapping was FBC-3-PK. It should also be noted that 10 of FBC-1-JP members who posted during

the three-month period also posted during the two-year observations of the community. Out of the 10 FBC-1-JP members, three of them were identified as the top 10 most frequent members who posted during the two-year observations, though two of them were the administrators of FBC-1-JP.

## **5.2 The initial questionnaire**

In the initial questionnaire which was distributed in 2020, language teachers using Facebook were asked about their uses of technology for teaching purposes, their ways of learning about how to use technology in language teaching and learning, their uses of SNSs for professional purposes, and their participation in online and in-person face-to-face teacher communities. The following sections describe the main results obtained from the questionnaire which received 482 responses.

In all, 95.2% of the initial questionnaire respondents indicated that they used technology in some shape or form. As illustrated in Table 21, the 23 respondents (4.8%) who reported that they did not use technology for teaching purposes were not using technology in class for a variety of different reasons: Approximately half of them indicated they did not use technology since their schools and institutions did not provide the teachers and students with adequate equipment (n=12). Several respondents also indicated that their school and institutions did not allow them to use technology (n=5), and other fairly common responses were related to their familiarity with using technology for teaching purposes (n=4), their beliefs (n=4), socioeconomic reasons (n=4), and time-related factors (n=4). On less frequent occasions, a few respondents reported that their schools and institutions did not have access to the Internet and/or electricity (n=2).

**Table 21***Reasons for Not Using Technology for Teaching Purposes (n=23)*

| Codes   | Frequency | Example response  |
|---|-----------|---|
| No equipment provided                         | 12        | "Our classrooms are not suitable for using technology."                 |
| Goes against school policy                    | 5         | "The school prefers non-use of technology."                             |
| Not familiar with using technology            | 4         | "I am not very familiar with using technology for teaching a language." |
| Do not see the benefits                       | 4         | "I don't see a cost/benefit in a face-to-face class."                   |
| Socioeconomic reasons                         | 4         | "The students belong to the poorest socioeconomic level of my city."    |
| Time consuming to prepare and set up in class | 4         | "The duration of periods given to teaching English is limited."         |
| No access to the Internet/electricity         | 2         | "We do not have internet access."                                       |
| Distraction                                   | 1         | "When present it is often a distraction."                               |
| Inconvenient                                  | 1         | "A hassle to carry the devices."<br>(機材持ち運びが面倒)                         |
| Too many students                             | 1         | "There are many students in the class."                                 |
| Prefers traditional teaching style            | 1         | "Easier to write on blackboard/whiteboard"<br>(黒板/白板の方が書き込みやすい)         |
| Personal dislike                              | 1         | "Hate it. I don't like computers."                                      |

In total, 76.9% of the respondents reported that the COVID-19 pandemic had affected the way that they teach. Many of them reported that they were delivering their lectures through a Learning Management System (e.g., BlackBoard, Moodle, Edmodo, Google Classroom, Microsoft Teams) and/or a video-conferencing software (e.g., Zoom, Skype, Google Meet).

In response to the question which asked if they were currently learning about technology in language teaching and learning, 72.8% of the total number of respondents indicated "yes," and the other 27.2% indicated "no." Out of the 23 respondents who reported that they did not use technology for teaching purposes, nine of them (39.1%) reported that they were learning about technology. This indicates that approximately a third of them claimed that

they were still trying to learn about technology for teaching purposes despite not using technology in their classes.

In the following question, the respondents indicated how frequently they did certain activities to learn about how to use technology in language teaching and learning. As illustrated in Table 22, many of the respondents indicated that they search the web (79.5%), watch videos (73.8%), connect with teachers on SNSs (63.6%), and ask co-workers (61.9%) at least once a week to learn about how to use technology in language teaching and learning. Moreover, approximately half the respondents reported that they read blog posts (57.9%), email list messages (56.1%), journal articles (52.1%), and books (45.8%) at least once a week. On the other hand, many of them indicated that they “rarely” or “never” take face-to-face (not online) lectures/courses (62.6%). Approximately half of them also reported that they “rarely” or “never” attend face-to-face conferences (52.1%), take online lectures/courses (44.8%), attend online conferences (44.6%), and observe other teachers’ classes (43.9%).

**Table 22**

*Questionnaire Respondents' Results Regarding the Ways to Learn About Technology in Language Teaching and Learning (n=482)*

|   | Daily | 2-3 times a week | Once a week | Once a month | Twice a year | Once a year | Rarely | Never |
|---|-------|------------------|-------------|--------------|--------------|-------------|--------|-------|
| Attend face-to-face (not online) academic conferences   | 3.1%  | 4.2%             | 4.6%        | 5.6%         | 16.5%        | 13.8%       | 19.2%  | 32.8% |
| Attend online conferences                               | 1.7%  | 7.7%             | 7.1%        | 15.3%        | 14.6%        | 9.0%        | 17.2%  | 27.4% |
| Take face-to-face (not online) lectures/courses         | 3.1%  | 4.0%             | 4.8%        | 5.0%         | 9.6%         | 10.9%       | 20.7%  | 41.8% |
| Take online lectures/courses                            | 3.6%  | 8.8%             | 7.3%        | 12.3%        | 11.9%        | 11.3%       | 17.2%  | 27.6% |
| Search the web  | 47.3% | 16.3%            | 15.9%       | 9.8%         | 1.5%         | 0.4%        | 2.5%   | 6.3%  |
| Watch videos  | 34.9% | 21.5%            | 17.4%       | 9.2%         | 2.9%         | 0.8%        | 4.0%   | 9.2%  |
| Read journals articles                                  | 18.2% | 19.0%            | 14.9%       | 13.2%        | 3.8%         | 3.1%        | 10.3%  | 17.6% |
| Read books  | 15.3% | 16.1%            | 14.4%       | 12.8%        | 6.3%         | 5.6%        | 11.3%  | 18.2% |
| Read blog posts   | 16.9% | 21.3%            | 19.0%       | 12.3%        | 3.8%         | 4.8%        | 8.8%   | 13.0% |
| Read email list messages                                | 26.2% | 16.7%            | 13.2%       | 6.3%         | 2.7%         | 4.2%        | 10.0%  | 20.7% |
| Connect with teachers on Social Networking Sites (SNSs) | 31.6% | 17.4%            | 14.6%       | 8.6%         | 2.9%         | 2.7%        | 8.4%   | 13.8% |
| Ask co-workers  | 21.3% | 23.2%            | 17.4%       | 13.4%        | 5.0%         | 2.3%        | 7.5%   | 9.8%  |
| Observe other teachers' classes                         | 5.6%  | 7.7%             | 10.0%       | 12.1%        | 13.4%        | 7.1%        | 18.4%  | 25.5% |

In response to the question, “Do you wish to learn more about how to use technology in language teaching and learning in the future,” 90.0% of all respondents reported “yes.” More than half of the respondents (60.9%) who reported that they were not using technology in language teaching and learning indicated that they would like to learn more about it in the future.

In the third part of the initial questionnaire, the respondents were asked about their uses of SNSs including Twitter, Facebook, LinkedIn, Instagram, and Line. As previously mentioned, all 482 initial questionnaire respondents were Facebook users, so it seems plausible that

Facebook was used the most among the respondents. As indicated in Table 23, 89.6% of them reported that they used Facebook at least once a week (i.e., those who selected “once a week,” “2-3 times a week,” and “daily”). Approximately half of the respondents reported that they used Instagram at least once a week (51.5%), and a third of them reported that they used Line (36.9%), Twitter (34.0%), and LinkedIn (33.6%) at least once a week. On the other hand, it should also be noted that almost half of the respondents indicated that they “rarely” or “never” used Line (57.5%), Twitter (55.8%), LinkedIn (50.8%), and Instagram (41.5%).

**Table 23**

*Questionnaire Respondents’ Results Regarding Frequency of SNS Use (n=482)*

|           | Daily | 2-3 times a week | Once a week | Once a month | Twice a year | Once a year | Rarely | Never |
|-----------|-------|------------------|-------------|--------------|--------------|-------------|--------|-------|
| Twitter   | 19.5% | 7.5%             | 7.1%        | 8.3%         | 0.8%         | 1.0%        | 9.5%   | 46.3% |
| Facebook  | 75.3% | 9.5%             | 4.8%        | 1.9%         | 0.8%         | 0.4%        | 2.1%   | 5.2%  |
| LinkedIn  | 13.1% | 11.0%            | 9.5%        | 10.8%        | 3.5%         | 1.2%        | 12.0%  | 38.8% |
| Instagram | 33.2% | 11.8%            | 6.4%        | 4.1%         | 2.1%         | 0.6%        | 8.1%   | 33.4% |
| Line      | 27.8% | 6.6%             | 2.5%        | 4.4%         | 0.4%         | 0.8%        | 3.7%   | 53.7% |

Moreover, the respondents were asked to report on how they used Twitter, Facebook, and LinkedIn for professional purposes (see Table 24). Approximately half of them indicated that they used Facebook to acquire resources (52.1%), to share resources (44.2%), to collaborate with other teachers (42.9%), and to connect with new teachers (40.5%). About one-third reported that they used Facebook to communicate with teachers other than those who work at the same institutions (38.4%), and about 20% reported that they used Facebook to communicate with co-workers who work at the same institutions (24.9%) and to get emotional support (19.5%). In comparison to Facebook, there were fewer respondents who

reported that they were using Twitter (24.7%) and LinkedIn (52.1%) for professional purposes. The top five most common ways of using Twitter professionally were to acquire resources (14.7%), to share resources (11.4%), to connect with new teachers (10.8%), to collaborate with other teachers (8.9%), and to communicate with teachers other than those who work at the same institutions (6.6%). On the other hand, the main ways of using LinkedIn were to connect with new teachers (24.7%), acquire resources (24.5%), to communicate with teachers other than those who work at the same institutions (20.1%), and to collaborate with other teachers (15.4%).

There seems to be a difference among the three platforms on how the respondents are using each platform for professional purposes. For instance, on Facebook and Twitter, the respondents seem to be using the two platforms to acquire as well as share resources, but on LinkedIn, there were significantly more respondents who were using the platform to acquire resources (24.5%) than to share resources (0.6%). In addition, approximately 20% of the respondents indicated that they were using Facebook to get emotional support, whereas only less than 3% indicated that they were using Twitter and LinkedIn to get emotional support. However, it should also be noted that there were some commonalities among the three platforms: The two least frequent ways of using the platforms professionally were to communicate with students and to communicate with parents (of students).



*Questionnaire Respondents' Results Regarding the Ways of Using Facebook, Twitter, and LinkedIn Professionally (n=482)*

|   | Facebook | Twitter | LinkedIn |
|---|----------|---------|----------|
| To acquire resources  | 52.1%    | 14.7%   | 24.5%    |
| To share resources  | 44.2%    | 11.4%   | 0.6%     |
| To collaborate with other teachers                                | 42.9%    | 8.9%    | 15.4%    |
| To connect with new teachers                                      | 40.5%    | 10.8%   | 24.7%    |
| To get emotional support  | 19.5%    | 2.5%    | 1.9%     |
| To communicate with students                                      | 15.6%    | 2.3%    | 1.5%     |
| To communicate with parents (of students)                         | 7.3%     | 1.5%    | 6.6%     |
| To communicate with co-workers (who work at the same institution) | 24.9%    | 2.9%    | 6.6%     |
| To communicate with teachers (other than my co-workers)           | 38.4%    | 6.6%    | 20.1%    |
| I do NOT use the platform for professional purposes               | 36.3%    | 75.3%   | 47.9%    |

The respondents were also asked to indicate their memberships of online communities related to language, teaching, and/or technology on Facebook, Twitter, LinkedIn, and other platforms. In total, 83.0% of them reported that they were a member of at least one online community related to language, teaching, and/or technology. Many of them (68.5%) indicated that they were in at least one online community on Facebook. It was also found that 19.1% were on LinkedIn, 7.5% were on Twitter, and 7.1% on a different platform. Out of the 400 respondents who indicated that they were members of at least one online community related to language, teaching, and/or technology, claimed that they were in on average 2.34 online communities (SD=2.28), and the respondent who was in the greatest number of online communities listed 21 online communities. It should be noted that the average number is only a rough estimate since 18 respondents did not list up the specific details of the communities, as illustrated in the following three comments:

“Many! I don’t remember the names to be honest!” (Respondent #62)

“I am a member of several groups, but I do not recall the names. In a sense, I don’t check the groups unless something that catches my attention lands on my newsfeed.”  
(Respondent #66)

“Too many to list!” (Respondent #298)

The first two comments made by Respondent #62 and #66 highlight how some of the respondents are in multiple similar communities. The second comment made by Respondent #66 also illustrates how the posts and comments shared in the Facebook communities are all shown in the same newsfeed, which makes it difficult to remember in which community they were shared. When calculating the average number of online communities, the 18 comments which did not list the specific names of the communities were counted as one. Hence, it is likely that the average number is higher than the actual estimate.

Although the initial questionnaire was distributed in the online language teacher communities, 17.0% of the respondents indicated that they were not a member of any online community related to language, teaching, and/or technology. This seems to be indicating that some respondents do not perceive themselves as “members” despite being in the communities. Out of all the respondents who indicated that they were not a member of any online community related to language, teaching, and/or learning, more than half of them (57.1%) expressed that they would like to join such communities. Several of those who indicated that they did not want to join such communities left a comment stating their reasons for not wanting to join (see Table 25). The two most common reasons were that they did not see the necessity of them (n=4) and that they did not have time to spend participating

in them (n=4). Other respondents indicated that they did not want to share their personal information with others in the communities (n=2), were not aware of online communities (n=2), did not want to connect with co-workers and colleagues on SNSs (n=2), and had a personal dislike of SNSs in general (n=2).

**Table 25**

*Reasons for Not Wanting to Join an Online Community Related to Language, Teaching, and Learning (n=11)*

| Codes  | Frequency | Example responses   |
|--|-----------|---|
| Do not see the necessity                                   | 4         | "Cannot find a particular necessity for joining."<br>(特に必要性を見つけれない)   |
| Do not have time   | 4         | "I don't find the time to spare for it."  |
| Privacy issues   | 2         | "I don't want to share my personal information."<br>(個人情報を知られたくない)  |
| Not aware of online communities                            | 2         | "I don't know what kinds of online communities are there, but if there are any that are good, I would like to join them."<br>(どのようなものがあるのかまだ知らないので、調べていいコミュニティがあれば参加したいと思います) |
| Do not want connect with co-workers and colleagues on SNSs | 2         | "I don't want to connect with co-workers/colleagues on SNSs."<br>(SNS で仕事関係の人とつながりたくない)   |
| Has a personal dislike for SNSs                            | 2         | "I despise all forms of social media. I do not believe the pros outweigh the cons."   |
| Do not know how to utilise online communities effectively  | 1         | "I feel that I will not be able to utilise the communities/groups well."<br>(コミュニティグループをうまく活用できる気がしないので)  |
| Learning preference  | 1         | "I would rather learn alone and pay tuition than learn in a group."<br>(グループよりは個人として学費を払って学ぶほうが好きなので)   |
| Prefers face-to-face communities                           | 1         | "I like face-to-face communities better."   |
| Do not want to read online messages                        | 1         | "I do not want the added online messaging to read. Often I feel that people are not discussing topics of substance."  |
| Have sufficient support                                    | 1         | "I have a large and creative group of very experienced co-workers."   |

Finally, the respondents were asked about their memberships of face-to-face communities related to language, teaching, and/or technology. Out of 482 respondents, 30.7% of them reported that they belonged to at least one face-to-face community. In total, 49.5% of those who were not in any face-to-face community indicated that they would like to join one. A total of 131 of these respondents left a comment indicating their reasons for wanting to join a face-to-face community (see Table 26). On a number of occasions, respondents claimed that they wanted to join such communities to learn (n=37), to share information/ideas (n=21), to connect with other teachers (n=18), and to get information/ideas (n=16). Several of them

also indicated that they wanted to improve their teaching practice (n=9), to broaden their perspectives (n=6), to exchange ideas and information (n=6), to meet new people (n=4), and to discuss teaching ideas (n=3).

**Table 26**  
*Reasons for Wanting to Join a Face-to-Face Community Related to Language, Teaching, or Technology (n=131)*

| Codes                 | Frequency | Example responses   |
|-----------------------|-----------|---|
| For learning purposes | 37        | "I hope to learn new ways to employ technology in language learning." |

|                                       |    |   |
|---------------------------------------|----|---|
| To share information/ideas            | 21 | "It may be possible to share information."<br>(情報共有ができるかもしれないから)  |
| To connect with other teachers        | 18 | "I would like to meet up with more teachers like me."   |
| To get information/ideas              | 16 | "I think I can get useful information."<br>(有益な情報が得られる気がする)   |
| To improve their teaching practice    | 9  | "to enhance my teaching practice"   |
| To broaden their perspectives         | 6  | "It would be interesting to hear a different perspective."  |
| To exchange ideas and information     | 6  | "For networking and exchanging ideas in teaching"   |
| To meet new people                    | 4  | "I like to meet new people."  |
| To discuss teaching ideas             | 4  | "Would be nice to be able to discuss and challenges<br>with co-teachers"  |
| To get support                        | 3  | "I need support from other teachers."   |
| Prefers in-person interactions        | 3  | "I would appreciate the knowledge others can provide<br>and would prefer an in-person option."  |
| To see what others are doing          | 3  | "I want to be more updated on the teaching learning<br>system being practised by others."   |
| To collaborate                        | 3  | "Yes. To collaborate the best teaching method"  |
| It is good                            | 3  | "It can be good to join that kind of community."  |
| Face-to-face interaction is important | 3  | "I think it is important to have f2f contact and<br>relations."   |
| To improve themselves as teachers     | 2  | "To improve myself as a teacher."   |
| For research purposes                 | 2  | "Can review and present research."  |
| Face-to-face interaction is better    | 2  | "Because it's proved if you have face to face contact<br>you can learn faster"  |
| If there is a good one                | 2  | "I don't know what kind of community exists, so if I find<br>a good one, I would like to join."<br>(どのようなものがあるのかまだ知らないので、調べ<br>ていいコミュニティがあれば参加したいと思う) |
| It would be interesting               | 2  | "I am interested." (興味がある)  |
| To ask questions                      | 2  | "It's a better opportunity to ask any question I have<br>about using technology in teaching."   |
| It would be fun                       | 1  | "It'd be fun though it'd be difficult to find any time for<br>that."  |
| To socialise                          | 1  | "To socialise"  |
| Dislikes learning online              | 1  | "I do not like online lessons."<br>(オンライン講座はどうしても好きにはなれない)  |
| To get feedback                       | 1  | "to have feedback"  |

The other 50.5% of the respondents who were not in any face-to-face community reported that they did not want to join such a community due to a wide-range of different reasons. As

illustrated in Table 27, 131 respondents left a reason or two to explain their answers. Approximately 29.7% of them claimed that they did not have time to join such face-to-face communities, and reasons related to the COVID-19 pandemic were second most common (n=17). However, it should also be noted that at least five respondents expressed that they would like to join face-to-face communities once the pandemic is fully over. Other fairly common reasons were that they did not see a need for them (n=13), they prefer learning in their online communities, they were receiving sufficient support from their online communities (n=9) and co-workers and colleagues (n=9), and they were simply not interested in learning about technology in language teaching and learning (n=9). Several respondents also expressed that they had other priorities, such as career changes and other jobs besides teaching, and there were also some who expressed that they did not like in-person communication due to psychological reasons, including shyness (n=5). Less common but other noteworthy reasons were related to financial reasons (n=4), geographical locations (n=4), and gender issues (n=1).

**Table 27**

*Reasons for Not Wanting to Join a Face-to-Face Community Related to Language, teaching, or Technology (n=138)*

| Codes                    | Frequency | Example responses  |
|--------------------------|-----------|--|
| Lack of time             | 41        | "Too busy to attend such meetings"                           |
| Pandemic-related reasons | 17        | "There's a pandemic."  |
| No need                  | 13        | "I do not have a particular need for it."<br>(特に必要性を見つけられない) |

|  |    |   |
|--|----|---|
| Prefers learning in their online communities   | 12 | "It is more convenient to interact online, especially during the school year"   |
| Sufficient support from their online communities   | 9  | "Because I have enough for now with my virtual groups."   |
| Sufficient support from their co-workers and colleagues                                    | 9  | "My colleagues at my school are amazing. I have learned so much from them and I don't need to join anywhere else."  |
| Not interested   | 9  | "I couldn't care less."   |
| Different priorities<br>(e.g., changing/ending careers,<br>second jobs, work-life balance) | 6  | "Teaching is really my second job."<br>"Face to face communication isn't suitable for those who haven't known beforehand mainly because of some psychological reasons." |
| Psychological reasons<br>(e.g., shyness)   | 5  | "On site will be expensive."  |
| Financial reasons  | 4  | "None available where I live."  |
| Geographical remoteness  | 4  | "I can get what I need online."   |
| Resources available online   | 4  | "I have belonged to such groups in the past, but I never got much from these groups."   |
| Not beneficial   | 4  | "I'm not very social and prefer to do my own thing in my own way."  |
| Prefers learning alone   | 3  | "Prefer personal lessons."  |
| Prefers other modes of learning  | 3  | "It's a hassle to go to meetings."<br>(会合などに参加するのが面倒だから)  |
| It's a hassle  | 2  | "I do not want to participate in any face-to-face interaction."   |
| Dislikes face-to-face interactions   | 1  | "I do not want to personally connect (with others)."<br>(個人的に繋がりにたくないから)  |
| Do not want to connect with others   | 1  | "Most groups that I've encountered are boys' clubs or fraternities thus not interested in them"   |
| Gender issues  | 1  | "Too much work"   |
| Heavy workload   | 1  | "It's an inefficient way to learn"  |
| Inefficient  | 1  | "I believe that face-to-face groups specializing in technology cannot be particularly good utilizers of technology."  |
| Not good for learning about technology   | 1  | "I would like to learn when I'm ready."   |
| Not ready to learn   | 1  | "I like my privacy."  |
| Privacy issues   | 1  |   |

### 5.3 Semi-structured interviews

In all, 31 language teachers participated in the semi-structured interviews which were conducted over a year-long period between July 2020 and June 2021. Out of the 31



interviewees, 13 were members of FBC-1-JP and 18 were those who were in other language teacher communities on Facebook. The main themes emerged from the interviews are represented in Table 28. The following sections describe the main themes and sub-themes which emerged from the data set in detail. It should be clarified that not all of the results from the interviews will be presented in this chapter, and some of them will also be included in the following Discussion chapter.

**Table 28**

*Main Themes and Sub-Themes Identified from the Interviews (n=31)*

| Themes   | Sub-themes   |
|--|--|
| The benefits of being in an online community   | Convenience<br>Networking<br>Professional support<br>Emotional support<br>COVID-19 |
| The challenges of being in an online community | Arguments<br>Rude comments<br>Spam messages  |

|   |   |
|---|---|
|   | Credibility, reliability, and trustworthiness<br>Time   |
| Reasons for sharing/not sharing in an online community    | Asking professional questions<br>Conducting research<br>Helping others<br>Avoiding arguments<br>Concerning gender issues<br>Getting support from teacher friends<br>Lurking |
| Suggestions for a better experience in online communities | Real-name policy<br>Writing techniques<br>Moderators<br>Community rules   |
| Learning about technology                                 | Financial constraints<br>Time<br>Accessibility<br>COVID-19<br>Amount of collegial support<br>Amount of institutional support  |
| Learning about other topics                               | Pragmatics<br>Literature (metaphor)<br>Inclusive education<br>Gender equality<br>Non-teaching related topics  |

### ***5.3.1 Perceived benefits and challenges associated with being in online language teacher communities***

One of the main themes identified from the interviews was the benefits and challenges of being in online language teacher communities. It was revealed that the majority of the interviewees reported that they were in two or more online language teacher communities at the time of the interview. Although most of them were clear on which community they were referring to in their responses, some were not. Since a few interviewees described “online language teacher communities” as a general concept without referring to one specific online community, it should be noted that the names (i.e., pseudonyms) of the specified online communities are only included in the extracts when it was clearly indicated by the interviewee.

Firstly, the convenient aspect of online language teacher communities was raised by several interviewees. For instance, Rynelle who was a member of FBC-1-JP member indicated that she read the posts and comments shared in the community in her spare time at work:

We, as teachers, want to read, we want to learn, we want to expand our knowledge base, but we don't often have the time to do that. I think, being part of groups like this [FBC-1-JP] helps to streamline information a lot better, so if I only have a five-minute break between my classes, I hop on to Facebook and something pops up about something interesting going on in the tech world then that's my five-minute knowledge boost for the day, so I think it's a good way to kind of streamline the information that teachers might want to have.

In addition, several interviewees claimed that joining language teacher communities was a convenient way to connect with other teachers who were not in their immediate circle. As in the following example, Anna, a language teacher in Chiba, indicated the main benefit of being in language teacher communities is to connect with others:

For me, it's about finding people who've got similar interests and or problems and connecting with people outside of my house. Yeah, that's the biggest benefit.

Similarly, Farhana who was living in Fukuoka mentioned that she found the online language teacher communities to be particularly useful because she did not "know anything about what anyone's doing in other universities in Fukuoka" despite working in several universities in Fukuoka, and it also informed her of "what's happening in other parts of Japan."

Moreover, Nur who was living in Sri Lanka claimed that "networking was one of the main reasons" why he joined two Facebook language teacher communities. Furthermore, Daniel indicated that the main reasons for joining a Facebook language teacher community were "to figure out what others were doing online and to ask for advice if I needed it." Related to his comment, another benefit identified from the interviews was that the language teachers

were able to turn to the Facebook language teacher communities to obtain professional support. Charlotte, for instance, believed that Facebook language teacher communities offered language teachers a place to ask questions:

There are so many platforms, so many different methods and avenues to teach online and so many issues can come up with a wide variety of teachers, and if you have a problem, and you ask [in the communities], it's almost guaranteed someone can help you, yeah that's the benefit, I think.

Similarly, Aiofe also described how she thought FBC-5-JP was particularly useful during the pandemic for many teachers since they were able to easily get answers to their queries:

On FBC-5-JP, no matter the stupidity, you can ask and someone will answer you...They are very useful and reassuring to know that they are there.

Like Aiofe, it was clear from many of interviewees' responses that the majority of them were turning to online communities during the COVID-19 pandemic. Apart from Amelia who was the only interviewee who was already teaching online prior to the pandemic, 30 interviewees claimed that they were suddenly expected to teach online. It should also be noted that of the interviewees, 27 did not have little or no prior training in online teaching. In the following extract, Lucy claimed that she joined FBC-1-JP in April 2020 when the private university in Tokyo she was teaching at suddenly decided to hold classes online so that she could connect with teachers in Japan who were dealing with similar problems.

Developing an online course takes a very long time, but we were asked to do it in a matter of weeks with no training... So, I was looking to get insights from not only

people who had done this before but also who were in the same situation that I was in, who were having to do this very quickly with little training.

There were several other interviewees who positively described their experiences in using Facebook language teacher communities during the pandemic. For instance, Tessah praised the FBC-5-JP for being helpful during this difficult time:

I think it's great. Many people clearly enjoy it and I did. I had a real need for it. They saved me.

Daniel, who originally re-joined Facebook so that he could distribute his survey to language teachers for his PhD research, also found the online communities to be helpful when he needed to teach online unexpectedly:

I honestly only joined Facebook for purely selfish reasons which was that I just started my PhD program. I wanted to tap into a network of teachers because I knew all of these teachers were on Facebook, and I wanted to be able to access them when it comes time for me to do my own research... That was the only reason I got Facebook, but then it turned out to be a blessing in disguise when everything happened and we shifted online then. I've started to use Facebook beyond that original intention.

In a different instance, Lily recalled asking various technical and techno-pedagogical questions in FBC-5-JP and explained how she found the responses to be useful for her teaching:

I remember asking questions about breakout rooms in the beginning. I wanted to do peer review in my writing class, but I had no idea how I could do it, so I asked in there [FBC-5-JP] and then they told me how I could do it on Moodle.

She also indicated that when she posted a question in FBC-5-JP, she received private messages from a few FBC-5-JP members to personally help her with certain technical issues on Moodle:

I was relying heavily on Moodle because I usually have vocabulary tests in my classes, so I had to learn how to make quizzes and the different style questions so that was challenging at first, but then people like Archer and they were a godsend. Anytime something big happened, like I posted in FBC-5-JP but then [Archer] or even XXX [another FBC-5-JP member] would message me offline to help me. Then we would organise a Zoom call, so it was like a godsend... But yeah, FBC-5-JP was a lifesaver last year.

In addition to receiving professional support, Lily also seemed to view FBC-5-JP as a virtual space to receive emotional support:

In the beginning [of the pandemic], it [FBC-5-JP] was kind of like counselling because everybody else was freaking out and stressed, because they had the pressure of learning new technology themselves... We all relate to each other, so in the beginning it was more like a counselling kind of thing with helping each other, and that was useful.

Although the interviews clearly show that there are various beneficial aspects of being in Facebook language teacher communities, the negative aspects were also prominent in the interviewees' responses. The concern that the interviewees raised multiple times was related

to online arguments. A few interviewees claimed that they had personally received rude comments when they posted a question or comment in the communities. Tessah who described a negative experience she personally had in FBC-5-JP said that when she responded to a post, a couple of members “ganged up” on her, as illustrated in the following example.

One guy posted, ‘If my students submit a video or an audio recording and it’s one second short, I make them do it again. Is that fair?’ and I responded, ‘No, definitely not fair.’ I mean, he asked, and I told them, and he didn’t like that, and a couple people kind of ganged up on me.

Lily also described a negative encounter she had with one of the members in FBC-5-JP.

... (There is) one female member that is always rude... She says things in a very rude way, and she’ll tell you she thinks you’re wrong or she openly disagrees.

At least five interviewees reported that they had sometimes witnessed arguments in the online communities. For instance, Nur claimed that he did not participate in online arguments but expressed his concerns:

People can be aggressive (in the online communities) without any reasons. It’s psychological because there’s no face... because we can’t see their face... You need to select who you’re connecting with.

In another example, Farhana who joined FBC-5-JP a few months after the community was created in 2020, she witnessed “kerfuffles,” though she did not think that the atmosphere of the entire community was particularly bad:

I do remember when I first joined last summer, there was a little kerfuffle because someone said something, and it wasn't well received by other people, so there is that aspect. As a whole, I think FBC-5-JP is fairly positive, not toxic.

Similarly, Arthur claimed that he had only witnessed some "squabble" and "bickering" between community members and did not personally experience it before. He further explained that he was reluctant to get involved in the community to avoid negative experiences:

I haven't personally had any negative experiences. I think I've seen some negativity online where people sometimes will squabble about things which you know, you sometimes can see that, but I haven't personally, again, maybe because I'm not that engaged in Facebook. I think maybe if I was more than maybe. I've seen people kind of bickering sometimes, but I try not to. I don't like to get involved, not on Facebook, I mean.

In addition, David commented about the issue of online arguments, which he claims is a problem for not only those involved in Facebook language teacher communities but also for all Internet users. He further explains how these arguments can cause anxiety among users:

I think people can get dragged into unnecessary negative arguments or disagreements, so I tried to step away from that but it's sometimes difficult. Someone might say something which you really disagree with, or you might say something that somebody else disagrees with, but this is a wider problem in society these days. People really want to be right on the Internet, and it causes a lot of anxiety and a lot of division.



Besides online arguments, the interviewees seemed to have other negative experiences in the online communities. For instance, Preedah, a female interviewee, explained that when she joined one community, she received multiple friend requests from men and spam messages:

Actually, from my experience, once when I joined a particular group, after a few days, (I received) at least three or four friend requests from mostly men. You have to be careful. Also, I received personal messages inviting me to join a particular community, for example, tutoring schools.

In a different interview, Archer described his negative encounter with one of the FBC-5-JP members. He explained how he felt annoyed after finding out the member who asked a question in the community only wanted to “whine” and “vent” about the situation rather than someone to help him. Archer explained how he spent about an hour trying to help the member but felt that he wasted his time at the end:

I was actually trying to help him. I recorded to Screen Captures, and I offered to do a Zoom call with him and said, “Hey, let’s get you all sorted out there, buddy. You know, I’m gonna and things like that and I’m forwardly offering my time to help him and actually taking my time to record the video to take screen captures and things like that, and then later on to realise that he’s *tadano nakimushi* [just a crybaby]... I was very upset at that because I had probably spent about an hour trying to help this guy, and I’ll never get that time back.

Another potential issue pointed out by two interviewees is the permanency of the posts and comments shared online. As indicated in the following two extracts, the interviewees talked about the need to think carefully before posting.

I think the probably the biggest thing about online communities that comes to my immediate thought is that you have to be so careful about everything right like it's permanent in a way, so no matter what you post somebody's going to see that even if you delete it. (Tom)

Online, once you put it out there, it's hard to take it back. (Chloe)

Furthermore, a common concern raised was related to the trustworthiness and reliability of the information provided in the communities. Three interviewees expressed that they were sceptical about the quality of the comments and feedback given by some of the community members. For example, as indicated in the following extract, Tessah expressed how she would rather ask her teacher friends for feedback than a community member who she does not know personally.

I look more to certain friends who I trust their judgement or feedback. If I have a problem in a class, I might say, "This happened today. What are your thoughts?" I find it more valuable to have people who know me, give me feedback than some random guy on the Internet.

Moreover, Charlotte emphasised that teachers need to be aware that not all posts and comments shared in FBC-5-JP are not credible:

You have to remember that it's set up by volunteers, of course and you have to check the credibility of your volunteers, which I had no issue with this [FBC-5-JP] group, but because it's open to so many people, you also have to remember, everybody writing may not have the same credibility, of course, just be careful of that.

In a similar way, David explained how he valued the feedback provided by his teacher friends who he knew in real life more:

With certain people who I'm friends with I know in the real world, not just in the online world, we've helped each other over the years, so we're more likely to support each other in that way, and maybe in some ways the feedback might be more trusted or more reliable.

Related to this concern, Chloe described how some members occasionally misunderstood her question that she asked in the community and found it difficult to correct them since they were people who she didn't know:

The dominant voices think they really know everything and they keep talking about and it's hard to get your voice in... I could ask a question, for example, and somebody can answer for 30 minutes on a total tangent that I don't even want to know... I think that's the hard part on a group that doesn't know you because you couldn't say, 'Hey can you wait for a second. That's not what I mean,' like I'd be really shy to. I find it hard to say, 'stop' and I don't want to be rude, but I have a specific question, and I only have this much time and I really want to get to it.

Finally, an additional concern was about wasting too much time reading the posts and comments in the online language teacher communities, as indicated in Carlos's comment.

The negative aspects can be... you sometimes can waste a long time following the group.

In sum, it is clear that a number of different challenges associated with being in Facebook language teacher communities were described in the interviews. However, it is also worth noting that there was one interviewee, Punya, who explicitly stated that she could not think

of anything negative about the communities and that she had not experienced anything negative while being in the communities, which seems to be indicating that not all online community members thought that there were any problems with using Facebook language teacher communities.

### ***5.3.2 Reasons for posting/not posting in the online communities***

Connected to the previous theme, the second theme emerged from the interview data was the reasons for posting/not posting in the online language teacher communities. Firstly, it should be stressed that only several of the interviewees reported to have posted or commented in the Facebook language teacher communities, and most of them claimed that they were not extremely active in the online communities. The few interviewees who claimed to occasionally write initial posts and comments seem to be asking questions mostly related to technology and teaching. For instance, Lily indicated she posted in the communities to ask questions on how to effectively use breakout rooms for peer review activities in her writing classes (see Section 5.3.1 for the actual quote). Arthur also reported to have asked a question about an LMS with an automatic plagiarism checker which he could use for his English language classes:

Turnitin.com, it's quite powerful, but the problem is that it is extremely expensive, and apparently, you can only get it through the university. I was so frustrated with the matter. I tried to find out if I could get a personal Turnitin subscription but they don't offer that. You can only get it through the university. So that's why I went on Facebook, and I asked [in FBC-1-JP] if anybody knew of anything similar.

Another reason for posting in the communities seemed to be for research purposes. For instance, Daniel, a PhD student, indicated that he had joined FBC-1-JP and FBC-5-JP

because he wanted to have access to language teachers for his own research in the future (see previous section for the actual quote). In addition, David reported that he posted a survey in the communities for his own research, though it seemed that he preferred to write comments on posts more than write his own posts:

(I comment on) more practical or straightforward questions, and I did answer quite a few research surveys like yours because I posted my own, and it's you know nice to everyone to share around, isn't it? Yeah, answering some polls, answering some specific questions about what would you do in this situation. I think mainly maybe advice about teaching or that kind of idea.

Similarly, Archer who indicated that he "very rarely posts" explained that the reason why he mostly comments on posts instead of writing initial posts is to help others in need:

This community [FBC-5-JP] only exists if people help each other out, and so I sort of feel that my use of that software [Moodle] and my use of these benefits that everyone else is providing me, sort of the way I pay for that is by helping other people and paying it forward. So that the next people can enjoy the same benefits.

He also gave another reason for commenting on questions mostly related to Moodle. He explained how that if more teachers are on Moodle, the bigger the Moodle community gets, which, in turns, could be potentially beneficial for him:

Another small selfish reason is that if other people are on Moodle and I'm on Moodle, we're both on the same system that makes collaborating between that person and myself a lot easier. So if the person who I've helped out in the past comes back to me and says, "Oh, I found this great new plugin, man. You should try it out." And they'll share that information with me. Preferably, I'll be the first person they'll tell

because they're excited that they found something new or something, but also because they are like, "Thank you for helping me. I want to help you back." That community aspect of everybody just helps each other, I think it's a really beautiful thing.

On the other hand, other interviewees talked about the reasons for not wanting to post in the communities. As described in the previous theme, many interviewees had mentioned that they had witnessed online arguments at least once in the online communities. It seems that one of the common reasons for not posting in them is to avoid such negative situations, as illustrated in Daniel's comment.

I don't like getting drawn into these online discussions and debates because it just doesn't seem like it's worth anyone's time, so that's probably why I don't actually post much.

David also indicated that he tends to avoid responding to questions that may lead to an argument with other community members:

Why I really don't like to get involved on Facebook is arguments with people. If someone has a different opinion to me, that's fine, that's okay. They don't have to agree with me, so I don't comment on those kinds of questions.

For a similar reason, Chiharu also commented that she does not post much as she does not stand out in the community:

I'm a member [of FBC-1-JP and FBC-5-JP] but I'm not really involved in that sense... I just try hiding behind everyone.

Another potential reason for not posting may be related to the teachers' level of confidence. For instance, Amelia indicated that she did not post much because she was afraid of being exposed as a fraud, saying that "a big part (of not posting) is imposter syndrome." Chloe also mentioned that she was not able to ask a question in the community at first because she did not know the right technical jargon to sound intelligent:

At the beginning of the year, I didn't even have the right language. I didn't even know what an LMS was. I could imagine it, but I didn't even have the right language to speak intelligently about it.

Moreover, several female interviewees commonly reported that they were not involved much in certain communities because of gender-related issues. For instance, Tessah explained how she felt more comfortable in posting in an all-female community than FBC-5-JP:

It's the men that really ticks me off. That's what it was. Because this other group is all women and we're supportive. We are direct sometimes, and be like, "No, that's crazy," but then we reflect on their feedback and we're pretty direct with each other, but it's a supportive environment. Yeah, so I think that little group has taken over. I mean, one member is really excellent at tech stuff, and she has two grown sons who are excellent... So, I think it's a gender thing if I'm analysing myself now.

In another instance, although Chloe generally spoke highly of FBC-5-JP, she also mentioned this gender issue in the community.

There are certain people who really think they know everything, not everything, but like they really see themselves as the leader, the dominant. I hate to say it, but in

Japan, men and women... there is a gender element there [in FBC-5-JP], and it comes out like that a lot.

Lily, who posted more frequently than the other interviewees, also commented about the sexism that was going on in one of the Facebook language teacher communities that she was in and found “majority of the women much nicer than the guys.”

A further factor that seemed to influence whether or not the teachers posted in the communities was related to their teacher friends or close work colleagues. For example, Charlotte expressed that they asked other teachers they personally knew than the online communities:

I have friends, you know, colleagues, who I would turn to if I had questions.

She also explained that she did not post much in the community because she did not seem that she could add anything valuable to the conversation, and she personally did not have a need to ask questions because she did not come across many issues:

I had nothing specific to offer that wasn't already being discussed. As I said, I kept my own online simple and I'm probably doing you know, I use Zoom for my classes and I didn't have too many problems, so just checking through what people have posted maybe I found a solution to a problem if I did have one.

Similar to Charlotte, it was revealed that a lot of the interviewees described themselves as being “lurkers.” As indicated in the following comment, David indicated that he was reading the posts more than writing posts himself.

What's the phrase they call them, a lurker, right? Someone in the background. I haven't been to any of the social meetings or the online seminars. I've contributed a



few comments or answers to some of the questions that have gone up. I posted one or two things myself but not deeply involved, but it is interesting to look at.

Daniel also used the term “lurk” when he described his involvement in FBC-1-JP:

They’ve been really good to sort of see a community of practice and get ideas, but I really lurk. I don’t interact very much because I don’t like Facebook. I just signed up. I don’t really post or respond to anybody, but I lurk and read other people’s posts sometimes to see what other people are doing and to get ideas.

Finally, Indah, who claimed that she was not a confident user of English, indicated that she used online language teacher communities to “practise using English.” She explained that since there were no native English speaker teachers teaching at her school and she spoke Indonesian with all of her colleagues, she did not have many opportunities to use English, which made her want to find a place where she could practise the language that she was teaching.

In sum, a wide variety of reasons why teachers were posting and not posting in the online language teacher communities were identified from the interviewees’ responses. Although many of the interviewees indicated that they were not “fully active” members in that they did not post frequently in the communities but were “passively active” in that they were lurkers who would frequently read through the shared posts and comments.

### **5.3.3 Suggestions for a better experience in online communities**

In multiple interviews, the interviewees shared some of their thoughts on their positive experiences in the online communities and how they can be further improved. Quite a few interviewees indicated that anonymity plays a key role in shaping the users’ interactions

online. Since Facebook users need to use their real name, this rule seemed beneficial in terms of maintaining a safe and positive environment for the community members. Farhana, for instance, described how “toxic” the environment was in the Yahoo! Groups, which allowed her to join anonymously.

I used to hang out on Yahoo!, and oh my God, you wouldn't believe the toxicity.

In comparison, Farhana pointed out the beneficial aspect of using real names in the online communities on Facebook:

A positive thing about Facebook is you're using your own Facebook account, not like Yahoo! or things like that... So you're more careful about what you write.

In addition, Arthur speculated that language teachers in general avoid getting into online arguments because they are not anonymous:

It wouldn't be a very good advertisement for a teacher to be doing that (getting into arguments with others), so I think maybe that's a good thing in a way because as a professional group, generally speaking, it's not anonymous as well.

However, in another interview, David pointed out the negative side of not being anonymous and suggested that users think twice before posting and commenting online:

I think some of those people don't realise that Facebook is a lot more public than they think it is. What you post on Facebook is the only image you're presenting to people in the outside world and that could come back and give you some trouble in the future, so people do need to be a little bit careful with that, myself included.

Similarly, Tom explained how writing posts online could potentially have a detrimental effect on one's career and advised teachers to carefully think about how they would like to present themselves in the communities:

I mean it (writing a post) could be career ending sometimes. I once read this article about how somebody like posted or Twitter post got on a plane that flew from the US to Africa. By the time she was in Africa, she was fired because of the storm it created... If we're trying to make a career in these digital spaces, I think it becomes really important to consider what identity you construct in a professional and a non-professional way because Facebook has both, right?

Related to this, several interviewees mentioned a few suggestions on how to avoid getting into online arguments when participating in online communities. For instance, Anna talked about how community members should try to write clearly to avoid misunderstandings and said that "I try to be as clear as I can" when writing posts and comments. In another instance, Charlotte talked about the importance of writing politely in the online communities:

You know, maybe with this [pandemic] situation right now we get tired and frustrated and things, so we do have to remember to be polite and that everybody's trying your best because sometimes there were some discussions that got a little heated. It's different when speaking and writing, things can be expressed differently or we don't know the tone, we don't hear someone's tone physically. It's just like writing emails in the beginning, when we started right, we had to be careful of how we express things, because we can't hear each other and see each other face to face, so I think it can lead to some unnecessary disagreements or criticisms.

As shown in the following extract, Lily also explained how she would add a sentence or two to try to make herself sound humble or add emojis to avoid trying to sound rude.

Some people are not overly friendly in their postings. So in the beginning, I was nervous because everyone seemed to be experts and I'd seen some posts from the unfriendly kind of people, so I was bit scared in the beginning to actually ask a question so every time I ask a question like, "I have a dumb question" or "I have a stupid question, so sorry" Yeah, but then usually most people say oh that's a good question I have the same question... I often put emojis so it sounds obvious I'm not being rude.

However, there seems to be a limit to what can be done at the individual level. A few interviewees indicated that the moderators of the community play a vital role in creating a positive environment for the members. Farhana, for instance, indicated that FBC-5-JP did not particularly have a negative atmosphere and suggested the reason for this was due to the efforts made by the moderators:

I think FBC-5-JP is very welcoming and open and quite friendly and the people who run it tried to keep it that way, which I'm really impressed with. That's a very hard job.

Similarly, as the following extract indicates, Lily reported that she felt more comfortable posting and commenting in FBC-5-JP once the moderators notified the members with community rules and became stricter towards those who did not follow them.

So in the beginning, it was a little bit uncomfortable, but now it's gotten a lot better because I think the moderators have gotten stricter with the evil people... I'm not

sure if they were kicked out, but I know that they posted a lot saying things like “don’t do this” and that, so people stopped doing it.

It seems that the overall experiences in online communities can be improved by taking measures individually as well as having several core members to moderate the community to ensure that the rules are being followed.

#### ***5.3.4 Potential factors influencing the way language teachers learn about technology***

Another prominent theme identified from the interview data was the factors which seemed to be involved in influencing the language teachers’ modes of learning about technology in language teaching and learning. All 31 of the interviewees indicated that they were learning about technology in language teaching and learning in some way or another. When they explained about the ways in which they were learning about technology in language teaching and learning, a variety of factors emerged from the data set. Firstly, one of the most prominent factors was related to financial issues. For instance, Carlos who was teaching full-time in Brazil explained how he had to rely on free materials and tools to learn about technology due to financial constraints:

In Brazil, our current state of the economy is not so good... so I would need to pay five times more... Since teachers here don’t have a high salary, we don’t have money to spend so much on these things. We basically search for free tools... something that is cheap or free.

In addition, Nur who moved from Japan to Sri Lanka in early 2021 to teach also indicated that he only participated in free online seminars until recently because he was unemployed but now that he has funds from his workplace, he can attend ones which are not free:

I never pay. I always attended the free ones because I didn't have a job for a while because of COVID. I didn't have any income. But right now, if there is an interesting seminar and I have to pay 20 dollars, yeah sure, okay... They [his new workplace] have a lot of studying funds.

In another instance, Farhana, a part-time instructor teaching in Fukuoka, expressed how she wanted to participate in some professional learning courses but decided not to because they were too expensive. As indicated in the following extract, she chose a learning method that was free instead.

For a part-time instructor, I'm interested (in learning about technology), but I don't have the money, and that's why I thought the summer sessions were so useful because everything was free.

The summer sessions to which she referred were a week-long event hosted by the FBC-5-JP community during the summer break from 2020. They included talks, workshops, and seminars on topics related to online teaching, which were completely free of charge.

Another factor that was notable from the interviewees' responses was related to time. As teachers are known for their busy schedule, it is not surprising that language teachers were keener on learning through online platforms than in-person options. For instance, Farhana explained that she prefers learning online because "face-to-face meetings take a lot of time and energy." In addition, Rynelle claimed that as a language teacher, she does not have much time to learn about technology but read posts shared in Facebook communities in her short break between her classes (see 5.3.1. for the actual quote).

It was clear that some interviewees had other priorities besides learning about technology. For instance, Charlotte claimed that while she was teaching at multiple universities, she was also going through some health issues which required frequent treatment at the hospital. Three interviewees (i.e., Daniel, Tom, Chloe) also mentioned that they were doctoral students who had to conduct research in addition to teaching. Four interviewees (i.e., Lily, David, Daniel, Hung) also mentioned that they were busy taking care of their young children. Furthermore, the COVID-19 pandemic seemed to have added even more burden on their already heavy workload, as indicated in the following comment made by Tessah who was one of the many language teachers teaching online during the pandemic.

I was terrible. I didn't sleep for the first couple months. I was so stressed out since I had so much to do. I had serious insomnia. So that was terrible, but yeah, it [online teaching during the pandemic] is just so time consuming.

Besides time-related factors, accessibility also seemed to be a contributing factor. For instance, Carlos who lived in a small city in Brazil indicated that there were not many opportunities to study about technology. As illustrated in the following extract, due to his geographical location, he claimed that his options for learning about technology were limited.

The public universities do not offer much, and when they do offer, they're far from our city, so we cannot go.

This comment appears to be indicating that online modes of study are particularly useful for those who live in rural areas and cannot easily attend courses, workshops, seminars, or other relevant events, which are often held in major cities.

Moreover, it was clear from the interviewees' responses that in many parts of the world, the COVID-19 pandemic has made it difficult for them to learn through in-person options. All

31 interviewees from 11 different countries reported that their countries implemented some sort of lockdown or movement restrictions to slow the spread of the virus. Due to these restrictions, the majority of those interviewed seemed to have no choice but to work from home. In several cases, the interviewees commented about downsides of not having their colleagues nearby when working. For instance, the following quote made by Chiharu, who prior to the pandemic, used to work in an office shared by other teachers, illustrates how working remotely limited the interactions with her colleagues:

I'm working remotely most of the time, so if I need help from my workmates, they're not here. If we were all together in an office, all I needed was to just reach over across the desk and say, 'help me.'

However, it should also be noted that some language teachers seemed to be making the most of the situation and turned to online platforms to connect with other teachers. For example, although Daniel expressed some hesitations in engaging in language teacher communities, he emphasised that they could be used as a useful replacement when face-to-face interactions with other language teachers were limited.

It's really good and really helpful, especially now as everyone's sort of teaching online. You know, we were not getting a lot of the usual sort of interface and interaction with each other that we might if we're getting if we're meeting our colleagues on campus and you know, seeing each other at conferences and things like that, and so I think that it's a good thing to have when you don't have the capacity to meet people face-to-face and talk about your teaching.



In addition, Chiharu expressed the perks of international events being held online, claiming that “a lot of Professional Developments (PDs) are online, which is actually great because I can go to all these conferences and PDs overseas now.”

Another related point that was notable from the interviews was that there seems to be a disparity between those who have sufficient collegial support and those who do not. For instance, at least four interviewees (e.g., Charlotte, David, Johan, Tessah) indicated that they all had several close colleagues who they could turn to if they needed help. As illustrated in David’s comment below, he was able to connect with his teacher friends on Facebook if he needed any support.

I’ve been in Japan for a long time, so a lot of my Facebook friends are other university teachers, so if I have a question about something, or if I am looking for some feedback or some sort of ideas, sometimes I’ll just put these questions on my personal page and then I often get back some useful responses that way.

On the other hand, there were several interviewees who felt that they had little or no connections with other teachers at their workplace. For instance, Farhana, who was a part-time instructor at a university in Fukuoka, claimed that it was difficult to interact with her co-workers because she was teaching part-time:

The whole setup of part-time teaching: We are there at different times, we have different schedules, so it’s hard... We don’t have meetings. We just go to school, teach our classes, and come home.

She contrasted with her past experience as a full-time teacher in Malaysia where she was able to exchange conversations with her colleagues more easily:

Back in Malaysia, I was a schoolteacher. We had a big staff room, and all the teachers were there, and it was easy to talk to your colleagues about things, discuss things, and ask for their feedback, but here (in Japan), it's hard. I do have one or two people who I can talk to but no more than that.

In another interview, Daniel reported that he started working at a new university from April 2020 during the peak time of the COVID-19 pandemic. Since he had to work remotely throughout the first six months, he claimed that he struggled to get to know his new colleagues. As described in the following comment, he explained how it was difficult at the beginning because he was not able to meet them face-to-face for an extended period of time.

When you start a new teaching job you go into the office and you meet the new people. You get a sense of the work and culture in that department or in that office, what the students are like, what everyone's like you know, and I completely just lost that. I haven't met anyone face-to-face with any of my colleagues, which is really bizarre.

In addition, there seems to be a difference in the amount of support the interviewees were receiving from their institutions, particularly during the pandemic. For instance, as illustrated in the following extract, Tessah who was teaching part-time in Japan shared her different experiences in April 2020 when the three universities where she was teaching told her to teach online.

One [university] was fantastic... They had a manual. It's like this thick and tells you about how to use all the different things. Then they had some Zoom training you could join and then this was amazing and I didn't take them up on the offer, but they had staff who were your mock students. So if you wanted to practise, you could make

an appointment and they would have the students ready to take your class. So that was my great university and then we just go downhill from there.

She further explained about the negative experiences that she had with the other two universities:

(At one university,) nobody knew what was going on and the full-timers were just answering questions when they didn't really have the answers... And then at the other university, they finally set up a Google group for us. But it was all in Japanese...I can't follow along with everything written in Japanese. So they did listen and created one in English, but there were just a few people that joined...Yeah, that university, I was really on my own.

It was evident that language teachers who had little or no support from their colleagues and institutions had no choice but to turn to other modes of learning, especially those that are self-directed in nature.

In sum, it is evident from the interviewees' responses that there are a number of different reasons why language teachers choose to use a certain way to learn about technology in language teaching and learning.

### ***5.3.5 Learning about other topics besides technology***

Although many of the language teachers expressed that they were interested in learning about technology for language teaching purposes, it was revealed that they had interests in learning about other topics in language teaching as well. With language teaching and learning in general, there are various important areas of study in which teachers need to continuously acquire skills and knowledge. As indicated in the following three extracts,

some of the topics that were included in the interviewees' responses were pragmatics, metaphor, and special education inclusive practice.

I'm not just in the CALL SIG (Special Interest Group), but I'm also in the pragmatics SIG. In 2018, XXX was one of my very first conferences I went to and presented and after that, I joined YYY. We had to choose which SIG we wanted to join, so I chose pragmatics. (Farhana)

When you're a PhD student, it still informs teaching, I think in some way...I also go to all kinds of conferences, and one of my interests is metaphor... There's a literature conference and that's about different ways that we can use literature with language teaching. Those are some of the main ones. They're all one-off seminars that I've attended. (David)

I'm a PhD student at XXX [university name] and my research is sort of centred around the intersection of teacher training in our field teacher training for language teachers and special education inclusive practice. And so, related to that, I am also the Chair of the supporting students with disabilities interest section for YYY [an international academic organisation]. (Daniel)

In another instance, Nur who was teaching at a language school in Sri Lanka reported that he was learning about Equality Diversity Inclusiveness (EDI) in education and participated in workshops and seminars on topics such as gender equality, sexuality, and people's rights in Pakistan.

He also expressed how he was not sure if he would be able to continue teaching in the future because he had financial concerns. Despite being a language teacher for six years in Japan

and Sri Lanka, he explained that language teaching might not be a possible long-term career option for him:

Although it's nice living abroad. If I work with the right company, like XXX [the current institution], I feel respected as a teacher. I feel I made an impact and got involved in the global network, like the EDI stuff, so if you're working with the right people, with the right company, yes, it's nice, but we know it's not forever, and it's the sad truth. Although the pay is comfortable, the lifestyle is nice, but still, you can't save for retirement like this, and at some point, you will be stuck somewhere and that's the sad part.

He further explained that he was considering pursuing a career completely different from teaching in the future:

I've been thinking a lot about backup career plans as well. We know it's not forever and I have a lot of other interests. And you know, who knows, maybe in five years, I'm going to open a restaurant. Maybe I'll be a scuba dive master, who knows? I'll be a photographer full time, who knows?

Out of all the interviewees, Nur was the only one who explicitly stated that he was not sure if he was going to continue his career as a language teacher in the future.

#### **5.4 The post-interview questionnaire**

In March 2022, a post-interview questionnaire was distributed to the 31 interviewees, and all apart from Gemma and José responded to it. The majority of the respondents (n=25) indicated that they were teaching at the same institution since their interview in 2020 and 2021. The four who indicated that they had changed their jobs (Aiofe, Chiharu, Hung, Amelia) were still working in the education sector.

In the first part of the post-interview questionnaire, respondents were asked to write about their expectations for the technology-focused language teacher communities when they first joined. Most of the respondents described that they had positive expectations at first. As indicated in Table 29, approximately half of the respondents (n=13) indicated that they joined the online communities to get teaching ideas. Specifically, many of these respondents commonly reported that they wanted to get teaching ideas related to online teaching or hybrid teaching. Moreover, five of the respondents indicated that they joined the online communities to get emotional and technical support from other teachers. Furthermore, other respondents indicated that they joined to ask questions (n=4), to learn about tools for online teaching (n=3), to share about research and practice (n=2), to socialise and network (n=2), to learn from others (n=2). In single cases, respondents claimed that they joined to find a community of practice (n=1), to see what others are doing (n=1), to discuss teaching ideas (n=1), to collaborate (n=1), and to help others (n=1). Among the 27 respondents who initially expected their community memberships to result in a positive outcome, the majority of them (n=23) claimed that their expectations had been met, though not all responses were completely enthusiastic. To the question which asked if the communities that they were members of had met their expectations, two respondents were rather enthusiastic (“yes and more,” “yes, definitely”), and 12 of them simply wrote “yes.” The other nine respondents seemed to be also enthusiastic but to a lesser degree (e.g., “yes for the most part,” “to a certain extent,” “pretty much”). Although most respondents did not specify which community they were referring to, five of them specifically wrote that FBC-5-JP were the communities that had met their expectations. Moreover, seven of them also seemed to be less satisfied with the online communities (e.g., “not really,” “not completely,” “yes and no”), and the other two explicitly stated that they were not satisfied with them (“no”).

Furthermore, out of all 29 respondents, two of the respondents also indicated that they did not expect much from joining the online communities. Aiofe, for instance, indicated that she found most groups on technology to be intimidating because they were often male-dominant in pre-pandemic times. However, she reported that her expectations were met and found that FBC-1-JP and FBC-5-JP were particularly useful during the pandemic.

**Table 29***The Respondents' Expectations for the Online Language Teacher Communities*

| The respondents' expectations                              | Frequency | Respondents  |
|--|-----------|--|
| To get teaching ideas                                      | 13        | Matthew, Theodore, Mohamed, Arthur, Charlotte, Mei, Chiharu, Chloe, Johan, Tessah, Zjarra, Indah, Seth |
| To get emotional and technical support from other teachers | 5         | Tessah, Lily, Archer, Anna, Chloe  |
| To ask questions   | 4         | Lucy, Chloe, Farhana, Hung   |
| To learn about tools for online teaching                   | 3         | Theodore, Punya, Nicholas  |
| To share about research and practice                       | 2         | Preedah, Johan   |
| To socialise and network                                   | 2         | Tom, Chiharu   |
| To find a community of practice                            | 1         | Daniel   |
| To see what others are doing                               | 1         | David  |
| To discuss teaching ideas                                  | 1         | Rynelle  |
| To collaborate   | 1         | Hung   |
| To help others   | 1         | Seth   |
| Not much expectation                                       | 2         | Aiofe, Amelia  |

Respondents were also asked to indicate whether their teaching practice had changed as a result of participating in the online language teacher communities, and 22 out of 29 respondents (75.9%) selected “yes” in response to that question. In the following question, the 22 respondents were asked to further elaborate on their answers. One of the most common answers was about how they were able to learn about teaching ideas and

technological tools in the technology-focused online language teacher communities and led them to incorporate them into actual classes, as indicated in the following two comments.

I have implemented some ideas in my online classes. (Johan)

I have been able to source more tools, techniques and insights from online communities and implemented it into my lesson. (Rynelle)

Several of the respondents also commonly indicated how learning about other members' ideas on how to use technological tools and resources in the communities made them more willing to use technology in their classes:

I have new ideas to use [technology, and] I see how others have solved similar issues.

I am willing to try new things based on what I read from other teacher's experiences.

(Chloe)

Now I'm much more open to being willing to try new tools with my students.

(Carlos)

On the other hand, it should be noted that seven respondents (24.1%) indicated that their teaching practice was not affected by the online communities. Two respondents commented on how much of the content discussed in the online communities did not apply to their teaching context:

The tips and technology I've seen on Facebook often don't really apply to me since I'm not teaching grade school kids. (Amelia)

That community was more for university teachers. Not me. (Anna)



Moreover, Seth reported that though he thought that interacting with other teachers had broadened his perspective, he did not always agree with what some of the members were saying:

What participation has made me aware of is that there are still people whose approach I'm not sure I understand or agree with.

Daniel who activated his old Facebook account to join online communities during the pandemic also indicated that his teaching was not affected by the communities because he did not rely much on them:

I ended up mostly troubleshooting things on my own. It's not that I was disappointed in the community I found online, only that I utilised it less than I thought I would when I joined. In retrospect this may be due in large part to my general aversion to Facebook. I was off of Facebook for 8 years before joining again when the pandemic started, and my interaction there across the board has been very minimal because it's not something I'd been accustomed to doing with any regularity.

Furthermore, Matthew who reported that he went back to teaching in-person explained that he no longer needed to use what he had learnt about online teaching from the communities since he "reverted most classwork and tasks to pre-2020."

In the following section, respondents were asked to indicate whether or not their use of online communities had changed in the past year. Of the fifteen who indicated they were using them differently, thirteen reported that they were using them less. Three respondents reported that they were using the online communities less because they were relying more on their colleagues (Mohamed), other teacher communities (Anna), and other resources such as webpages and applications (Preedah). In addition, some of the respondents (e.g., Arthur,

Lily) were using less of the communities because they were no longer teaching online, though Arthur indicated that he was still “interested in various aspects of online teaching such as hybrid and blended learning.” In total, 11 out of 29 respondents were still teaching online at the time the post-interview questionnaire was distributed, but it seemed that some of the respondents did not feel that they needed as much support as before. For instance, Lucy noted that she was relying on the communities less because she feels “more comfortable with online teaching.”

Despite half of the respondents indicating that they were using the communities less, there was one respondent who reported that he was using them more in the past year than before, as indicated in the following comment:

I have become a lot more engaged in trying to help and share ideas and experiences.

(Carlos)

Furthermore, the other 14 respondents reported that their uses of online communities have been somewhat constant the past year, though Farhana and Archer stated that they were continuously lurking and not posting much.

Subsequently, respondents were asked if they had joined any new online language teacher communities in the past year, and the majority of them (n=20) reported that they did not. However, the nine respondents who reported that they had joined at least one other online community in the past year claimed that they joined communities related to teaching (Mei, Tessah), language teaching (Indah), technology in language teaching and learning (Carlos, Tom), and research (Preedah).

From the semi-structured interviews conducted between 2020 and 2021, it was clear that some of the respondents, such as Lily, explained how they had relied upon the online language teacher communities to receive emotional support. Hence, in the post-interview questionnaire, all the interviewees were asked to indicate whether the online language teacher communities had provided them with emotional support, and 14 out of 29 respondents indicated “yes.” The respondents further explained about the ways in which the online communities provided them with emotional support: Seven respondents (i.e., Lucy, Preedah, Theodore, Farhana, Chiharu, Tessah, Daniel) commonly indicated that it felt reassuring that “other teachers are facing similar challenges” (Farhana). Moreover, three respondents (i.e., Tessah, Lucy, Preedah) commented on how they made them “feel less alone” (Lucy) in their struggles since they were interacting with others in the online communities. Archer also explained how the online social events provided him with emotional support. Even Daniel, who indicated that he was a lurker and rarely posted in the online communities, claimed that, “sometimes I’ll see someone post about a similar problem or issue or feeling that I’ve had or been having, and reading the replies to that comment makes me feel better.” Similarly, Tessah indicated that she “felt comfort in knowing others were struggling, though she also felt that “some comments on [FBC-5-JP] were upsetting and unsupportive.”

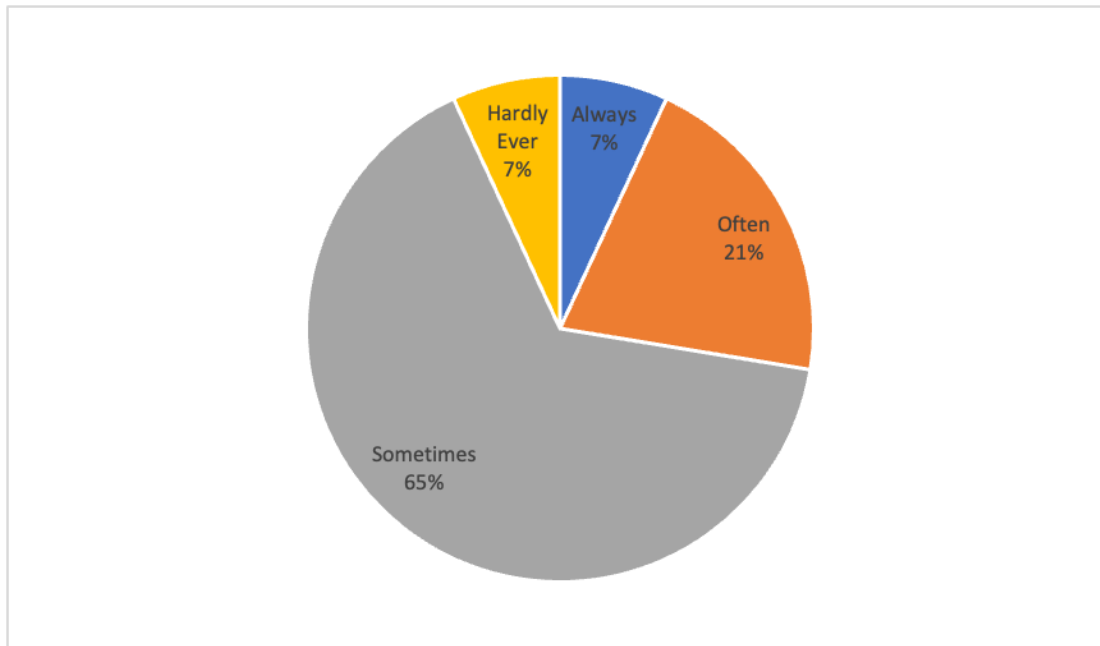
Furthermore, the other half (n=15) reported that the online communities did not provide them with any emotional support. The most common reason (n=5) was that they joined in the communities for other purposes and were not looking for emotional support in the first place (Amelia, Arthur, Matthew, Tom, Zjarrta). Another common reason (n=3) was that they had other sources from which they could receive emotional support (David, Johan, Rynelle). For example, David indicated that he had a “real-life support network,” which he relied on instead. Other reasons were related to the negative aspects of online communities: Lily

claimed that she found that “there are many trolls” in large online communities. Moreover, Chloe indicated that she actually gained negative emotions from the communities because there was “bickering among teachers.” Furthermore, Anna noted that she “didn’t feel safe in those spaces to share.” Hence, it is clear that due to a variety of reasons, not all respondents viewed the online communities as a source of emotional support.

Another common point raised in two of the interviews was about teacher stress. Lily and Tessah both mentioned the stressful aspect of their work, especially during the start of the COVID-19 pandemic. Hence, in the post-interview questionnaire, respondents were asked to indicate how often they generally felt stressed towards their work. As illustrated in Figure 13, more than half of the respondents (n=19) indicated that they were sometimes stressed about work. Moreover, 27.3% (n=8) indicated they were “always” or “often” stressed about work. Only 6.9% (n=2) reported that they “hardly ever” felt that work was stressful, and none of them chose the “never” option.

**Figure 13.**

*Percentage of How Often Respondents Feel Work-Related Stress (n=29)*



In the following question, respondents were asked to briefly specify the main sources of their work-related stress: Ten of them (i.e., Matthew, Carlos, Arthur, Mei, Tessah, Rynelle, Zjarrta, Indah, Amelia, Farhana, Aiofe) explained that preparing for classes was the most stressful aspect of their work. Tessah further elaborated that preparing for classes is particularly more time-consuming and stressful for her now because she needs to prepare for two types of lessons for each class, namely for students who attend face-to-face classes and those who cannot come to classes due to COVID-19 related symptoms. Arthur also commented how the stressful aspect of planning a lesson was made worse during the pandemic since he was using a computer which was not working well and having the need to check several email accounts, LMSs, and other platforms. Other sources of work-related stress described by the respondents were from having a heavy workload (Daniel, David, Nur), grading (Hung, Tom, Lily), doing administrative tasks (Theodore, Lucy), teaching at a new university/institution (Aiofe, Farhana), dealing with management (Archer, Chiharu), having a lack of collaboration among colleagues (Theodore, Johan), having a lack of

technical staff (Charlotte), having to improve their teaching based on students' evaluations (Chloe), having the need to learn about technology (Mohamed), attending faculty meetings held in a foreign language (Lily), having the need to publish journal articles and books to maintain a full-time position (Preedah), and time management issues (Anna).

It was revealed that 21 of them (72.4%) reported that they were doing something to manage their work-related stress. A wide variety of actions were taken, including exercising (Lucy, Charlotte, David, Tessah, Aiofe, Lily, Hung, Anna, Amelia), chatting with friends and colleagues (Lucy, Theodore, Charlotte, Tessah, Rynelle, Anna, Nur), spending time on their hobbies and self-care activities, such as massages, eating out at restaurants (Chloe, Preedah, Farhana, Aiofe, Hung, Anna, Seth, Nur), taking breaks (Lucy, Chiharu, David, Nur), and reading posts shared in language teacher communities on Facebook (Seth).

Several of the respondents (e.g., Lily, Aiofe, Daniel) stated in their 2020/2021 interviews that they were stressed out during the COVID-19 pandemic because they had no prior experience in teaching online and had not received any training on how to teach online. A few of the respondents (e.g., Lily) also indicated that they felt more comfortable in using technology to teach towards the end of the first semester online. Moreover, Lily reported how the discussion in FBC-5-JP was initially focusing on troubleshooting at the beginning of the spring semester in 2020 but gradually changed towards other topics related to teaching at the end of the semester as "everyone seemed to be experts and comfortable." Since their confidence in using technology for teaching purposes seemed to have changed over the course of two years, all the respondents were asked in the post-interview questionnaire to rate their confidence levels before the pandemic and their current confidence level using a six-point Likert scale (1: Not very confident at all, 6: Very confident). As shown in Table

30, 20 out of 29 respondents indicated that their confidence level increased since the time before the pandemic. On average, those who claimed that their confidence level has changed since pre-pandemic times increased by 1.14 points ( $SD=1.09$ ). The respondent with the highest increase was Chloe who rated 4 points higher than her initial low rating of “2.” In total, there were nine respondents who did not change their confidence levels. It is noteworthy that all nine of these respondents rated their confidence level as either “5” or “6,” indicating that they perceived themselves as being highly confident in using technology for teaching purposes. It should also be noted that no respondents indicated that their confidence levels lowered since the pandemic had started.

**Table 30**  
*Respondents' Confidence Levels Before the Pandemic and Now (n=29)*

| Respondents' name | Before the pandemic | March 2022 | Changes in confidence level |
|-------------------|---------------------|------------|-----------------------------|
| Chloe             | 2                   | 6          | 4                           |
| Lucy              | 2                   | 5          | 3                           |
| Indah             | 1                   | 4          | 3                           |
| Daniel            | 3                   | 5          | 2                           |
| Theodore          | 3                   | 5          | 2                           |
| Mohamed           | 3                   | 5          | 2                           |
| Arthur            | 4                   | 6          | 2                           |
| Chiharu           | 3                   | 5          | 2                           |
| Tessah            | 3                   | 5          | 2                           |
| Zjarrta           | 4                   | 6          | 2                           |
| Preedah           | 4                   | 5          | 1                           |
| Carlos            | 5                   | 6          | 1                           |
| Charlotte         | 4                   | 5          | 1                           |
| Mei               | 5                   | 6          | 1                           |
| Farhana           | 5                   | 6          | 1                           |
| Johan             | 4                   | 5          | 1                           |
| Tom               | 4                   | 5          | 1                           |
| Lily              | 5                   | 6          | 1                           |
| Nur               | 3                   | 4          | 1                           |
| Matthew           | 6                   | 6          | 0                           |
| Punya             | 5                   | 5          | 0                           |
| David             | 5                   | 5          | 0                           |
| Aiofe             | 5                   | 5          | 0                           |
| Rynelle           | 5                   | 5          | 0                           |
| Archer            | 6                   | 6          | 0                           |
| Daniel            | 6                   | 6          | 0                           |
| Anna              | 6                   | 6          | 0                           |
| Amelia            | 6                   | 6          | 0                           |
| Seth              | 5                   | 5          | 0                           |

**Note.** 1: Not confident at all, 6: Very confident



The final part of the post-interview questionnaire included the same question as the initial questionnaire distributed in 2020. The respondents were asked once again to indicate how frequently they did certain activities to learn about how to use technology in language teaching and learning. The main reason for including the same question in the post-interview questionnaire was to see if there were any major changes in how the respondents were learning about technology in language teaching and learning in the last two years. As shown in Table 31, there seems to be some changes in the ways the respondents have been learning since 2020. Firstly, one of the main differences is that there were fewer respondents who indicated that they were attending face-to-face academic conferences in the post-interview questionnaire. Approximately four times more respondents (n=23) in 2022) reported that they “never” attend face-to-face academic conferences than in 2020. Subsequently, there seems to be more respondents that reported to have attended online academic conferences more frequently in 2022. Another clear difference is that there are much fewer respondents who were observing other teachers’ classes in 2022. Exactly twice more respondents (n=14) in 2022 reported they “never” observe other teachers’ classes than in 2020. It was also observed that there were slightly more respondents attending online courses and reading journals and books in 2022 than in 2020. On the other hand, there were slightly less respondents reporting that they were asking co-workers in 2022 than in 2020. Throughout the past two years, activities such as searching the web, watching videos, reading email lists, and reading blogs have continued to be popular modes of learning, whereas other activities such as taking face-to-face courses have been equally unpopular in both time periods.

**Table 31**  
*Post-Interview Questionnaire Respondents' Results Regarding the Ways to Learn About Technology in Language Teaching and Learning in 2020 and 2022 (n=29)*

|   | Year | Daily | 2-3<br>times a<br>week | Once a<br>week | Once a<br>month | Twice<br>a year | Once<br>a year | Rarely | Never |
|---|------|-------|------------------------|----------------|-----------------|-----------------|----------------|--------|-------|
| Attend face-to-face<br>(not online) academic<br>conferences | 2020 | 0     | 1                      | 0              | 3               | 6               | 5              | 8      | 6     |
|   | 2022 | 0     | 0                      | 0              | 1               | 2               | 2              | 1      | 23    |
| Attend online<br>conferences                                | 2020 | 0     | 1                      | 2              | 5               | 4               | 3              | 8      | 6     |
|   | 2022 | 0     | 0                      | 3              | 9               | 8               | 4              | 3      | 2     |
| Take face-to-face (not<br>online)<br>lectures/courses       | 2020 | 0     | 0                      | 0              | 3               | 3               | 2              | 11     | 10    |
|   | 2022 | 0     | 0                      | 0              | 1               | 1               | 2              | 6      | 19    |
| Take online<br>lectures/courses                             | 2020 | 1     | 2                      | 0              | 6               | 4               | 3              | 5      | 8     |
|   | 2022 | 1     | 2                      | 1              | 5               | 3               | 3              | 4      | 10    |
| Search the web  | 2020 | 15    | 5                      | 3              | 4               | 0               | 0              | 1      | 1     |
|   | 2022 | 17    | 3                      | 3              | 4               | 1               | 0              | 0      | 1     |
| Watch videos  | 2020 | 13    | 5                      | 4              | 4               | 1               | 0              | 1      | 1     |
|   | 2022 | 14    | 5                      | 1              | 6               | 1               | 0              | 2      | 0     |
| Read journals articles                                      | 2020 | 5     | 5                      | 3              | 7               | 2               | 1              | 4      | 2     |
|   | 2022 | 3     | 3                      | 10             | 9               | 0               | 0              | 3      | 1     |
| Read books  | 2020 | 4     | 5                      | 4              | 2               | 3               | 3              | 6      | 2     |
|   | 2022 | 3     | 3                      | 5              | 8               | 1               | 0              | 5      | 4     |
| Read blog posts   | 2020 | 4     | 4                      | 5              | 3               | 3               | 1              | 5      | 4     |
|   | 2022 | 4     | 6                      | 6              | 4               | 1               | 0              | 6      | 2     |
| Read email list<br>messages                                 | 2020 | 5     | 5                      | 4              | 0               | 1               | 1              | 6      | 7     |
|   | 2022 | 8     | 4                      | 1              | 4               | 1               | 1              | 4      | 6     |
| Connect with teachers<br>on SNSs                            | 2020 | 9     | 10                     | 4              | 1               | 1               | 0              | 3      | 1     |
|   | 2022 | 8     | 5                      | 5              | 7               | 1               | 2              | 1      | 0     |

|                                 |      |   |   |   |   |   |   |   |    |
|---------------------------------|------|---|---|---|---|---|---|---|----|
| Ask co-workers                  | 2020 | 4 | 8 | 7 | 3 | 2 | 2 | 2 | 1  |
|                                 | 2022 | 4 | 5 | 7 | 4 | 2 | 0 | 6 | 1  |
| Observe other teachers' classes | 2020 | 2 | 2 | 1 | 5 | 4 | 2 | 6 | 7  |
|                                 | 2022 | 2 | 1 | 0 | 3 | 3 | 2 | 4 | 14 |

### 5.5 Summary

In this chapter, the results of each data collection method (i.e., the online observations of technology-focused online language teacher communities on Facebook, initial questionnaire, semi-structured interviews, and post-interview questionnaire) were described in detail. Specifically, in the first section, the number of members, posts, comments, and like and content of the posts collected in FBC-1-JP and the four other comparison cases were presented. In the subsequent section, the findings of the initial questionnaire which was distributed in June 2020 and received a total of 482 responses were reported. In the third part of the chapter, five main themes derived from the interviews which were conducted with 31 questionnaire respondents during the period between July 2020 and June 2021 were demonstrated. Finally, in the fourth section, the key findings of the post-interview questionnaire which were filled out by 29 of the interviewees in March 2022 were presented. In the following chapter, the results described in the current chapter will be discussed in terms of the three main research questions described in Chapter 2, taking into consideration relevant past literature.

## Chapter 6. Discussion

The main results from the two-year observations of FBC-1-JP, the three-months observation of four other similar technology-focused language teacher communities, the initial questionnaire, semi-structured interviews, and the post-interview questionnaire were presented in the previous chapter. In the present chapter, the synthesis of these results in relation to the original purpose of the study, three main research questions, and existing literature are stated. The first section of the chapter aims to uncover what language teachers on Facebook are doing to learn about how to use technology in language teaching and learning. The second part examines the realities of how language teachers are actually making use of online language teacher communities. The subsequent part then focuses on understanding the ways in which language teachers were using such communities during the pandemic and the potential consequences of it. Lastly, the limitations of study are outlined at the end of the chapter.

### 6.1 Learning about technology in language teaching and learning

One of the main goals of the study was to understand the ways in which language teachers are learning about technology in language teaching and learning. Given that the results are based on the questionnaire and interview responses obtained from language teachers who are on Facebook, it should be stated from the start that the findings do not describe the entire picture of how all language teachers in the world are learning about technology in language teaching and learning. Nonetheless, as alluded in Chapter 2, since there has only been a handful of studies in the past specifically examining this matter (cf. Egbert et al., 2002; Son, 2014), the findings from the current study will contribute to the limited understanding of how language teachers are actually doing to learn about technology in language teachers and learning. The following sections mainly focus on answering three specific questions: (1)

Why are some language teachers motivated to learn about technology in language teaching and learning and others are not?; (2) What are the trends towards learning about technology in language teaching and learning; and (3) What are the reasons behind these trends? By answering these three main questions, the ultimate goal is to offer practical implications on how to enhance and support the learning of language teachers using technology for teaching purposes.

### **6.1.1 Language teachers' attitudes towards learning about technology**

The initial questionnaire which received responses from 482 language teachers in 78 countries revealed that the majority of questionnaire respondents (95.3%) were using technology in their classes. On the surface, the high percentage of language teachers using technology for teaching purposes seems to be illustrating that technology is no longer a special tool and has become a step closer to “normalisation” to which Bax (2003) refers as the state where “technology is invisible and truly integrated” (p. 13). Certainly, the high percentage may be simply illustrating that more and more language teachers are currently using technology for teaching purposes, but there are likely several reasons why many language teachers indicated that they were using technology in their classes. First, and most probable reason is related to the timing of the distribution of the initial questionnaire. Since the initial questionnaire was distributed in summer 2020 during the COVID-19 pandemic, many language teachers were still teaching online. As indicated in the initial questionnaire, 76.9% of those who indicated that they were using technology for teaching purposes indicated that the pandemic had affected the way that they teach. Consistent with other studies which examined the ways teachers were teaching during the pandemic (e.g., Gawronski, 2021; Nguyen et al., 2022), many of the questionnaire respondents in the current study also indicated that they were suddenly forced to use a type of LMS and/or a video conferencing tool (e.g., Zoom) to teach in lieu of face-to-face classes because of the

pandemic. In the post-interview questionnaire, which was filled out by 29 of the interviewees two years after the initial questionnaire was distributed, more than 60 percent of the respondents indicated that they were no longer teaching online and were teaching face-to-face classes. Seth, one of the interviewees, elaborated on his answer in the questionnaire claiming that, as of 2022, he was using several of the same technological tools he was using for his online classes as well as other tools which he used in pre-pandemic times in his face-to-face classes. Tessah also indicated in her interview that she was planning to use less paper and use online quizzes through Google Forms or LMSs as soon as she returns to face-to-face classes. On the other hand, Carlos, a different interviewee, indicated in the questionnaire that he rarely uses technology in his face-to-face classes since his return to face-to-face classes as “in Brazil the teaching process in *presencial* [English translation: face-to-face] classes almost never involve technological tools due to the lack of these tools in public schools.” Out of the 459 respondents who indicated that they were using technology for teaching purposes in 2020, it is likely that there are several of them, like Carlos, who were using technology simply due to lockdown and other social distancing measures imposed by the pandemic and have now reverted back to their traditional teaching practice which does not involve technology.

Another possible reason for the large number of respondents indicating they were using technology for teaching purposes in 2020 is related to how they were recruited. As the initial questionnaire was posted and promoted in several different online communities, it meant that all the respondents were online users and used at least one type of SNSs. It can be assumed they had basic technical knowledge and skills needed to see the post about the questionnaire and fill it out online. Those who strongly opposed using technology and those who do not have basic technical knowledge and skills were likely to have been excluded from the study.

Although there are likely to be other minor reasons which could explain the high percentage of teachers indicating that they were using technology for instructional purposes, these two main possible reasons suggest that the figure may have been slightly lower if the distribution period and recruitment method were different. Having said that, the wealth of research in CALL, MALL, and other related fields in the past decade or so (e.g., Chapelle & Sauro, 2018; Farr & Murray, 2016; Son, 2014; Stockwell, 2012, 2022; Thomas et al., 2012) suggest that there are indeed increasingly more language teachers who are using technology in their classes, and the findings from the current study also seem to reflect this trend.

As a large number of questionnaire respondents indicated that they were using technology for teaching purposes, it is not surprising that many of them (i.e., 72.8% of the total number of respondents) also indicated that they were learning about technology in language teaching and learning in some shape or form. Moreover, 90.0% of the respondents also indicated that they wanted to learn about technology in the future. Overlapping with the aforementioned reason for using technology in their classes, many of them were likely to be motivated to learn about technology because of the pandemic. As mentioned in the previous chapter, a number of questionnaire respondents and interviewees (e.g., Tessah, Charlotte, Lily) indicated that they unexpectedly needed to switch from face-to-face teaching to online teaching in March 2020 without having prior experiences in teaching online. It can be assumed that they had no choice but to learn about technology in language teaching and learning on their own in order to teach online in a short timeframe. Another possible reason for the respondents being motivated to learn about technology may possibly be related to their positive attitudes towards using technology for teaching purposes. For instance, the majority of the interviewees generally held positive attitudes towards using technology in their classes, though some (e.g., Charlotte, Daniel, David) seemed to be more sceptical than

others. It is unlikely that they would be inclined to learn about technology if they did not see the benefits of implementing it in their classes.

However, it should also be noted that approximately one-third of all respondents reported in the initial questionnaire that they were not learning about technology, and 10 percent of all respondents also reported that they did not wish to learn about technology in the future. Based on the responses from the two questionnaires and interviews, a number of different reasons can be suggested to explain why some language teachers indicated that they were not keen on learning about technology for teaching purposes: Firstly, one possible reason for not wanting to learn about technology may be linked to their use of technology in class. In the initial questionnaire, a total of 23 respondents reported that they were not using any technology to teach their classes, and more than half of them reported that they were not currently learning about technology (n=14). It is reasonable to think that those who were not using any technology in their classes were less likely to be motivated to learn about technology. Although a variety of reasons were listed to explain why they were not using technology in their classes, at least five respondents explicitly criticised the use of technology for teaching purposes. For instance, one respondent who was strongly opposed to the idea of using technology in class even stated, "Hate it. I don't like computers." Connected to the aforementioned reason for wanting to learn about technology, having a negative attitude towards using technology is likely to have an adverse impact upon their motivations for learning about technology in language teaching and learning. Moreover, another likely reason is that some language teachers do not always have the time to spend on learning about technology. The questionnaire and interview participants frequently made reference to their busy work schedule. In line with recent studies conducted during the pandemic (e.g., Kim et al., 2022; MacIntyre et al., 2020), it was also evident in the current study that the pandemic has brought upon numerous stressors, such as increased workload,



domestic responsibilities, health concerns, and job insecurity. For instance, Charlotte, one of the interviewees, indicated that she did not have the time nor energy to learn about technology because of additional stressors brought upon by the pandemic. Similarly, Tessah shared in her interview that she personally struggled physically and mentally due to the increased workload she was expected to do, particularly at the start of the pandemic. Even before the pandemic, it was often reported that teachers generally struggled with the long hours of teaching, grading, and doing administrative work (e.g., MacIntyre et al., 2019), but it appeared that the pandemic further exacerbated the situation. If teachers are overwhelmed with the existing work they have, they are unlikely to make an effort to learn about technology. Moreover, another possible reason why some language teachers expressed that they were not keen on learning about technology may be linked to their accessibility to learning opportunities. Carlos mentioned that many of his colleagues were not learning because they were living in a remote area in Brazil where the closest city was two hours away, making it difficult for them to learn through face-to-face options. If those teachers did not have access to the Internet or did not have the basic knowledge and skills in how to use technology, they would not have many options to learn about technology. Furthermore, some language teachers may not be motivated to learn because of their financial and job uncertainty. Nur, for instance, indicated that he was not able to attend paid seminars and courses because he was unemployed for a while. He was able to find a teaching position in a different country a few months later but admitted that he was not sure if he would stay in the teaching industry long term. In another instance, an initial questionnaire respondent stated that he was not motivated to learn about technology because he has “a few years before retirement” and feels that he currently has “enough knowledge to function.” Like Nur and the initial questionnaire respondent, if teachers are thinking about changing jobs or retiring in the near future, they may not be keen on investing their time and money in

learning about technology. Finally, several of the interviewees indicated that they were not doing anything particular to learn about technology because they were confident in using technology in their classes. Amelia, Archer, and Seth reported that they were experienced users of technology and were in fact teaching other language teachers who were less proficient at their workplace and in other teacher communities. If teachers have enough knowledge and skills in technology, they may not feel the particular need to learn more about it.

The findings from the initial questionnaire, interviews, and post-interview questionnaire clearly suggest that there are a wide range of underlying reasons why some language teachers are motivated to learn about technology in language learning and teaching and why others are not so motivated.

### ***6.1.2 Language teachers' ways of learning about technology***

The previous section examined the various reasonings behind teachers' motivation to learn about technology in language teaching and learning. The current section outlines the different activities that language teachers are reported to be doing to learn about technology and the factors which influence their choice of learning activities.

In the initial questionnaire, all of the respondents were asked to indicate their ways of learning about technology in language teaching and learning and how often they did the particular activity. The results indicated that language teachers in the world were doing a number of different activities using a wide variety of tools and resources: They generally seemed to be relying on self-directed informal methods rather than formal methods to learn. The findings demonstrated that they were frequently searching the web, watching videos, and connecting with teachers on SNSs. Moreover, they were reading blogs, email list messages, journal articles, and books related to technology in language teaching and learning,

though to a lesser degree. In contrast, it was evident that formal courses and lectures were the least preferred way to learn about technology, with about half of the respondents indicating that they “rarely” or “never” took online or offline courses and lectures. It also appeared that attending academic conferences and observing other teachers’ classes were not very frequently done.

The study’s results echo those of Son (2014) who similarly examined CALL practitioners’ ways of learning about technology. Son’s (2014) study, which the current study’s questionnaires were partially based on, also found that the language teachers often used self-directed means of learning, including reading journals, email list messages, and blogs, searching the web, and connecting with others on SNSs to learn about technology. In addition, his study also illustrated that teachers were less frequently likely to attend conferences and events which were held either face-to-face or online. Despite these similarities, there seems to be slight differences in the breakdown of the popular and not-so-popular learning activities. The main difference is that participants in the current study preferred online conferences and courses slightly more to face-to-face options, but in Son’s (2014) study, they seemed to prefer face-to-face options slightly more. The underlying reason for this difference is likely to be related to the timing of the two studies. Son’s (2014) was conducted prior to the COVID-19 pandemic, whereas the current study was conducted in 2020 during the peak time of the pandemic when many of the countries had enforced strict lockdown and social distancing measures. Although the pandemic is presumably a crucial factor contributing to the increased popularity of online modes of learning, it may also be indicating that online modes of learning have become more prevalent in the landscape of professional learning activities since 2014. Despite these minor differences, there is little doubt that the two studies show similar trends in the ways in which language teachers learn about technology.

Going beyond what Son (2014) examined in his study, the current study also explored the differing reasons behind the learning trends identified from the initial questionnaire, of which some overlap with the aforementioned factors influencing teachers' motivations towards learning about technology. From the online observations, questionnaires, and interviews, several assumptions can be made about the factors influencing language teachers' ways of learning about technology. A number of the language teachers in the study commonly reported on how they opted to learn by using free resources and tools and attending free events. For instance, when an FBC-1-JP member shared a research article that was not free in the community, another member commented that he was "unemployed and the working poor," to which the original author responded with a URL link to a free version of it. In another example, Carlos, a language teacher in Brazil, indicated in his interview that the only option for him was to rely on learning opportunities which were free of cost since his salary was low. In particular, he mentioned how it was difficult for him to purchase books and journals published outside of Brazil since the Brazilian currency (i.e., Real) is weaker than other stronger currencies such as the US dollar. Even those living in more economically advantaged countries reported being restricted to using free resources. As previously mentioned, Farhana who was a part-time lecturer in Japan at the time of the interview claimed that she was only able to attend the free events about online teaching offered by some of the experts in FBC-5-JP, and Nur who was temporarily laid off during the pandemic in Japan similarly claimed that he could not afford to pay for paid courses and events to learn about technology during his unemployment period. On the other hand, tenured employees teaching in Japan, such as Arthur and David, reported that they had attended various conferences related to language teaching and/or technology which often require a substantial attendance fee. From these language teachers alone, it is clear that opportunities to learn about technology are not equally available to teachers living in all countries or even within

a single country. The issue of language teachers not being able to access paid resources has also been raised by Stockwell (2009) who indicated that the costs of these resources can inhibit language teachers, especially those who are struggling financially, from accessing them.

Another issue pointed out in Stockwell's (2009) study was that the participating teachers who were novices in using technology expressed how journals and books did not have much value to them. In the current study, however, it was observed that many of the participants indicated that they were using them as a source to learn about technology, though it seemed they were using them as a supplementary way rather than a main way of learning. On the other hand, it should also be noted that like in Stockwell's (2009) study, several participants indicated that reading books and journals is not a good way of learning about technology, one of the reasons being that "things [related to technology] change so quickly" (Quote taken from David's interview). Due to the fast-changing nature of technology, certain types of "know-how" books and journals can become easily irrelevant and outdated. Other reasons for not reading books and journals may be due to time and cost related factors or because teachers believe that they are too difficult to read (Nassaji, 2012) and "of limited practical use" (Borg, 2009, p. 370). While the need for bridging the gap between educational research and practice is still an ongoing issue (e.g., McIntyre, 2005; Nava & Pedrazzini, 2018) and books and journals cannot be a replacement for "hands-on" learning opportunities, there is also a danger of ignoring them completely (Stockwell, 2009). As outlined in Chapter 2, teachers need various types of knowledge in order to teach successfully. Books and journals can provide teachers with teaching ideas based on empirical research as well as theoretical underpinnings of pedagogy (e.g., Sato & Loewen, 2019). As technology integration needs to be well thought out and grounded in theoretically sound pedagogy (Lawrence et al., 2020), books and journals on research and pedagogy in Second Language Acquisition (SLA),

CALL, and other relevant fields are likely to be a vital resource for language teachers. With some top-ranking relevant journals currently being open access (e.g., *Language Learning & Technology*, *Studies in Second Language Teaching and Learning*, *The JALT CALL Journal*), they could potentially reach a larger number of readers, including those like Carlos, Farhana, and Nur who claim not to have the luxury to spend on paid materials.

In the current study, it was also observed that teachers generally preferred utilising online learning options to face-to-face in-person options to learn about technology in language teaching and learning. Many participants indicated that they were frequently searching on the web, watching videos on online platforms, like YouTube, and reading blog posts, email list messages, and posts on SNSs. There also seemed to be more participants who indicated that they were attending conferences, seminars, and courses held online than physical locations. In addition to financial reasons, there are likely to be a number of reasons why online modes of learning were popular among the participants. One possible reason for teachers choosing to learn online may be because of the convenience of learning online. Several interviewees commented on how online platforms can potentially accommodate their busy schedule and reduce their travelling time. For instance, Rynelle reported how she used her five-minute breaks between her classes during working hours to read online posts. Moreover, Farhana indicated that she liked learning online since she does not need to travel, which, in turn, saves her overall time and energy. Like Farhana, it was evident that several other participants, including Carlos and Mohamed, were learning online because of their geographical location. In contrast to those who were living in major cities, these participants reported living in remote areas where it was difficult for them to access face-to-face conferences, seminars, and courses. This trend was also observed in existing studies which showed that online platforms provided teachers who were living in isolated areas, such as a

rural area in Australia (Maher & Prescott, 2017) and a refugee camp in Jordan (Motteram et al., 2020), with a valuable source of professional learning. It is worth noting that even those living in metropolitan areas are not guaranteed that they would always be able to learn through face-to-face options, as demonstrated by the ongoing pandemic. With more options to learn about technology available online, a wider range of language teachers in varying locations and circumstances have more opportunities to learn.

Another trend identified from the current study's findings was that many participants commonly reported they were infrequently observing their co-workers' classes to see how they were using technology: In the initial questionnaire and the post-interview questionnaire, approximately half of the respondents indicated that they "rarely" or "never" observed other teachers' classes. These results share similarities with the studies conducted by Stockwell (2009) and Son (2014) who also found that their participating teachers hardly ever observed their peers. While the benefits of peer observations of classroom teaching for enhancing teachers' professional learning have been highlighted in the literature, they are often associated with a number of obstacles (e.g., Lasagabaster & Sierra, 2011; Sheal, 1989; Wajrynb, 1993). Warynb (1993), for instance, noted that some teachers feel vulnerable and threatened when they are being observed by a third person. This may be particularly true for some experienced senior teachers who have been reported to be resistant towards being observed for the fear of losing authority (e.g., Sheal, 1989; Wang, 2021). In the current study, Johan, a language teacher working at a university in the Netherlands, was one of the few interviewees who reported to be observing his co-workers' classes on a frequent basis. In the interview, he indicated that he would often ask his co-workers to observe his classes so that they could see how he was using technology since he believed that "seeing how technology works" in classes which include students' actual reactions is "the best way to

learn” about technology in language teaching and learning. He further explained that he thought that peer observation was a common activity at his workplace due to the open atmosphere of the university, with classrooms being surrounded by glass walls and a flat organisational structure among co-workers and superiors. He indicated that in the Netherlands, many work colleagues often call each other on a first-name basis, which makes it easier for them to observe each other’s classes and openly discuss matters about technology. This may explain why in countries like Japan where a clear vertical workplace hierarchy based on seniority exists (e.g., Howe, 2005), there is less enthusiasm among teachers towards peer class observations.

Related to this point, the importance of collegial support for the teachers was apparent from the current study’s findings. In the initial questionnaire and post-interview questionnaire, more than half of the respondents indicated they asked technology-related questions more than once a week to their co-workers. Several interviewees (e.g., Johan, Charlotte, David, Tessah) commonly reported that they formed informal groups with their close colleagues, teacher friends, or what Farrell (2001, 2022) calls “critical friends” (see Section 2.1.3) and would ask questions and discuss topics related to technology and language teaching. One even claimed that she would rather rely on someone they personally knew rather than “some random guy on the Internet” (see Charlotte’s full quote in Section 5.3.1). On the other hand, there were also a few members who claimed that they did not have a close relationship with their co-workers. As mentioned previously, multiple interviewees seemed to be struggling with collegial isolation due the lack of support they were receiving from their colleagues at the workplace. For instance, Farhana who worked as a part-time lecturer at a university indicated that she did not have many opportunities to socialise with her co-workers because of the setting of the workplace for part-time workers who would often just leave immediately



after their classes. Moreover, Daniel, who started a new full-time job at a university in April 2020, reported that because of the pandemic, he was not able to meet his new co-workers in person. It is possible that some of these teachers struggled with collegial isolation even before the pandemic, but the pandemic seemed to have worsened the situation even further. To fill their void of collegial support, they may have turned to the online language teacher communities. Despite Farhana labelling herself as a “lurker” in the online communities, she still claimed that she felt “a sense of community.” Daniel, who also indicated that he did not post much in the online communities, viewed them as a “community of practice” where he could “see what other people were doing and get ideas” and even claimed that they were a “blessing in disguise” during the pandemic. From these comments alone, it is not too much of a leap to assume that the online language teacher communities are playing an important role for supporting these teachers with limited support from their peers.

Overall, these findings seem to be congruent with Son’s (2014) study which illustrate that language teachers use a wide variety of tools and resources to learn about technology for language teaching purposes. Considering that it takes time to learn about technology in language teaching and learning (Stockwell, 2009), it is vital for teachers to be aware of the different learning options available and how they can make use of them throughout their long teaching careers. As repeatedly mentioned, since traditional formal training programmes have often been perceived as being ineffective for preparing language teachers to actually use technology in class in the past (e.g., Kessler, 2006, 2007), the study’s findings also support Son’s (2014) assertion that training programmes should focus on guiding teachers on how they can educate themselves through personalised learning activities, including autonomous and collaborative ways of learning.

## **6.2 The realities of the online communities for language teachers using technology**

The preceding section discussed how some language teachers are learning about technology in language teaching and learning. The following sections now address the second research question which looks at how online language teacher communities on SNSs can be used to support language teachers who are using technology for instructional purposes. The first section explores the nature of the posts shared in the observed online language teacher community. The second section examines the reasons why some language teachers participate in online language teacher communities, and the subsequent section considers the benefits and challenges associated with being members of such communities.

### ***6.2.1 The types of posts shared in a technology-focused online teacher community***

The content analysis of 616 initial posts and 2824 comments which were written by 291 different members during the two-year observation of FBC-1-JP revealed that various activities were taking place on the platform: The online community appeared to be serving as a “potential treasure trove of resources, ideas, and insights to support educators’ cognitive growth” (Trust et al., 2020, p. 156). Specifically, it was evident that the FBC-1-JP members were frequently sharing information about events, websites, online applications, reading materials, videos, and advice. Moreover, they were asking various kinds of teaching-related questions and asking for recommendations and advice. As these findings are parallel to what was found in the cross-case analysis of four other online teacher communities and prior studies which similarly analysed posts and comments shared in the online teacher communities on Facebook (e.g., Rutherford, 2010; Yildirim, 2019; Patahuddin & Logan, 2019), it appears that such activities, namely the acts of offering resources and tools and helping each other to overcome some of the challenges they faced as a teacher, were not uncommon in online teacher communities formed on the SNS platform.

However, as stated several times throughout the thesis, the current study was distinct from other existing studies in the field as it primarily examined the content shared in a technology-focused online language teacher community on Facebook. As the majority of the FBC-1-JP members were language teachers who were using technology for instructional purposes, it seems somewhat natural that the content shared in FBC-1-JP covered a broad range of topics related to technology in language teaching and learning. There were multiple posts and comments which were shared about in-person and online events, including conferences, seminars, courses, and workshops, which were held specifically for those interested in learning about technology for teaching purposes. For instance, as the following post illustrates, the FBC-1-JP community member is promoting a free online course on using educational technologies:

Hey everyone, I am an English teacher in Kyushu and I run a free course on Ed Tech tips. Please join if you are interested. It is just two weeks and six emails. We go over things like creating audio lessons, online activities and more. Here is the link. It's free as in free. No catch.

In addition to such online events, reading materials, including books and journal articles, news websites, and blog posts which mostly pertained to the topics of technology in language teaching and learning were shared in FBC-1-JP. There were also several posts and comments asking for experts in the field, including the author of the aforementioned online post who was hosting a technology training course, to help them with technology-related problems.

Flipgrid issue, I have had at least 3 students who couldn't use Microsoft Edge... Has anyone else encountered this issue?

Moreover, there were multiple posts and comments which were asking for technology recommendations for language learning and teaching. For instance, one FBC-1-JP member who was a part-time teacher asked other community members to recommend her paid educational apps and add-ins:

What educational apps and add-ins have been worth paying for, for you? I'm 100% pure hijokin [a part-time worker] these days, so on the one hand, expenses are tax-deductible, on the other hand, apps need to earn their keep. I especially want an interactive add-in for G Slides for G Classroom and/or PowerPoint for Teams... no single app has all the bling sadly.

In addition, on a number of occasions, there were posts and comments which were about grading and marking papers. For example, on several different threads, teachers were discussing the issue of plagiarism and the use of online translation software, like Google Translate and DeepL. With students increasingly utilising Internet resources to write their essays for their language classes, it was clear that many teachers were concerned with this issue. In the community, teachers were looking for free plagiarism software (e.g., "Alternative to Turnitin for collecting and grading work?") and expressing their stance of using online translation software in language classes, as indicated in the following comment:

I take a fairly liberal position. I don't say NEVER use it [Machine Translation], because I don't think that's realistic. I advise against using it for composition, pointing out that blind reliance on MT [Machine Translation] will result in funny, sometimes undecipherable English...

It was also noticeable that a few FBC-1-JP members were concerned with English proficiency examinations which were popular in Japan, such as TOEFL and GTEC. As many

of the members were English language teachers, it was understandable that a few were reaching out to the online community to ask for advice (see an example post in Section 5.1.2.2). Similar to the current study's findings, other studies in the field have observed that teachers were discussing topics related to examinations. For instance, in Yidirim's (2018) study which examined the posts shared in a Facebook community for mathematics teachers, multiple posts were about sharing information and asking about university entrance examinations.

Another topic which was occasionally raised in FBC-1-JP was related to study abroad. As noted in Section 5.1.2, two discussion threads appear to reflect how many language teachers hold the responsibility of study abroad matters at their schools and universities (Jackson, 2018). Moreover, although the members were language teachers, many of them were also researchers who were conducting their own research on the side. They were frequently sharing their own surveys and asking them to give advice on their research:

So, I've been Google Keep notes-style journaling over the past 10 weeks. The changes I have been watching in public HS edtech and course delivery as this all is going on and I really want to write an article about it all when I am done. Is that a study? How does one write something like this up?...

Although most past empirical studies on online teacher communities did not particularly yield the same finding, it seems to be fairly consistent with what was observed in Yildirim's (2019) study which also found that teachers were asking for "help for scientific study" in the online mathematics teacher community (p. 599).

Furthermore, in line with existing studies (e.g., Rutherford, 2010; Yildirim, 2019), it was found that FBC-1-JP community members were similarly concerned with matters related to job and employment. Specifically, there were several posts which were advertising teaching positions. Besides posts which were directly about job recruitment, there was one short thread discussing the so-called “5-year rule” which enables part-time contract workers who had served more than five years to be granted permanent employee status under the Labour Contract Law (MHLW, n.d.-a). Considering that it was noticeable from the observed discussion threads, initial questionnaire, and interviews that there were many teachers in FBC-1-JP who were teaching part-time, it is likely that such members were interested in learning about the relevant labour law which has been enforced since 2018.

Finally, as the observation period coincided with the onset of the COVID-19 pandemic, the study was one of the first studies which examined how teachers were utilising pre-existing online teacher communities on SNSs (cf. Al-Jarf, 2021; Greenhow et al., 2021; Trust et al., 2020). The observation data demonstrated that teachers were taking on the role of crisis managers as they needed to deal with the unprecedented emergency situation without much help from their institutions and colleagues. From the observation data collected during the first few months into the pandemic, FBC-1-JP community members were utilising the online community members to share information and ask questions about how to cope with the pandemic, teach online, and care for their students (see Section 6.3.1 for further details).

In short, the observed technology-focused FBC-1-JP community appears to be offering a space where language teachers are able to easily access various techno-pedagogical information and resources as well as a space where less experienced teachers can ask experts in the field to help them to overcome some of their technology-related hardships. It was also

clear that besides discussion topics related to technology for instructional purposes, language teachers were interested in other areas such as language proficiency examinations, study abroad, research, job hunting, and crisis management. The findings evidently showed that the posts and comments shared in the online language teacher community are reflecting the varying roles and responsibilities that the members undertake as a professional language teacher. Although the current section only examined the main topics discussed in the observed FBC-1-JP community, the following sections delve deeper into the results to uncover the reasons why language teachers are utilising such communities and to identify the benefits and challenges associated with using them as a professional learning source.

### ***6.2.2 Reasons for participating in online language teacher communities***

To obtain an in-depth understanding of why some language teachers are using online communities on SNSs, the findings obtained from the content analysis of the posts and comments, initial questionnaire, semi-structured interviews, and post-interview questionnaire are discussed in terms of the main themes identified from Hur and Brush's (2009) study which were used as a basis to organise relevant literature in Section 2.2.1.

Firstly, in line with Hur and Brush's (2009) study and more recent studies, such as Carpenter and Krutka (2014, 2015), Curwood and Biddolph (2017), and Staudt Willet (2019), the findings from the current study seem to indicate that many language teachers were taking part in the online teacher communities on SNSs to obtain new ideas. As described in detail in the previous section, FBC-1-JP and the other similar online language teacher communities offered a wide variety of content, including topics related to language, teaching, and/or technology. One of the most common types of posts found in the communities were about sharing resources, sharing about their teaching ideas and experiences, and requesting other

community members to share their ideas, expertise, and opinions. Moreover, in the initial questionnaire, approximately half of the respondents indicated that they were using the online language teacher communities on Facebook and other SNSs to acquire and share resources. In the interviews as well, multiple participants reported that their main purpose of participating in the online language teacher communities was to find out how other teachers were teaching their classes. For instance, Daniel, who was a self-identified lurker, reported that he “reads other people’s posts sometimes to see what other people are doing and to get ideas.” In another instance, as indicated several times earlier, Farhana, who was working as a part-time instructor at the time of the interview, claimed that she was a member of FBC-1-JP so that she would be able to learn about how other teachers in Japan were teaching since she did not have many opportunities to interact and exchange ideas with other teachers teaching at her institution. Moreover, Lucy, who had no experience in teaching online prior to the pandemic, reported that she was especially interested in learning about how others were teaching online at the start of the pandemic. David also praised the online communities for providing teachers with information about online events such as conferences and seminars. Although he acknowledged that online events were not exactly the same as face-to-face events, he positively described them, saying that when in-person interactions are not possible, “it just expands the number of responses or ideas that you are exposed to.” Furthermore, 44.8% of language teachers who responded to the post-interview questionnaire (n=13) indicated that they had initially joined the online language teacher communities because they expected that they would be able to obtain teaching ideas. These four main data sources suggest one of the prominent reasons for teachers participating in them is to find a wide range of different ideas that could potentially help them with their own teaching context.



Consistent with the findings found in Hur and Brush's (2009) study, language teachers in the current study were also using the online communities to take advantage of some of the affordances that they offer. Multiple participants reported that they were utilising online language teacher communities instead of face-to-face teacher communities, which were often because of time-related factors. For instance, as previously stated, in her interview, Rynelle brought up how being in online language teacher communities like FBC-1-JP was convenient for her since she can review the content during her short breaks between her classes. In another interview, Farhana also reported that she attended the online events which were promoted in the online language teacher communities as she can save time and energy. Since the events were often held online, she was able to attend them from the comfort of her own home without the need to travel to a physical location. In the initial questionnaire, "lack of time" was the most common answer for not wanting to join face-to-face in-person communities among those who were using online language teacher communities for professional purposes (n=41). Moreover, it seemed that participants were utilising online language teacher communities on SNSs due to reasons related to accessibility. In contrast to face-to-face teacher communities, which often require an annual membership fee, online teacher communities formed on SNSs are mostly free and open to anyone who is interested in the content (Wesely, 2013). The content analysis of the posts and comments in FBC-1-JP indicate that the shared teaching-related resources, including videos, websites, and reading materials, and events were often free of charge. In some interviews, interviewees (e.g., Carlos, Farhana) indicated that they were using online language teacher communities on SNSs because they were free to participate. In the initial questionnaire, a small number of respondents (n=4) indicated that they did not want to join face-to-face communities because "on site will be expensive." Another potential reason for participants turning to online communities instead of face-to-face communities may be related to where they were located.

Four questionnaire respondents who were members of online language teacher communities indicated there were no face-to-face language teacher communities near where they were living. Confirming this, Carlos mentioned in his interview that he lived in the countryside, which made it difficult for him to access such in-person communities. Some interviewees also mentioned that they were attracted to the unique affordances offered by specific SNSs. As briefly mentioned in Chapter 1, each SNS provides different features and experiences for its users. For example, unlike SNSs such as Twitter, Facebook implements a real-name policy in which users need to use “the name they go by in everyday life” (Meta, n. d.-b). In an interview, Farhana indicated that she felt more comfortable and safer participating in online communities which require members to use their real names as their username than online communities which do not. Arthur also mentioned in his interview that he speculated that the reason why there are less online arguments in the online language teacher communities on Facebook is because the members are not anonymous. Although the language teachers who participated in the current study were all Facebook users, some of them were using other SNSs, such as Twitter and LinkedIn for professional purposes. Similar to how they were using Facebook, they were using other platforms to mainly share and obtain resources, connect with new teachers, and get emotional support. In some cases, the participants indicated that they preferred other platforms to Facebook. Mohamed, for example, reported that he was participating in the online language teacher communities on LinkedIn much more frequently than on Facebook because he believed that the platform was suitable for professionals. As shown in the initial questionnaire, many respondents reported that they were also using Facebook for personal purposes. Although some teachers may not care if they mix their personal and professional lives together, teachers like Mohamed seem to prefer using platforms like LinkedIn which only show their professional information. This seems to share similarities with previous findings from other studies which found that some

teachers disliked mixing their personal and professional content on SNSs (e.g., Carpenter et al., 2019; Thuman & Persson, 2018). Although none of the 31 interviewees reported that they created a separate “teacher profile account,” teachers in Thuman and Persson’s (2018) study reported that they frequently used a different user account to avoid mixing their personal and professional accounts together. In addition, several participants in the current study indicated that they were relying on Twitter more than any other SNS platforms. Daniel reported that he generally did not like engaging in SNSs, with the exception of Twitter, because he enjoyed the selectivity of who he could follow on Twitter and he felt that had more control over the discussions. On Twitter, users are able to freely choose who they want to engage with, but on platforms like Facebook, once they are in a community, they need to engage with everyone in the community and review all the content shared within the community. The findings clearly illustrate that teachers were utilising the various affordances offered by the online language teacher communities on SNSs.

Although in Hur and Brush’s (2009) study, there were a number of teachers who were sharing emotions in the observed communities, the content analysis of the posts and comments in the current study revealed that there were only a few similar instances. For example, a female FBC-1-JP community member wrote a fairly long (i.e., 286 words) post in the community to share her negative experience with one of her students. She began by briefly explaining about her teaching experience on Zoom during the pandemic:

...This group has been my lifeline for staying afloat as an English teacher, so I value your input. I’m having a roller coaster ride of failures and (a few small but heart-warming) successes incorporating Zoom meetings into my classes starting this week.

She wrote in her post that she tried to finish her classes early so that students could ask questions, thinking this extra time after class would be especially useful for students who were struggling in class. However, she claimed that she had an unpleasant encounter with a male student when she was alone with him in the meeting room on Zoom after class:

Mostly no one stayed on, except one student today who decided he wanted to talk with me as long as possible, and one of the first things he said was “So, do you have a boyfriend?” No harm was intended, and we just had a chat about this and it was my first time ever seeing this student, since we haven’t had face-to-face classes yet...

Although she did not believe that the student’s question was ill-intended, she expressed that it did make her uncomfortable and asked for advice on how to make a safe environment on Zoom for both teachers and students. In response to the teacher’s post, seven community members commented, leaving 39 comments in total. They mainly provided possible suggestions for the teachers, as indicated by the following two comments:

Just like off-line classes, there should be a syllabus with class rules/code of conduct.

This clearly falls under ‘inappropriate questions.’ (Comment #1)

I guess you could record the meeting—and inform the student you will be doing so.

(Comment #2)

Besides offering practical advice on how to avoid such scenarios in the future, two community members also seemed to be providing the teacher with words of comfort by including such comments as “I hope everything is ok.” and “I understand that it must have been a shock.”

Although the above post and comments were one of the few instances that seem to directly deal with emotions related to teaching, findings from the initial questionnaire, interviews, and post-interview questionnaire suggest that a fair number of language teachers were receiving emotional support in the online language teacher communities. Out of 482 language teachers who responded to the initial questionnaire, 94 language teachers (19.5%) reported that they were receiving emotional support from the online language teacher communities. Moreover, in the post-interview questionnaire, 14 out of 29 respondents (48.3%) indicated that they were receiving emotional support from them. In the online posts and interviews as well, several language teachers seem to indicate how they were emotionally invested in the online communities. For instance, when they described some of the online language teacher communities, they used terms like “counselling,” “lifeline,” and “lifesaver,” and others claimed that “they’re very useful and reassuring that they’re there” and “they saved me.” Four interviewees reported in the post-interview questionnaire that they had expected to receive professional and emotional support when they joined the online language teacher communities, which seems to suggest that for some community members, their expectations had been met.

Closely related with this reason, some participants in the current study were utilising the online language teacher communities to combat teacher isolation and to get a sense of camaraderie, which appears to support the findings from existing studies (e.g., Carpenter & Krutka, 2014; Carpenter et al., 2020a; Hur & Brush, 2009; Wesley, 2013). Since “asking to connect with others” was identified as one of the key categories from the content analysis of the posts shared in FBC-1-JP, it seemed that some community members were utilising the online language teacher community to find connections. In one instance, an FBC-1-JP member claimed that she finds it difficult to connect with colleagues in Japan because of the

language barrier and asked for recommendations for groups which would help her make connections.

Greetings!...I find it hard connecting with Japanese colleagues (mostly due to the language barrier), but I do acknowledge the importance of, and quite frankly crave, sharing ideas with other professionals in the field. I'd be really happy to join a group like that. I'm in Japan, if location matters. Thank you! 😊

The community member received 13 comments in total written by four members. As illustrated in the following two comments, several face-to-face and online academic groups were recommended to her.

I'd recommend joining XXX or YYY if you want to connect with Japanese people.  
(Comment #1)

[FBC-5-JP] has a lot of good discussions about CALL/MALL, especially in the current online teaching context. (Comment #2)

In the two-year observation period, there were three other posts with similar intentions in FBC-1-JP. It was unclear if they were actually able to build effective connections from these posts alone, but the findings from the other data sources seem to suggest that online language teacher communities are serving as a go-between which connects the community members to other teachers and researchers in the field. For example, in the initial questionnaire, some language teachers reported that they were using online language teacher communities on SNSs to connect with new teachers (Facebook: 40.5%; Twitter: 8.9%; LinkedIn: 15.4%) and collaborate with other teachers (Facebook: 42.9%; Twitter: 10.8%; LinkedIn: 24.7%). In addition, in an interview, Lily indicated that she became rather close with a few members from FBC-5-JP as they had personally helped her with some technical problems on several

occasions. In another instance, Archer indicated that the online social events which have been held every Friday evening since the pandemic had started allowed him to socialise with other teachers teaching in Japan and that they had provided him with emotional support. The online social events to which he referred were originally intended for those in FBC-5-JP but were also advertised multiple times in FBC-1-JP. In this way, online language teacher communities seem to be providing language teachers with various opportunities to socialise with other teachers teaching in a similar situation.

Similar to recent studies investigating online teacher communities on SNSs (e.g., Staudt Willet, 2019), the five main reasons why teachers are participating in online teacher communities which were raised in Hur and Brush's study (2009) also appeared to be well-suited and applicable to the findings from the current study even over a decade later when their study was originally conducted. There were, however, a few other reasons which were not identified in the literature but are still worth mentioning. In particular, when the interviewees were asked why they were participating in the online language teacher communities, some of their answers did not fit into the aforementioned five themes. For instance, Seth indicated that the main reason for him joining and participating in the online language teacher communities was to help others who are struggling with using technology for teaching purposes. Since he perceived himself as being a confident user of technology, he believed that he would be able to provide assistance to teachers who were less skilled and knowledgeable in using technology. Having such high altruistic motives is not particularly uncommon in online communities, as noted in several studies on non-teaching related online communities (e.g., Lampel & Bhalla, 2007; Lin & Huang, 2012). It is difficult to pinpoint the exact reason why some community members invest so much of their time and effort in the online communities without asking for anything in return, but they may take part in them

simply because they enjoy engaging in intellectual pursuit (Wasko & Faraj, 2000), helping others (Wasko & Faraj, 2005), or seeking status (Lampel & Bhalla, 2007). As Lave and Wenger (1991) emphasise, one of the core elements of sustaining communities of practice is the interactions between experts and novices. It would be no exaggeration to say that online community members such as Seth who selflessly offer the community their expertise play a vital role in sustaining self-organised online communities as without them, there would be not enough members who can assist those who are in need of help.

From Arthur's interview, another similar but different reason was identified: As he was a full-time professor at a Japanese university and was in charge of supporting the part-time language teachers teaching at the institution, he had initially joined FBC-1-JP because he wanted to understand the needs of language teachers, particularly those teaching in Japanese universities part-time, so that he could provide support to his co-workers. Findings from the interviews revealed that several of the interviewees such as Farhana and Tessah who were working part-time as a language teacher indicated that they were not receiving enough support from their administrations and co-workers, and thus relied on the online language teacher communities when they were in need of assistance. Tessah speculated that one of the reasons for the lack of support at her workplace was partially due to language barriers, as she had trouble communicating with her Japanese co-workers who only spoke in Japanese. Although Arthur did not work at the same institution and the situation may vary depending on the institution, reading the posts asking questions in the online language teacher communities and sharing their struggles as a teacher may help him learn about how to better support his own co-workers who may have similar queries and concerns about teaching, technology, and language-related issues.



Further, Indah provided a completely different reason from the rest of the interviewees, in that she claimed that she had joined the online language teacher community to practise communicating in English. As an Indonesian English teacher teaching in Indonesia, she claimed that most of her colleagues were Indonesian, so she did not have many chances to practise her English. It can be easily forgotten that non-native teachers are language learners themselves and many of them are often not confident in their own language ability (Murdoch, 1994). In Indah's case, the online language teacher community was a venue where she could practice her English without feeling embarrassed as she did not know anyone personally in the community.

Finally, some community members seem to be participating in the online language teacher communities to promote their businesses. Close examination of the content shared in FBC-1-JP and the other four similar online communities for the cross-case analysis revealed the presence of commercially-driven posts and comments. As indicated in the following post which was shared in FBC-3-PK, a few posts were sharing information about certain commercial products.

Halloween Sale on your favourite software/saas

Lifetime plans offer ends 31st Oct 2021

Grab the best deal on your favourite software to grow your business

Besides such posts which were obviously selling a commercial product, there were also several posts which were less direct and more difficult to determine whether they were simply trying to sell their product or suggesting the product because they truly believe that it would be beneficial for the other community members. For instance, when a community member asked, "What educational apps and add-ins have been worth paying for you?" in

FBC-1-JP, a community member suggested that he/she use his own website which requires an annual subscription fee. Overall, these findings seem to align with the findings from Carpenter and Harvey's (2019) study which also found some community members in online teacher communities on SNSs were advertising their commercial products. Unlike their study, however, none of the 31 interviewees who participated in the current study were directly complaining about this issue. The precise reason for the difference is unclear, but a possible reason could be the difference in the SNS platforms that the participants were using. In Carpenter and Harvey's (2019) study, some of the teachers who expressed that they disliked the existence of self-promotional content in the online teacher communities were on Twitter which are essentially open to the public, including those who are not members of the communities. They claimed that they connected with other teachers using hashtags, and the hashtag can be "polluted by things that maybe not all of [them] support" (Carpenter & Harvey, 2019, p. 5). On the other hand, the interviewees in the current study were using online language teacher communities on Facebook which require all users to become members before they can post and comment within them. If they violate the rules which are enforced by the community, they may get kicked out or their ability to post and comment may be turned off by the moderators (Meta, n. d.-c). Hence, by simply comparing the two SNSs, it seems that the Facebook platform makes it more difficult in posting posts and comments which are self-promotional in nature.

To sum up, from the current study's findings, it was evident that there were many reasons why teachers participated in the online language teacher communities. As identified in Hur and Brush's (2009) study, the findings seem to indicate that online community members in the study were joining in the online language teacher communities to obtain new ideas, to take advantages of the online affordances, to share emotions, to combat teacher isolation,

and to obtain a sense of camaraderie. Besides these five reasons, it was also found that they were using the online teacher communities to help others, to understand the struggles of part-time teachers, to practise their language, and to promote commercial products.

### ***6.2.3 Benefits and challenges associated with language teachers' uses of online language teacher communities***

As described in Chapter 2, a number of existing studies have illustrated that online teacher communities on SNSs bring about various benefits and challenges to teachers. The findings from the current study, which specifically focused on online teacher communities for language teachers using technology, appear to provide further evidence that online communities on SNSs are a “double-edged sword” for teachers (Nelimarkka et al., 2021, p. 11). In light of the findings described thus far, this section turns to examining how language teachers, especially those who are using technology in their classes, can benefit from using such online language teacher communities and the challenges associated with them.

From the preceding discussions, it is clear that the online language teacher communities serve a wide variety of professional purposes for language teachers. Congruent with relevant literature (e.g., Wesely, 2013), the findings from the four data sources demonstrate how online language teacher communities on Facebook were providing online community members with valuable learning opportunities. The content analysis of the posts and comments shared in FBC-1-JP and the other four similar observed online language teacher communities indicated that by far the most popular types of posts were sharing and asking information about conferences, seminars, lectures, and courses on various topics related to language, teaching, and technology, which appears to illustrate that such online communities are functioning as a bulletin board-like role in which teachers are able to access information about events which could potentially help them learn more about technology in language

teaching and learning. Although it was not possible to determine the actual attendance rate for each of the events among the community members, several of the interviewees who participated in the study reported that they were in fact attending the events which they came across in the communities. Besides the posts about events shared in the online communities, there were multiple posts which were sharing other resources, such as videos, reading materials, websites, and online applications which could also be of use for language teachers who are learning about technology in language teaching and learning. An interviewee (i.e., Rynelle), for instance, pointed out that one of the main benefits of being a member of an online technology-focused language teacher community was that teachers are able to learn easily about “something interesting about the tech world.” Since, as the primary focus of the discussion in the observed communities was on technology, it is not entirely surprising that the shared content dealt with a broad range of topics related to technology in language teaching and learning, including advice on how to implement Internet-based resources (e.g., Quizlet, Podcasts) in their language lessons to enhance a specific language skill (e.g., writing, listening) and how to utilise video conferencing tools (e.g., Zoom, Skype) to encourage student interactions in a class. Since much of the resources which were shared in the online communities were free of charge, language teachers who have limited funds to invest in professional learning opportunities could particularly benefit from them.

It should be noted that the act of sharing resources on good practice itself does not necessarily mean that learning is taking place unless there is evidence that there is changed behaviour in practice (Zhang, 2009). However, similar to the findings from the study conducted by Carpenter and Krutka (2015) who found that their participants had claimed that their actual lessons were directly influenced by what they read in the Twitter communities, in the current study, it appeared that the online community members’ teaching

practice was indeed affected by the shared content which were accessed through the Facebook communities. In the post-interview questionnaire, many interviewees reported that browsing the shared content in the online communities had influenced their teaching practice, and some interviewees explicitly claimed in the interviews that they were implementing some of the advice and ideas suggested in the online communities in their actual teaching. Although these findings are only based on self-report data, it seems to illustrate how some online community members were learning in the online communities through reading about how others were using technology in their classes, which, in turn, resulted in them to experiment and test out the ideas, tools, and other resources obtained from the online communities.

Another advantage of online language teacher communities is likely to be the fact that teachers are able to ask various types of questions related to technology in language teaching and learning within the communities. From the initial questionnaire, it was evident that language teachers with different backgrounds (e.g., country of origin, age, teaching experience) were making use of the online language teacher communities, and the post-interview questionnaire revealed that language teachers possessing varying levels of skills in using technology for teaching purposes were using the online communities. Hence, teachers who ask questions within the communities are able to gain differing insights, ideas, and perspectives from the diverse subset of individuals participating in the online language teacher communities. Moreover, in the post-interview questionnaire, apart from two respondents, 29 of them reported that they were feeling work-related stress due to a number of different reasons, including having a lack of technical support. Considering that not all teachers are receiving adequate professional support from their institutions, and having a lack of such support may deter them from implementing technology into their own classes

(Park & Son, 2009), online language teacher communities, like FBC-1-JP, may be serving an essential role in providing those who are in need of help with technical and pedagogical assistance.

In addition to providing language teachers with professional support, the online language teacher communities also appeared to be providing emotional support. Community members reported that they were receiving emotional support from various sources within the communities, one of which being the online social gatherings where community members were able to socialise with other teachers using videoconferencing tools, such as Zoom, and discuss matters not necessarily related to teaching. Besides these social events, community members were connecting to other teachers through engaging in the online discussions within the community or directly requesting community members to find ways so that they can connect with certain teachers. Socialisation is not only a key component for learning (Reio Jr., 2012), but they are also considered to be a vital component for enhancing teacher well-being (Mercer & Gregersen, 2020). By socialising and connecting with other like-minded teachers, those who have limited collegial support at their workplace may possibly be able to overcome isolation, which has been an enduring issue surrounding the teaching profession for many years (Johnson et al., 1993; Cooper, 2013).

It is evident that online language teacher communities can bring about various benefits to language teachers using technology for teaching purposes, but the findings also revealed that they are not without flaws. Firstly, it appeared that not all teachers were completely satisfied about the content of the discussion going on in the online communities. Mirroring the findings from Carpenter and Harvey (2019), some language teachers found a few of the community members to be unprofessional or offensive from time to time. Several

participants in the study (e.g., Tessah, Lily) reported that they had personally received rude and negative comments when participating in the discussions within the online language teacher communities. Moreover, a few participants (e.g., Farhana, Arthur, Nur) reported that they had occasionally witnessed online arguments, or using Farhana's word, "kerfuffles" in some of the online language teacher communities. The content analysis of the posts and comments in FBC-1-JP seem to confirm what these participants were saying. Although not frequently, there were instances where there appeared some tension and disagreement among certain community members. An instance of this is shown in the following interaction between the two FBC-1JP members who appear to be arguing with each other:

***FBC-1-JP member A:*** Because his comment was null. Like yours. No hostility intended, but I don't particularly enjoy wasting time with null.

***FBC-1-JP member B:*** I do not know you but I was certainly taken aback by your communication style. Null? Almost a parody of what some people think CALL is all about. I don't believe it is, but your second comment about people wasting your time speaks volumes.

***FBC-1-JP member C (administrator):*** Please take care not to offend others while using this group. Please also be aware that this is a closed group but that it is not only restricted to "CALL people" and even if it were, generalisations about groups of people are unwelcome. All people in this group comment as individuals.

Edit: To clarify, by closed I meant that only members can post but please also remember that posts and comments are public. Members are people who have an interest in CALL but are not necessarily [FBC-1-JP] members.

In this case, FBC-1-JP member C, who was one of the administrators, played an important role in stopping the argument from going any further. A potential reason why there were not many online arguments in FBC-1-JP in general during the two-year period may be because administrators moderated the content by intercepting negative messages and promoting positive interactions. Moreover, another different reason why FBC-1-JP did not have many quarrels may stem from Facebook's real-name policy. As previously indicated, since Facebook users generally need to use their real names, it is likely that in language teacher communities on Facebook, there are fewer online "trolls" who make harmful and abusive comments than in online platforms which allow users to be completely anonymous (Cruz et al., 2018). Nonetheless, the findings suggest that language teachers on Facebook still have the risk of receiving harsh and negative comments, which may put some off from utilising the communities.

An additional challenge regarding the content of the discussion, relates to the quality of the content provided in the online communities. It is likely the posts and comments that are obviously misleading or unsuitable are deleted by the community moderators (e.g., Riding, 2001), but the quality of them may still be called into question. Considering that these online language teacher communities often do not do a background check of members prior to joining and are open to anyone who appears to have a legitimate user account, the credibility of the community members is unknown. As Charlotte indicated in her interview, "everybody writing may not have the same credibility," so it seems that there is a need for online community members to be constantly sceptical of the content shared in the communities. Although Hertel and Wessman-Enzinger's (2017) study which examined mathematical resources posted on Pinterest found that 31% of the analysed posts contained some type of mathematical error, the content analysis of the posts and comments in the current study did



not find any posts which were noticeably containing an obvious error. This difference of the findings is not entirely unexpected since mathematics questions tend to have a clear right or wrong answer, whereas answers to questions related to technology and language teaching tend to be more subjective. Much of the content shared in FBC-1-JP and the other comparison cases were also about sharing and asking for online community members' opinions and ideas. For instance, as mentioned in the preceding section, in response to the question asking about the online community members' recommendations for paid resources for language teaching in FBC-1-JP, it was not clear whether the suggestions made by online community members were genuine or financially motivated. Although there was no obvious "wrong" information shared in the online communities, language teachers still need to be aware that not everyone in the community is posting in the best interest of others.

Moreover, the findings from the current study seem to add to prior research suggesting the importance of considering the issue of context collapse (e.g., Carpenter & Harvey, 2019; Carpenter et al., 2020a). As teachers are public figures, their behaviour online can easily become under scrutiny by a number of stakeholders who are part of their school community, such as colleagues, administrators, students, and students' parents (Carpenter & Harvey, 2019). In some cases, participants indicated that they were conscious about the fact that their interactions within the online communities were public. As previously indicated, David, for instance, mentioned the fact that "Facebook is a lot more public than they think it is" and that behaving badly in the online communities can "give you some trouble in the future." Similarly, Tom brought up in his interview a viral story about a teacher who got fired from a post on Twitter to illustrate how online posts can potentially have detrimental consequences to one's career. Although only two out of 31 interviewees expressed their concerns about the risks of context collapse associated with posting in online language

teacher communities on Facebook and other SNS platforms, their comments seem to provide further evidence that some teachers may be worried about what they post in the communities and possibly even discourage them from using them to the full extent (e.g., Carpenter & Harvey, 2019).

Another point of concern identified from the findings was related to gender. One problem raised by one interviewee was about online safety for female users. For example, Preedah indicated that when she joined one of the larger online language teacher communities on Facebook, she received numerous unwanted friend and message requests from men who she did not know personally but were also in the online community. Since she was the only one to talk about this issue in the current study, it was not clear whether or not it was happening to only female online community members. Although online harassment is not only limited to female users (e.g., Salam, 2022), considering that several studies investigating online communities on SNSs in non-teaching contexts have well documented that female users have been receiving various forms of stranger-perpetuated online harassment, including cyberstalking and receiving inappropriate or sexist remarks, on SNSs (e.g., Henry & Powell, 2016; Salerno-Ferraro et al., 2021), the issue is likely to be more relevant to female online users than those of male users. Similar to what the participants said in Young and Quan-Haase's (2013) study, Preedah indicated that she did not accept friend requests from total strangers. However, feeling that the platform is unsafe may discourage them from using the online language teacher communities. Closely related to this issue, it is also worth noting that four of the female interviewees (i.e., Tessah, Chloe, Lily, Aiofe) indicated that as a female user in the online language teacher communities, they had felt negatively about some of the online communities because of the comments made by some male users. Although Lily was the only interviewee who explicitly stated that she felt that there was some sexism

going on in some of the online teacher communities, the others indicated that they had felt that there were some male users who took over the discussions, and using Chloe's words, they saw themselves as "the leader, the dominant" in the online communities. In addition, a questionnaire respondent indicated in the initial questionnaire that one of the reasons for generally disliking communities which have a focus on learning about technology is because she felt that the communities she encountered were either "boys' clubs or fraternities." Although there were no obvious posts and comments that could be identified as either sexist or misogynistic in FBC-1-JP during the two-year observations and the four other online teacher communities which were observed for a period of three months for the cross-case analysis, the fact that four interviewees commonly raised this issue without being asked specifically about this topic seem to highlight that some female teachers perceive these online communities negatively. In relevant literature, Goodyear et al.'s (2019) study is one of the few studies on online teacher communities which raised the issue of gender. In their study, they found that some online teacher community members felt that the dominant voices were white males as they had "a certain privilege for their voice to be heard" (p. 427). In a separate study set in a non-teaching context, Pruchniewka (2019) found that some women perceived co-ed professional Facebook communities, particularly those with a focus of technology, to be controlled by men who were constantly trying to show off their expertise. In their study, they found that the women preferred using women-only private professional Facebook communities to such co-ed online communities, which appears to support the claim by Tessah who indicated in the current study that she relied on an all-women private Facebook community which she described as more "supportive" than the co-ed online language teacher communities on Facebook. Based on these findings, there seems to be an indication that some kind of gender-related issue exists within these online professional

communities, though additional research is needed to further examine the issue in more detail.

Finally, the findings seem to illustrate that there are some time-related issues when using online language teacher communities. Consistent with the findings from previous research (e.g., Duncan-Howell, 2010), the findings appear to show that teachers in the study were investing a considerable amount of time interacting with one another on SNSs: In the initial questionnaire, more than half (56.2%) of the questionnaire respondents indicated that they were connecting with other teachers on SNSs at least once a week and one-fourth (26.2%) were using them on a daily basis. Despite putting an effort in trying to enhance their professional learning through these online communities, in many cases, these informal forms of professional learning activities are not recognised by their institutions as “proper” work (Highly & Seo, 2012). Similar to what Highly and Seo (2012) found in their study, a few interviewees in the current study also indicated that they were concerned about how much time they spent browsing the content shared in the online language teacher communities. As Carlos mentioned, he felt that he could “waste a long time following the group.” Moreover, Farhana admitted that she felt embarrassed about being a heavy user of SNSs as she checked the online language teacher communities, including FBC-5-JP, every day, often multiple times a day. Closely related to these time-related issues, the affordances of SNSs seem to have led to the blurring boundaries between private and work-time. One of the obvious benefits of utilising online language teacher communities is the convenience of being able to access them anywhere at any time of the day, but several interviewees mentioned that they were participating in the online language teacher communities in their private time. As mentioned several times in the chapter, Rynelle indicated that she was using her five-minute break between classes to browse FBC-1-JP and other communities. Moreover, Farhana

talked about how she participated in the online seminars which were promoted in the online communities during her summer break. As none of the interviewees explicitly complained about using their own private time to use SNSs for professional purposes, it may be that they did not feel that participating in the online teacher communities was part of their work. However, there is a danger of not recognising such activity as work, and this type of labour is often referred to as “invisible labour” (e.g., Hamblin et al., 2020). In Hamblin et al.’s (2020) study, which examined teachers’ perceptions of the work they thought were invisible, in addition to duties such as class preparation, checking students’ homework, and evaluating student performance, they considered various forms of professional learning activities as invisible labour. Without realising, teachers who spend much time on using online language teacher communities may potentially feel burdened by such activities, making them feel even more stressed because of their already heavy workload and threatening their overall well-being (e.g., Gregersen et al., 2020; Mercer & Gregersen, 2020). Hence, it is important for teachers, staff, school administrators, and other relevant stakeholders to acknowledge the time spent on participating in these online language teacher communities as a form of work, drawing a clearer line between private and work time.

All in all, adding on to the extant literature on online teacher communities on SNSs, the four main data sources in the current study suggest that there are various positive aspects of online language teacher communities for language teachers. The findings also clearly contributed to the limited understanding regarding the challenges language teachers experience when utilising online language teacher communities on SNSs.

### **6.3 Utilising online language teacher communities in times of a crisis situation**

Since the study had originally commenced prior to the COVID-19 pandemic, the third main research question about the pandemic was added only mid-way of the study. The panic and anxiety voiced by the language teachers at the onset of the pandemic highlighted the general unpreparedness of many educational institutions for emergency situations. Moreover, considering that there are bound to be similar crises in the future, it was clear that there was a need to better understand how teachers can be prepared for such situations. Hence, the subsequent two sections aim to shed light into the realities of the actual teaching situations and how online language teacher communities on SNSs assisted language teachers during the pandemic. Although the pandemic situation has been touched upon several times in the preceding sections, the following sections explore in more detail about what happened to the observed online language teacher communities and their members specifically during the pandemic, and, subsequently, the potential consequences of this crisis situation are outlined.

#### ***6.3.1 The realities of the online communities during the pandemic***

To say that the COVID-19 pandemic had affected the lives of language teachers is an understatement. In early 2020, due to social distancing measures imposed by the governments to stop the spread of the novel coronavirus, many language teachers around the world were reported to be forced in a situation where they needed to teach online suddenly (e.g., Back et al., 2021; Moorehouse & Kohke, 2021; Moser et al., 2021), and the participants in the current study were no exception: In the initial questionnaire conducted in June 2020, the majority of the respondents (73%) reported that their teaching was affected by the pandemic, and those who were not affected by it (e.g., Amelia) claimed that they had already been teaching online even before the pandemic. Similar to what MacIntyre et al. (2020) found in their study, the sudden temporary shift from online teaching in lieu of face-

to-face teaching appeared to bring upon a considerable amount of stress to the teachers who participated in the study as well. Some interviewees explicitly stated they “were freaking out and stressed” (Lily) and were struggling with stress-related symptoms, such as insomnia (Tessah). As they were compelled to change their teaching practice in a short period, mostly needing to use a certain type of video-conferencing tool, such as Zoom, Skype, and Google Meet, an LMS, such as Blackboard, Moodle, and Google Classroom, or a combination of these tools, without receiving any prior training or experience in teaching online, these negative outcomes are not completely unexpected. Lily reported that she did not receive any help from her university as “nobody at the university knew how to.” Moreover, it appeared that the situation was made worse for teachers who were working at multiple universities. For example, Tessah who was working part-time at three separate universities at the time of the pandemic indicated that since the three universities provided her with different video conferencing tools and LMSs to work with, she had to learn three separate sets of tools for each university without receiving much help from the universities. She claimed that only one out of the three universities provided her with the support she needed to learn how to use the required tools for online teaching. One university which did not help her appeared to only provide support to the teachers who spoke Japanese, and since Tessah did not speak Japanese, she was left entirely on her own to acquire the necessary skills and knowledge to teach her classes online. Even before the pandemic, these non-Japanese-speaking foreign language teachers have generally been reported to have a higher possibility of feeling isolated at their workplace due to barriers related to language, culture, and gender (e.g., Nagatomo, 2016), but Tessah’s example seems to demonstrate how the pandemic further marginalised vulnerable teachers like her.

Based on what was described by the participants in the study, it is not entirely unexpected that the observed FBC-1-JP community was the most active at the beginning pandemic in March and April 2020, which coincides with the time when the Japanese government declared the State of Emergency (MHLW, 2020), leading many schools and universities in Japan to temporarily close. The descriptive data obtained from the two-year observation of FBC-1-JP demonstrated that there was a large increase of new members and posts shared within the community. From the content analysis of posts and comments and the interviewees' responses, the increase may be part due to the annual conference organised by the members of FBC-1-JP in June, but this reason alone does not explain why there was such a sudden increase a few months prior to the actual event. It seems more plausible that the language teachers were joining and actively participating in them in March and April 2020 because the schools and universities were announcing that they were unexpectedly transitioning their upcoming Spring 2020 semester classes from face-to-face classes to online classes, which, as the above section discussed, brought chaos among many of the teachers.

The findings clearly illustrated that the online language teacher communities were offering various benefits to language teachers who were struggling to teach online during the pandemic. Lending support from the findings from the studies of Carpenter et al. (2021), Greenhow et al. (2021), and Trust et al. (2020) who similarly analysed the posts shared in the online teacher communities on Twitter during the initial period of the pandemic, the content analysis of posts and comments shared in FBC-1-JP showed that the Facebook community was providing the teachers with a rich source of information and resources. For example, during the onset of the pandemic, the most common types of posts were sharing about future events (e.g., conferences, seminars, workshops) and courses, which were



mostly targeted at those who were new at teaching online. Another common type of posts were sharing resources, including websites and online applications, videos, and reading materials (e.g., books, journal articles), which teachers could make use of to navigate their “new” online classrooms. Moreover, an additional advantage was the fact that the online community members were able to easily ask questions to other teachers who were experts in teaching online. The content analysis revealed that they were commonly asking questions about technical questions about a certain digital tool (e.g., “Does anybody know anything about WebEx?”) and advice on how to use them for online teaching (e.g., “Does anybody have a PowerPoint or instructions on how to use Zoom to teach a class online?”). In the post-interview questionnaire, multiple interviewees explicitly indicated that they had incorporated some of the ideas, tools, and suggestions obtained from the online communities into their own teaching context, which appears to indicate that for some, participating in the online communities had a direct influence on their online teaching practice.

In addition to receiving professional support, it was evident from the data sources that the online language teacher communities had provided some of the teachers with emotional support during this period of uncertainty. In FBC-1-JP, online community members were sharing information about several social events, which enabled them to socialise with other teachers who were similarly struggling to cope with the situation. For instance, Archer reported in the post-interview questionnaire that the weekly Friday night social gatherings which were promoted three times in FBC-1-JP between April 2020 and August 2020 provided him with comfort as he was able to talk with “friends in similar contexts with sympathetic ears.” It is also reasonable to assume that the engagement with other members in the online discussions held within the Facebook community, the private messages sent by other online community members, and participation in the other professional events, such

as conferences, webinars, and informal “how-to” sessions, which were held beyond the original Facebook platform using video-conferencing tools, such as Zoom, Microsoft Team, and Google Meet, had helped them get through the stressful pandemic situation. All 31 interviewees at the time of the interview reported that they were temporarily working from home and the pandemic-induced restrictions made it difficult for them to interact with their co-workers and friends. As Knight (2020) noted, the pandemic had further exacerbated the pre-existing issue of professional isolation, so it comes to little surprise that three interviewees (i.e., Tessah, Lucy, Preedah) specifically noted in the post-interview questionnaire that they used the online language teacher communities to ameliorate their feeling of isolation. Moreover, although not frequently, a few posts concerned the well-being of teachers. As the online community members noticed that other members in the community were distressed, they wrote posts to check up on them, advised them to take breaks, shared humorous memes, and shared ways to meditate and exercise.

It should also be pointed out that FBC-1-JP seemed to be occasionally working as a virtual information hub where online community members who did not speak Japanese were able to gain access to information about natural disasters like Typhoon Hagibis which hit Japan in 2019 and other disasters like the ongoing COVID-19 pandemic in English. As many of the members were non-Japanese nationals, several community members shared with them public health-related information and news articles about the virus and social distancing measures which were translated or written in English. These findings appear to corroborate what was found in other studies (e.g., Cho et al., 2013; Jang & Choi, 2020) which showed that pre-existing online communities on SNSs played a partial role in providing language minorities with up-to-date crisis-related information during emergency situations. Although national governments and local authorities tried to provide adequate information and

guidance related to the pandemic using various online tools, such as web pages, videos, and mobile phone applications (e.g., CDC, n.d.; MHLW, n.d.-c), much of the information in the early days of the pandemic was only presented in the main native language (e.g., Bahndari et al., 2021; Civico, 2020; Gil et al., 2020; Piller et al., 2020). In times of a crisis situation, language minorities who do not speak the native language of the host country are often overlooked, especially at the onset of the crisis, so seeing as these teachers in FBC-1-JP were helping those who could not speak Japanese so that they could easily find important information and potentially ask questions about non-teaching related matters in the online communities can be regarded as a positive aspect of the community.

Finally, another unexpected but noteworthy finding identified from the online observations was that there was a dramatic sudden decrease in the number of posts in May 2020. Since several new online teacher communities on Facebook which were specifically catering to the needs of teachers teaching online were created during the pandemic, this may have contributed to the dramatic fall in the number of posts in May 2020. The content analysis of the posts showed that there were several posts promoting the newly created Facebook communities such as FBC-5-JP in April 2020, and some of the interviewees confirmed that they had become more active in these new Facebook communities and less present in FBC-1-JP. Another possible reason for this fall could be that the community members had less need for the online community because they were becoming more comfortable in teaching online. Considering that many of them started teaching online in either March or April 2020 and were extensively relying on the online community during this initial transition period, they may have been starting to adjust to the new teaching situation by May 2020. In this way, it was evident that throughout the two years and three months observation period the number of posts shared in FBC-1-JP was not static and constantly changing, which appears

to be providing further evidence for the fluid and fast-changing nature of online teacher communities (Curwood & Biddolph, 2017).

### **6.3.2 Potential consequences of the pandemic**

As outlined in the preceding section, many of the language teachers participating in the study were largely affected by the pandemic situation. Although it is unclear at this point when the pandemic will fully end, there are likely to be traces of it in the unforeseeable future, particularly in the area of language teaching. The following section thus turns to examining the potential positive and negative consequences of the pandemic on language teachers' ways of learning about technology in language teaching and learning and their uses of online communities on SNSs in the future.

One notable finding identified from the post-interview questionnaire is with regards to the perceived confidence level towards using technology for language teaching purposes. In all, 20 out of 29 interviewees reported that they gained confidence in using technology since they had started to teach online due to the pandemic, and the other nine interviewees reported that their confidence level had not changed since they had been already perceived themselves as being "very confident" in using technology from the beginning. Although the "forced" online teaching following the pandemic may have caused an enormous amount of stress among many teachers, the positive changes in confidence level for the majority of the interviewees suggest that there were some silver linings to the crisis situation. Needless to say, the fact that the teachers were forced to teach online did not automatically lead them to feel more confident in using technology in their classes, but it was due to all the hard work and effort they put in themselves. As repeatedly noted in the preceding sections, most teachers were receiving little or no support from their institutions and were left to their own

devices. Because of this, they had no choice but to rely on informal online modes of learning, mainly through attending online events, watching online videos, and connecting with other teachers in online language teacher communities on SNSs. As they spent more time teaching online, it is likely that they felt gradually more comfortable and confident in using various new technological tools to teach their own classes.

An expected outcome of the increased level of confidence in using technology is the lowering of teachers' intrinsic barriers towards technology integration. Although technology integration is affected by a myriad of factors, confidence is considered to play a considerable role in determining teachers' uses of technology in educational settings. As commonly found in the literature, teachers who perceive themselves as confident in using technology are more likely to integrate it in their own classes than those who lack confidence (e.g., Darby, 2008; Pelgrum, 2001). One of the reasons for this is thought to be that confident teachers are less likely to have fear and anxiety towards technology, which, in turn, makes them perceive less risks when using technology in their own classes (Howard, 2013). Although having a high level of confidence in using technology does not necessarily mean that teachers will use technology in their classes (Kessler & Plakans, 2008), and other related factors such as confidence in language ability and knowledge in language teaching can come into play (Wang, 2021), it can be argued that without a certain degree of confidence in using technology, it would be difficult for teachers to take the first step and experiment with new teaching ideas using technology.

Another related point worth mentioning is the ways in which language teachers were learning about how to use technology for teaching purposes: It was evident that the participants were predominantly enhancing their professional skills and knowledge online.

In the initial questionnaire and post-interview questionnaire, interviewees were asked to indicate how often they did certain activities to learn about how to use technology for teaching purposes. As briefly touched upon at the first part of this chapter, from comparing the two data sources, it was clear that all 29 interviewees who responded to both questionnaires were generally relying upon online modes of learning more than in-person options. For instance, at the start of the pandemic in 2020, approximately half of the interviewees (n=14) indicated that they “never” or “rarely” attended online conferences, but two years into the pandemic in 2022, the majority of interviewees (n=24) indicated that they were attending online conferences at least once a year, with the most common answer being “once a month” (n=10). On the other hand, in 2020, 14 out of 29 interviewees reported that they “never” or “rarely” attended in-person face-to-face conferences, but there were ten additional interviewees in 2022 (n=24). In a similar vein, the majority of the interviewees (n=21) reported that they “rarely” or “never” participated in in-person face-to-face courses/seminars in 2020, and in 2022, a total of 24 interviewees reported the same way. Although roughly half of the interviewees (n=13 in 2020; n=14 in 2022) indicated that they “never” or “rarely” attended online courses/seminars both times, it also means that the other half were persistently attending them at least once a year. Besides attending online conferences, seminars, and courses, in both questionnaires, the interviewees reported that they frequently searched the web, read blog posts, watched videos, and connected with other teachers on SNSs. While it is difficult to determine at this point whether they will continue to learn online even after the pandemic fully ends, one possible outcome of more teachers making use of online modes of learning is that such online professional learning opportunities will become more mainstream.

Linked to the aforementioned point, a further prediction which can be made based on the study's findings is that teachers are likely to continue to reach out to online teacher communities on SNSs, especially when they face similar obstacles in the future. Although about half of the interviewees indicated in the post-interview questionnaire that they were relying on the online communities less compared to the peak period at the start of the pandemic, the other half reported that they have been using them consistently or increasingly over the past two years. The fact that quite a few teachers were using the online communities less in March 2022 was not completely unexpected, considering that many of them reported that they had gotten used to teaching online and had returned teaching under the same conditions as pre-pandemic times. Moreover, as teachers were teaching and doing every other aspect of their work online during the pandemic, several of them indicated that they felt that sitting in front of a screen for long hours took a toll on their health; hence, presumably, some of these teachers were trying to cut down on their overall "screen-time" for the time being. However, these changes do not necessarily mean that the online communities on SNSs will no longer have a place in the lives of teachers in the future. As a large number of questionnaire respondents and interviewees had expressed their appreciation towards online teacher communities during the pandemic, it is likely that the pandemic was a tipping point for many teachers to realise the power that online communities hold. The findings of the study evidently showed that the online communities provided a place of comfort when teachers had nowhere else to turn to for help. As outlined in the preceding section, online community members were assisting each other, finding and participating in online events, forming new friendships, and creating a sense of belonging within the online community. Since they went through such a difficult time together, it may even be possible to say that a special bond was created among some of them. Based on these observations, it would not be too far-fetched to assume that the online teacher communities

would be one of the first places where these teachers will look for in times of future challenges.

Although the end of the pandemic is getting nearer and teachers are returning to in-person classes like in pre-pandemic time, the pressure of using technology for teaching purposes has not completely worn off; rather, in some cases, teachers may be facing even more pressure to use and learn how to use them (e.g., Guppy et al., 2022). Although teachers may have gotten used to teaching online, this does not necessarily mean that they are able to teach using technology in face-to-face settings without any problems. As teaching online classes and in-person classes are different and require varying skills and knowledge (e.g., Colpaert, 2006), teachers will need to continue learning about technology for instructional purposes. One positive outcome of the pandemic is likely to have been that teachers were able to acquire the needed competences to use various digital tools to teach their online classrooms, which may have not otherwise been possible without the forceful push from the pandemic. The existing problems of CALL teacher preparation which were outlined in Chapter 2 did not magically disappear because of the pandemic; on the contrary, it may possibly have further aggravated the situation: Governmental bodies, educational boards, and school administrators may now hold a false impression that their teachers are capable of using technology and be even more reluctant to invest in their professional learning opportunities so that they can further enhance their knowledge and skills in technology. Although it is too early to say whether the pandemic situation will work as a positive force or a setback in CALL teacher preparation, it is anticipated that teachers will keep on utilising online communities, tools, and resources available on the Internet to survive in the “increasingly technology-driven future” (Kessler, 2021, p. xiv).



#### 6.4 Limitations of the study

The present research project had several limitations, some of which were anticipated beforehand but could not be controlled for and others which became evident only after collecting data. Firstly, the use of convenience sampling for the questionnaire led to a large data set, but the potential drawbacks of the sampling method need to be noted. Since the invitations were shared in the online language teacher communities on SNSs and a mailing list, there was no way of knowing what the precise response rate was. It was also unclear how many people actually saw the invitation but did not participate in the questionnaire. Considering that lurkers (i.e., users who observe but rarely participate in the discussions) are common in online communities (Popavac & Fullwood, 2019), it was anticipated that the respondent rate would be fairly low. Nonetheless, as the online teacher communities to which the initial questionnaire was distributed were large communities, many of which consisted of more than 500 members, and at the end, only 482 questionnaire responses were received, it can be deduced that the response rate of the initial questionnaire was in actuality fairly low, although past studies in the relevant field which employed a similar recruitment method for their questionnaires (e.g., Carpenter & Krutka, 2015; Carpenter et al., 2020 a; Duncan-Howell, 2010) are on a similar or smaller scale. Moreover, as the questionnaire and interview participants were recruited on a voluntary basis, they are mostly likely to be active online community members or who Dörnyei (2007) calls “eager-beavers” that are enthusiastic about participating in research studies. It should therefore be stressed that the sample for the questionnaires and interviews cannot be considered representative, and therefore the results only reflect a partial reality of those using online teacher communities on SNSs.

As the main findings partly relied on self-reported data collected through questionnaires and interviews, the conclusions drawn from the study should be interpreted with caution. Although the caveats of such type of data were anticipated from the beginning (see Chapter 4) and other more objective forms of data were also collected through observations to get a rounder view of technology-focused online teacher communities, the findings are uncontrollably influenced by various biases, particularly social desirability bias. One example of the participants' answers being affected by such biases was observed when Farhana, who wrote in an email sent after the interview how she was rather evasive in the interview when answering questions about her social media habits. She explained that her answers were not very "truthful" to the questions asking how often she checked Facebook in general and the online teacher communities because she "felt embarrassed" that she checked the online platform every day and spent a lot of time reading the content shared in the online communities. Although the researcher tried to avoid asking sensitive questions, based on her response, it appeared that talking about one's experiences in using SNSs for professional purposes may be considered personal for some, and considering that the researcher and the questionnaire and interview participants were not acquaintances prior to the study, they may have felt the urge to answer in a way that would be socially acceptable. As it is a "natural human tendency" to present themselves in a positive way (Dörnyei & Taguchi, 2010, p. 8), the inevitable weaknesses of relying on self-reported data need to be acknowledged.

Another point of concern is that as the online observation was predominantly conducted on one Facebook community, the results may not represent the realities of other technology-focused language teacher communities on Facebook. Although the results from the cross-case analysis of four other Facebook communities seem to illustrate that similar discussions

and interactions are occurring in these spaces, the fact that each online community is unique and consists of distinct members with different backgrounds makes it difficult to draw generalisable definite conclusions from each data set. A further limitation is that the sorting of the posts and comments are subject to research bias as the study employed manual coding instead of machine coding, though machine coding itself can be equally if not more problematic. Efforts were made to ensure the data quality and minimise bias, such as the employment of a second rater, but the data is naturally likely to include some type of human error.

The goal of the current study was to conduct an in-depth investigation of a public Facebook language teacher community which allows everyone, including those who are non-Facebook users, to read the posts and comments shared within the community, as opposed to a private one in which non-members are not able to view the shared content. As it is likely that the public nature of the online community had some influences on the content shared in the online communities, it would have been ideal if both public and private online communities could be observed extensively to see the differences between the two types. For the cross-case analysis, the posts from one private online community were examined as a reference, but as noted in Section 4.4.2, it was not possible to analyse the content in detail due to ethical reasons. Hence, the findings drawn from the study are somewhat restricted and portray what is mainly happening in a public Facebook language teacher community.

It is also worth noting that as stated at the beginning of the thesis, the COVID-19 pandemic was an unanticipated occurrence which inevitably influenced the data collection process and, consequently, the overall findings. As the pandemic unexpectedly emerged right before the distribution of the initial questionnaire and interviews, it was not possible to see the

differences in teachers' attitudes towards learning about technology for teaching purposes before and after the pandemic had occurred. Many participants reported that they were motivated to learn about technology and expressed positive attitudes towards the use of online teacher communities for professional purposes, but considering that the majority of them were suddenly forced to temporarily teach online because of the pandemic, the outcome may have been different if the data were collected at a different point in time. Although the post-interview questionnaire which was distributed in March 2022 provided some insights into how language teachers were learning about technology two years into the pandemic, a few participants reported that they were still continuing with online teaching because of the pandemic. Therefore, the current study was not able to capture whether teachers' attitudes and behaviours will change when they return to in-person classes once the pandemic ends completely.

Further, the results were not tied back to the relevant motivational theories extensively discussed in Chapter 3. Although the current chapter briefly touched upon how the participants in the study were motivated to learn about technology in language teaching and learning and to use online teacher communities on SNSs, there was not enough evidence to draw concrete conclusions with regards to teacher motivation and the aforementioned theoretical frameworks. To avoid putting words into mouths of the participants and making claims going beyond what was actually found, the results were only described as they were.

Finally, it should be recognised that the fast-changing nature of SNSs may have had an influence on teachers' reported online activities and views towards their use of online teacher communities on SNSs. During the four years since the study commenced in 2018, the Facebook interface and features were updated on a number of occasions. Although the

way users share posts and interact with one another in the community has fundamentally remained intact, there were minor changes to the platform: Not the least of these is that, as briefly mentioned in Section 4.2.1, a “care” reaction with a smiley emoji hugging a red heart to its platform where users could show compassion for others was introduced in 2020. Moreover, the platform’s terms and conditions, mainly regarding the transparency of third-party data use, have changed several times throughout the years. Although none of the participants specifically mentioned that they had changed their behaviour because of the new updates, it is possible that they affected them unconsciously. As the online landscape of SNSs is constantly altering and shifting, it should be emphasised that the present study’s findings reflect how the platform is currently being used at the time when the current thesis was written.

## **6.5 Summary**

In the present chapter, in relation to the study’s three main research questions, the key findings from the online observations of five technology-focused language teacher communities on Facebook, two questionnaires, and interviews collected over the past three years were discussed at length. Firstly, drawing on previous studies (e.g., Son, 2014), the ways in which some language teachers are learning about technology for instructional purposes were outlined. Secondly, reviewing the content shared in FBC-1-JP and other empirical studies on online teacher communities (e.g., Rutherford, 2010; Yidirim, 2019), the types of posts commonly shared in technology-focused language teacher communities were described. In the following sections, the varying reasons why some language teachers are participating in online teacher communities were explored, and the potential benefits and drawbacks of utilising them for professional purposes were identified. Subsequently, the chapter offered a glimpse into what was happening in a pre-existing technology-focused language teacher community during the ongoing pandemic. Based on these findings, several

post-pandemic predictions of how language teachers will learn about technology and their reliance on online communities in the future were also made. Finally, the study's limitations were considered at the end of the chapter. In the upcoming final chapter, the study's main conclusions as well as the implications for future research, practice, and policy are stated.

## Chapter 7. Conclusion

The current study sought to explore how technology-using language teachers are utilising online language teacher communities. As the previous chapters saw, the findings obtained from the study's longitudinal mixed methods research design, involving online observations, questionnaires, and interviews, provided a more comprehensible picture of the ways in which language teachers are learning about technology in language teaching and learning and how technology-focused online language teacher communities are supporting them. The first part of the chapter outlines the key findings and how they contribute to the existing body of knowledge in the field. It then goes on to consider the implications for future research and practical suggestions for teachers, teacher educators, administrators, policymakers, and relevant stakeholders. The final section ends with a few words to conclude the entire thesis.

### 7.1 Key findings and contributions of the study

The thesis has presented the findings of a four-year study investigating the role of online teacher communities on SNSs for supporting language teachers utilising technology for instructional purposes. The analysis of the data collected through the online observations of FBC-1-JP and four other similar technology-focused online teacher communities, the initial questionnaire which received 482 responses, semi-structured interviews with 31 language teachers, and the post-interview questionnaire which received 29 responses offered several conclusions regarding language teachers' learning about technology and their uses of online teacher communities.

Firstly, one of the primary objectives was to uncover the ways in which language teachers are learning about technology in language teaching and learning. The present investigation

showed that the professional learning activities that language teachers engage in were occurring frequently online, typically using web search engines, watching videos, attending online events, and participating in online teacher communities. Many teachers in the study reported that they had rarely received technology training and support from their institutions in the past. It therefore seemed natural that they were taking matters into their own hands, resorting to informal and self-directed modes of learning. Although the study did not set out to prove the effectiveness of each learning option, the results demonstrated that numerous teachers were choosing free and easily accessible learning options over expensive and time-consuming formal training programmes. Another key finding was that instead of solely relying on one learning option, they were commonly making use of multiple ways of learning so that they could learn how to teach using technology more smoothly.

Building on these findings, a substantial part of the study was to illuminate the significance of online language teacher communities on SNSs for supporting technology-using language teachers. It was evident that teachers were voluntarily joining online communities, in which a multitude of topics and themes were being discussed, for a variety of reasons—to explore techno-pedagogical related ideas, to overcome some of the challenges of teaching using technology, to network with other community members, to ameliorate their feeling of professional isolation, and to feel a sense of belonging, to name a few. As online communities seem to offer numerous benefits to language teachers, it was somewhat reasonable that nearly 80% of the interviewees in the study (n=23) indicated in the post-interview questionnaire that the online language teacher communities that they joined had met or exceeded their initial expectations. In the online communities, they were exchanging teaching ideas, resources, and tools, asking for assistance and advice, and providing each other with professional and emotional support. Another notable finding was that 22



interviewees reported that their teaching practice had changed as a result of the online communities. Specifically, they claimed that they were applying the ideas, knowledge, and skills that they gained from reading and discussing with other members, and for some, their experiences in the online communities had helped them build their confidence in using technology for teaching purposes.

It should, however, be emphasised that the study did not produce overly sunny results. Although one interviewee (i.e., *Punya*) did indeed state that she could not think anything negative about online language teacher communities, most participants were not unduly optimistic. It was clear that many teachers held positive views towards the use of online communities, but they also faced rather thorny issues and challenges. Quite a few interviewees reported that they had either been involved in or witnessed online arguments in the online communities in the past, and such instances were observed on multiple occasions in FBC-1-JP. Moreover, some expressed their concerns regarding the quality and credibility of the shared posts and comments and raised such issues as context collapse, sexism, and having a lack of time. Although the potential drawbacks have often been ignored in the earlier narratives surrounding online teacher communities (cf. Carpenter & Harvey, 2019), the current study contributed to the field by providing realistic insights into what it is like being a member of an online language teacher community. It is not only important for language teachers who actually make use of online communities to be aware of these limitations but also for other relevant stakeholders such as administrators, teacher educators, and policymakers who may have an influence on teachers' uses of online communities (see Section 7.3 for further details).

Another vital part of the study was to observe how language teachers were dealing with the pandemic situation and making use of online teacher communities during such difficult times. In the study, the pandemic's toll on language teachers was palpable: Many participants who had little or no experience in teaching with technology recalled how they had mere weeks or, in worse cases, days to learn how to use technology as their primary means of instruction. It was evident that with barely any support from their universities and schools, they had to learn how to navigate their virtual classes on their own in a short timeframe at the beginning of the pandemic. In particular, part-time teachers who were working at multiple institutions appeared to be hit hardest by the pandemic as many of them were required to learn how to use separate video conferencing tools and LMSs for each institution they were working for, without receiving any training or compensation for their additional workload. The findings showed that in situations when social distancing measures were enforced and in-person interactions were limited, online teacher communities on SNSs, which are free and open to anyone as long as they have Internet access, played an even bigger role in teachers' lives. Without having the fear of contracting the virus, teachers were able to connect with other teachers in pre-existing and newly formed online teacher communities. In these online communities, they were supporting each other by exchanging practical ideas, information, and resources and offering words of comfort. Teachers who had no idea of how to teach online are likely to have struggled even more if it were not for these online communities. Knowing that teachers were going through the same struggles and that there were experts who were constantly willing to help in the online communities doubtlessly assured them that they were not alone. The social aspect of online communities was also likely to have benefited teachers, even those who were already competent in teaching online, since they were able to socialise with others at social gatherings and other relevant events held online in times when the risk of isolation had increasingly heightened.

Although since the pandemic, more scholars are paying attention to crisis management in educational settings (e.g., Back et al., 2021; Moorhouse et al., 2021), the field, particularly, in relation to language teacher education has plenty of room to grow. The findings of the study therefore contribute towards a greater understanding of language teachers' uses of online communities during a pandemic and how they can be better prepared for future similar crises.

## **7.2 Implications for future research**

Since CALL teacher preparation, especially with regards to the use of technology-focused language teacher communities, is a relatively underexplored area of research, the current study provided some initial insights into how some language teachers using technology are enhancing their professional knowledge and skills. Although as shown in the previous section, it was possible to draw a number of conclusions from the study's results, a few questions were raised, prompting the need for further research. Firstly, as the data collection process began before the pandemic in October 2018 and ended during the pandemic in March 2022, a follow-up study should be conducted in the near future to see if there are any changes in how language teachers are learning about technology in language teaching and learning and their utilisation of online language teacher communities on SNSs in the post-pandemic era. Since many participants in the study reported that they were relying on various online tools and resources, including online teacher communities, to learn about technology, because of the pandemic, it may be worthwhile exploring whether they will continue to use such online modes of professional learning, or rather, rely more on offline options, such as face-to-face conferences, courses, and seminars when they become more available once the pandemic has fully ended. It is also possible that they would no longer be

interested in learning about technology because they are not using technology in their in-person classes.

As many studies on online teacher communities on SNSs have employed cross-sectional research designs, typically collecting data within a three-months period, the present research project was therefore one of the few longitudinal studies conducted in the field. Congruent with the findings from previous similar studies (e.g., Carpenter et al., 2022; Xing & Gao, 2018), the 27-months observation of the FBC-1-JP community showed that online communities are in a perpetual state of flux, with the number of shared posts and comments and additional community members constantly fluctuating during the observation period. The questionnaires and interviews carried out across various points in time between June 2020 and March 2022 also demonstrated how language teachers' involvement in the online teacher communities was not static over the years. Approximately half of the interviewees reported in the post-interview questionnaire collected in March 2020 that their involvement in the online communities had declined since the onset of the pandemic. The other half indicated that they have continued using them to about the same degree, with a few even indicating that their participation had increased. Considering that little is known about why certain teachers are continually involved in online teacher communities for a long period of time and others discontinue after a while, more research should be conducted to understand their long-term participation and commitment.

It would also be worth investigating language teachers who are not using online teacher communities on SNSs at all. As explained at the beginning of the thesis, language teachers who were not already utilising online platforms were beyond the scope of the study (see Section 1.3), but to gain a fuller understanding of language teachers' uses of technology-

focused language teacher communities, the next research step is to expand the sample to include: (1) language teachers who were online communities in the past but later completely quit; (2) those who are not currently in online communities but hold positive attitudes towards using them for professional purposes; and (3) those who are completely opposed to using any kind of online communities. Since past studies on online teacher communities on SNSs have generally examined the attitudes of teachers who are already making use of online communities, there is a need for a study which focuses on trying to understand why some teachers are not using online teacher communities and why some teachers discontinue after participating for a while.

The current study predominantly focused on Facebook, but another area ripe for research is online language teacher communities formed on other emerging SNS platforms. Although at the time when the study had commenced in 2018, Facebook was one of the most common platforms language teachers were utilising, since then, it appears that some teachers, especially among the younger teachers, are reaching out to relatively newer SNSs, such as Instagram (e.g., Carpenter et al., 2020a) and TikTok (e.g., Hartung et al., 2022). The participants in the study did not particularly mention that they were using these emerging platforms to learn about technology in language teaching and learning, but since some of them indicated that they were using them for personal purposes, in a few years' time, they may become more mainstream for professional learning purposes. Another potential scenario could be that traditional platforms such as Facebook and Twitter may continue to grow in popularity among teachers. Alternately, teachers may also migrate to a completely new SNS platform which has yet to be invented. In any case, considering the fast-changing nature of SNSs, it is important for researchers to investigate how language teachers are using

emerging platforms professionally as well as the reasons why some are more popular than others.

An additional type of online language teacher communities worth exploring is the ones formed on platforms other than SNSs. Since the 1980s, teachers have been connecting with others online through the use of computer bulletin board systems (BBSs) (e.g., Chandler, 1988) and email discussion lists (e.g., Riding, 2001; Warschauer, 1995). Today, various email discussion lists are still being used among teachers, some of which have been continuously active since the late 1990s (e.g., LeLoup & Ponterio, 2017). Despite the existence of these active email discussion lists for a lengthy period of time, much remains unknown about what is currently going on within these online language teacher communities and their changes over the past few decades. The field will therefore further benefit from a more detailed understanding of how and why certain language teachers continuously rely on email discussion lists and why others have abandoned them and migrated to other platforms including SNSs.

Moreover, as outlined as one of the limitations in the previous chapter, the study was not able to answer the question of whether (and to what extent) the public nature of online teacher communities had an effect on teachers' involvement. Considering that FBC-5-JP, which was set as a private group (see Section 4.2.1.), was more active than the other four observed online communities which were all public groups, on the surface, it appears that some teachers were attracted to the private group element. It can be speculated that there are less psychological barriers to joining private online communities and actively posting and commenting within them, though there is a need for further examination to confirm this speculation. Studying online teacher communities on SNSs, however, has generally been the

subject of contentious ethical debate (McKee & Porter, 2009), which inevitably makes scholars generally avoid using data collected in private online teacher communities (e.g., Kelly & Antoni, 2016). As it was not possible to gain consent from all members in the communities, the current study predominantly focused on observing publicly-opened Facebook communities. Ignoring private online teacher communities completely, however, is problematic, considering how numerous teachers are making use of such communities (e.g., Makri & Turner, 2019). One possible way to get around the ethical issue associated with studying private online communities is to rely on self-reported data collected through methods such as questionnaires, interviews, and focus groups. As not much is known about teachers' attitudes towards the privacy settings of online teacher communities on SNSs, further investigation will paint a fuller picture of their uses of online teacher communities.

Further, the unexpected outcome regarding gender issues in online teacher communities on SNSs calls for further examination of this topic. In the study, several female language teachers reported that their negative experiences in the online communities were caused by some male community members. Specifically, one participant claimed that she received friend requests and private messages from male strangers who were participating in the same online teacher communities, and a few others claimed that they occasionally received harsh comments from male users or felt patronised by them when participating in the communities. Because of these reasons, some teachers reported that they felt uncomfortable engaging in these communities and preferred engaging with female teachers in all-female online communities. Although overall, only a handful of participants raised gender-specific problems when using online teacher communities, the fact that they were naturally raised without being particularly prompted by the present researcher seems to suggest that gender plays some part in shaping the teachers' experiences in the online communities. To create

an online space where all teachers, regardless of gender, can feel safe and depend on, it is essential for future studies on online teacher communities to uncover the complexity of gender surrounding such spaces.

Finally, the link between online communities and teacher well-being should be further examined. The participants in the study reported that they felt stressed because of various reasons, including class preparation, the pandemic, heavy workload, and the need to learn about technology. Through the current investigation, it was apparent that quite a number of participants were relying on online teacher communities on SNSs to obtain emotional support, and some even claimed that they were able to ameliorate their work-related stress through reading posts shared in such online teacher communities and socialising with other teachers. The findings of the study seem to be one of the first studies to provide actual evidence for Mercer and Gregerson's (2020) postulation that online communities play a vital role in enhancing teachers' mental well-being. The current study will therefore likely serve as a base for future studies examining the intricate relationship between teacher well-being and online communities. Since teacher well-being in general is an understudied topic, the language teaching ecology will certainly benefit from "talking openly and seriously about the topic as well as taking concrete action steps to improve the well-being of all stakeholders" (Mercer, 2021, p. 20).

### **7.3 Implications for practice and policy**

The study provided valuable insights for not only researchers but also teachers, teacher educators, administrators, and policymakers. Since many teachers in the study did not have access to traditional forms of professional learning options through their schools and universities, and in the rare cases they did, they were generally unsatisfied with them, online



teacher communities on SNSs seem to be a viable alternative way of enhancing their professional knowledge and skills. As discussed in detail in previous chapters, they enable teachers to find solutions to mitigate problems that they encounter when using technology for teaching purposes, connect with likeminded teachers outside of their schools who would otherwise be difficult to meet in-person, and obtaining useful information about other professional learning options, such as conferences, workshops, courses, seminars, videos, and other educational websites. The focus therefore should be placed on assisting teachers to learn how to make use of such online communities in an efficient manner. One possible way of accomplishing this is for pre-service teachers who have not yet started teaching to learn about the existence of such communities and the benefits as well as the challenges associated with using them as a source of professional learning. Although the younger pre-service teachers are likely to use SNSs for their personal purposes and are often referred to as the somewhat controversial term “digital natives” (Prensky, 2001), there is no guarantee that they are able to utilise them for professional purposes. For instance, Krutka et al. (2017) found that when they introduced their participants (n=71) who were pre-service teachers, mostly under the age of 30, to Twitter as part of their teacher preparation course, despite over 80% of the total number of participants claimed that they were using such SNSs in their personal lives, approximately 40% of them reported that they faced a “learning curve,” and specifically, one participant reported that he/she “was a little confused and didn’t know what to do or how to do it” (p. 225). Initial teacher education programme leaders and teacher educators, thus, play a crucial role in raising awareness of the usefulness of such communities as a potential way to receive professional and emotional support, and at the same time, it is their duty to teach them how to actually use them as well as inform them about the dangers of using such communities. As witnessed in the current study and previous studies (e.g., Carpenter & Harvey, 2019; Carpenter et al., 2020b), online teacher

communities come along with a number of challenges, such as online harassment, spam messages, and context collapse. To minimise their negative experiences, teachers should learn about such problems that other teachers have actually encountered and their solutions to overcome them. In particular, female teachers, who have a higher risk of being an online victim compared to their male counterparts, will most likely benefit from receiving training which develops their self-protective abilities to prevent and cope with harassment situations (Veletsianos et al., 2018). For instance, teachers can learn how to directly report inappropriate or abusive Facebook posts to community administrators, who have the authority to delete the problematic post and remove any troublesome members. Moreover, as outlined in the preceding chapter, several of the analysed online posts and comments which promoted educational technology products were unclear whether they were commercially-driven or suggested because the online community members purely believed their educational value. Although posts which are self-promotional in nature are not always obvious, teachers should be recommended to check the authors' SNS profiles or the website of the promoted product to see if they have any official affiliation (e.g., brand ambassador) with it (Staudt Willet, 2019). Furthermore, it is also important for teachers to be aware that even though they participate in private closed communities, their presence on SNSs is still public and their posts could potentially be viewed by their students, students' parents, co-workers, or superiors. They have to understand that they need to be careful when posting within these spaces since what they post may have serious repercussions, which, in the worst-case scenario, could lead to getting fired from their job, as brought up by one interviewee in the present study (see Section 6.2.3).

As might be expected, in-service teachers who are already teaching in a classroom will also greatly benefit from being taught the content outlined above. Out of 31 interviewees who

participated in the study, 30 of them claimed that they had not received any prior training in using online teacher communities on SNSs. The only one who reported to have received little training took a DELTA (i.e., Diploma in Teaching English to Speakers of Other Languages) course which is essentially for experienced English teachers, and he was introduced to them in one of the required courses. Although it would be ideal for all in-service teachers to undergo some type of in-service training to learn about online teacher communities on SNSs, not all teachers have the time or luxury to undergo such training programmes, and in the first place, teachers often turn to online teacher communities because they have no other source of support. That is not to say that, however, school and university administrators do not hold any responsibility for providing support to their employees. As more teachers make use of online communities, they cannot simply ignore the fact that their employees are using them. Rules, regulations, and policies with regards to teachers' uses of SNSs should be considered for the sake of their teachers, students, and institutions. For example, guiding teachers on how to use online teacher communities and other informal professional learning sources safely would be a start. As, in a way, they will be representing their schools and universities in the online communities, privacy and confidentiality matters need to be addressed beforehand. As it is likely that many teachers are currently left on their own discretion over how much information they can share about their students, co-workers, and other teaching-related matters with the online community members, discussing such points in detail may prevent some of the aforementioned problems. Moreover, connected to the point raised in the previous section, it is important for schools and universities to offer institutional support in case they fall victim to any harassment or abuse on these online spaces (Veletsianos et al., 2018). Further, as noted a few times throughout the thesis, teachers are generally overwhelmed with work, and if they start using online teacher communities on SNSs as part of their professional learning, they may become

even busier than before, possibly blurring the boundaries between private and work time (Highly & Seo, 2012). As teachers who are overworked have a higher risk of burnout, which, consequently, negatively influences their teaching abilities (Ford et al., 2019), protecting them from overworking should be a priority. A possible way to do this is to acknowledge the time they spend on these online platforms as part of their work, and if they are forbidden to use SNSs during working hours, they should be allowed to monitor the content at work. In cases when teachers are required to earn a certain number of hours for professional learning or training activities, a certain proportion of time spent engaging in the online communities and participating in the online events might as well be counted towards their professional development requirements.

Finally, the study also offered a glimpse into how some teachers were navigating their classes during the COVID-19 pandemic. As repeatedly noted, it was obvious that many schools and universities were underprepared for the pandemic, as teachers in the study frequently reported having received little or no institutional and governmental support. Although no amount of training or care could have fully prepared teachers for this situation, the need to reform the current state of the weak crisis management infrastructure in education was brought to the fore. Learning from the mistakes made during the current pandemic will be the key in shaping the success of how future educational crises will be handled. As many schools and universities around the world were completely thrown off by the sudden announcement of school and university closures, an emergency action plan to ensure a smoother transition from in-person teaching to online teaching should be devised. Although protocols to prepare for natural disasters, such as wildfires, earthquakes, and tsunamis, exist in many schools and universities (e.g., CDE, n.d.; MEXT, 2018), they should also outline the measures which need to be taken during a pandemic and similar crisis when

online learning is possible. Since numerous schools and universities were in a state of panic and far from being able to calmly guide their employees on how to teach online during the pandemic (e.g., Mishra et al., 2020), in the future, teachers should be offered technology training sessions, including how to teach online, at an earlier stage. As alluded in Chapter 2, successful online teaching requires careful and considerable planning and skills (e.g., Colpaert, 2006), which means that teachers should be educated in advance instead of panicking and forcing them to learn when a disaster occurs. At the pre-service level, teachers should learn how to teach online as part of their initial teacher training, and at the in-service level, teachers should be given opportunities to continually develop their competences in online teaching. Moreover, the emotional exhaustion and burnout voiced by the participants in the current study shows that it is equally if not more important to provide emotional support to teachers during a crisis. Although many bore the burden of caring for their students during the pandemic, teachers generally seem to have been neglected and left on their own to find ways to deal with the stressful and uncertain situation for their students as well as for themselves (Beard et al., 2021). As the current study witnessed, online teacher communities, particularly those in which the focus of discussion is on technology, played a critical role in supporting teachers professionally and emotionally. It is therefore noteworthy for future crisis educational management systems to consider the value of online communities on SNS as a crucial source of support. Through careful collaboration among national and local government agencies, schools, universities, and online teacher communities, the quality of care for their students and teachers may be ensured in future crisis situations.

#### 7.4 Final remarks

In conclusion, the study's large and diverse sample offered a rich source of invaluable data regarding language teachers' utilisation of online teacher communities on SNSs, particularly the ones which focus primarily on technology. The power of online communities, though not without flaws, should not be underestimated as they provide a supportive space where technology-using teachers, especially those who are professionally isolated from their colleagues at their workplace, have access to the collective wisdom of their peers, both near and far, in a cost-effective manner. It can be easily forgotten that teachers are also regular people and, just like any other person, face an abundance of common life problems, including physical and mental health issues, career pressures, family issues, and financial challenges, throughout their enduring teaching careers. It may be reassuring for them to have an outlet where they can manage and relieve some of their professional and personal problems and to know that someone has their back. As the current study showed, each individual participant had different expectations for what they hoped to gain from the online communities. Since there is no single "best" online community in existence for language teachers and that each community is unique and offers different experiences, they may want to test out multiple types of online communities to find the ones that fulfil their individual needs, teaching situations, and lifestyles.

The beauty of online communities, in one sense, is that language teachers who are teaching a language which is often said to be "a gateway to knowledge, culture, and communication" are able to gain hands-on experience while interacting with others across geographic distances and cultures through participating in the online communities. Moreover, it seems intrinsic that they are learning about technology through the use of technology. Since their own personal experiences with technology are likely to have an influence on the use of

technology in their classes (e.g., Park & Son, 2020), especially when incorporating social networking tools (e.g., Kusuma, 2022), having experiences in using such tools themselves may possibly make it easier for them to see how students' learning can be enhanced and be more receptive to innovative teaching ideas.

Apart from the pedagogical aspects, the study revealed that the online communities proved to be a window on the psychological and emotional states of the participants in them, and to a certain extent, these elements needed as much—if not more—support than advice about how to use technology as a part of their individual contexts. The discussions showed that many participants faced isolation and a general lack of support, sometimes as a result of their gender or their ethnic background, and the online communities provided a forum in which they could express these concerns with others openly and honestly without fear of repercussions from their employers. To that end, the study showed that the online community can act as a much-needed resource that goes beyond the initial purposes for which it was designed.

All in all, online communities have opened up possibilities for teachers to learn and interact with their peers, whether they be in a small town in the countryside, a refugee camp, or a megacity in lockdown. As a result of these online communities, the meaning of “peer” appears to have changed: What was once used to refer to one's immediate colleagues at their workplace has now been expanded to include those who are in different parts of the world. Since the past few years alone have witnessed how war, pandemics, and natural disasters can easily disrupt the education system, it is important for teachers under any circumstances to have a place where they can turn to for help. Although online communities will not be a

panacea to solve all the problems which teachers encounter, they undeniably present as a worthwhile form of support for modern-day teachers.



## References

- Abdel Latif, M. M. M. (2022). Coping with COVID-19-related online English teaching challenges: Teacher educators' suggestions. *ELT Journal*, 76(1), 20–33.  
<https://doi.org/10.1093/elt/ccab074>
- Al-Jarf, R. S. (2021). ESL teachers' professional development on Facebook during the COVID-19 pandemic. *European Journal of Education and Pedagogy*, 2(6), 75–81.  
<https://doi.org/10.24018/ejedu.2021.2.6.220>
- Al-Fudail, M., & Mellar, H. (2008). Investigating teacher stress when using technology. *Computers & Education*, 51(3), 1103–1110.  
<https://doi.org/10.1016/j.compedu.2007.11.00>
- Akinyemi, A. F., & Rembe, S. (2017). Challenges encountered by communities of practice in enhancing continuing professional teachers development in high schools. *The Anthropologist*, 30(1), 8–16. <https://doi.org/10.1080/09720073.2017.1377890>
- Akram, O., Chakma, J., & Mahub, A. (2012). Continuing education in disaster-affected schools in Bangladesh: An evaluation of the education in emergencies project. *Children, Youth, and Environments*, 22(2), 249–262.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Education Psychology*, 84(3), 251–271.
- Atkins, N. E., & Vasu, E. S. (2000). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education*, 8(4), 279–302
- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, 64(6, Pt.1), 359–372.
- Atkinson, J. W., & Raynor, J. O. (Eds.). (1974). *Motivation and achievement*. Washington, DC: Winston & Son.
- Atkinson, J.W. (1964). *An introduction to motivation*. New York: Van Nostrand.
- Aydin, S. (2012). A review of research on Facebook as an educational environment. *Educational Technology Research and Development*, 60, 1093–1106.  
<https://doi.org/10.1007/s11423-012-9260-7>
- Back, M., Golembeski, K., Gutiérrez, A., Macko, T., Miller, S., & Lanie Pelletier, D. (2021). “We were told that the content we delivered was not as important”: Disconnect and disparities in world language student teaching during COVID-19. *Systems*, 103, 1–11. <https://doi.org/10.1016/j.system.2021.102679>
- Baek, E.-O., & Schwan, T. M. (2006). How to build a better online community: Cultural perspectives. *Performance Improvement Quarterly*, 19(2), 51–68.  
<https://doi.org/10.1111/j.1937-8327.2006.tb00365.x>
- Baker, K. J. (2020). Panic-gogy: A conversation with Sean Michael Morris. *The National Teaching & Learning*, 29(4), 1–3. <https://doi.org/10.1002/ntlf.30239>
- Bhandari, D., Kotera, Y., Ozaki, A. (2021). COVID-19: Challenges faced by Nepalese migrants living in Japan. *BMC Public Health*, 21(752), 1–14.  
<https://doi.org/10.1186/s12889-021-10796-8>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Baran, K., & Stock, W. G. (2016). “Blind as a bat?”: Users of social networking services and their biased quality estimations in TAM-like surveys. In K. Knautz & K. S. Baran (Eds.), *Facets of Facebook: Use and users* (pp. 265–284). Berlin: De Gruyter.
- Bax, S. (2003). CALL: Past, present and future. *System*, 31(1), 13–28.  
[https://doi.org/10.1016/S0346-251X\(02\)00071-4](https://doi.org/10.1016/S0346-251X(02)00071-4)
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge Journal of Education*, 39(2), 175–189. <https://doi.org/10.1080/03057640902902252>
- Beard, K. S., Vakil, J. B., Chao, T., & Hilty, C. D. (2021). Time for change: Understanding teacher social-emotional learning supports for anti-racism and student well-being during COVID-19, and beyond. *Education and Urban Society*. Advance online publication. <https://doi.org/10.1177/00131245211062527>
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers’ professional identity. *Teaching and Teacher Education*, 20(2), 107–128.  
<https://doi.org/10.1016/j.tate.2003.07.001>
- Berelson, B. (1952). *Content analysis in communication research*. Glencoe, Illinois: Free Press.
- Bhandari, D., Kotera, Y., Ozaki, A. (2021). COVID-19: Challenges faced by Nepalese migrants living in Japan. *BMC Public Health*, 21(752), 1–14.  
<https://doi.org/10.1186/s12889-021-10796-8>
- Bhuvana, N., & Arul Aram, I. (2019). Facebook and Whatsapp as disaster management tools during the Chennai (India) floods of 2015. *International Journal of Disaster Risk Reduction*, 39, 101135. <https://doi.org/10.1016/j.ijdr.2019.101135>
- Bird, D., Ling, M., & Haynes, K. (2012). Flooding Facebook? The use of social media during the Queensland and Victorian floods. *Australian Journal of Emergency Management*, 27(1), 27–33. Retrieved from  
<https://search.informit.org/doi/epdf/10.3316/agispt.20121974>
- Bishop, L., & Gray, D. (2017). Ethical challenges of publishing and sharing social media research data. In K. Woodfield (Ed.), *The ethics of online research* (pp. 159–187). Bingley: Emerald Publishing Limited.
- Bissessar, C. S. (2014). Facebook as an informal teacher professional development tool. *Australian Journal of Teacher Education*, 39(2), 121–135.  
<http://doi.org/10.14221/ajte.2014v39n2.9>
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.
- Borg, S. (2009). English language teachers’ conceptions of research. *Applied Linguistics*, 30 (3), 358388. <https://doi.org/10.1093/applin/amp007>
- Bourhis, A. C., Dube, L., & Jacob, R. (2005). The success of virtual communities of practice: The leadership factor. *Electronic Journal of Knowledge Management*, 3(1), 23–34.

- boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definitions, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Brinkmann, S., & Kvale, S. (2018). *Doing interviews* (2nd ed.). London: Sage Publications Ltd.
- Britt, V. G., & Paulus, T. (2016), “Beyond the four walls of my building”: A case study of #Edchat as a community of practice. *American Journal of Distance Education*, 30(1), 48–59. <https://doi.org/10.1080/08923647.2016.1119609>
- Britzman, D. (1986). Cultural myths in the making of a teacher: Biography and social structure in teacher education. *Harvard Educational Review*, 56(4), 442–457. <https://doi.org/10.17763/haer.56.4.mv28227614144u66>
- Brouwer, P., Brekelmans, M., Nieuwenhuis, L., & Simons, R.-J. (2012). Communities of practice in the school workplace. *Journal of Educational Administration*, 50(3), 346–364. <https://doi.org/10.1108/09578231211223347>
- Brown, C. G. (2012). A systematic review of the relationship between self-efficacy and burnout in teachers. *Educational and Child Psychology*, 29, 47–63.
- Brown, J. D. (2001). *Using surveys in language programs*. Cambridge, UK: Cambridge University Press.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford: Oxford University Press.
- Byrne, R. (n.d.). *About*. Free Technology for Teachers. <https://www.freetech4teachers.com/p/about-richard-byrne-and-free-technology.html>
- Bukor, E. (2014). Exploring teacher identity from a holistic perspective: Reconstructing and reconnecting personal and professional selves. *Teachers and teaching*, 21(3), 305–327. <https://doi.org/10.1080/13540602.2014.953818>
- Burde, D., Kapit, A., Wahl, L. R., Guven, O., & Skarpeteig, M. I. (2017). Education in emergencies: A review of theory and research. *Review of Educational Research*, 87(3), 619–658. <https://doi.org/10.3102/0034654316671594>
- Burn, A., & Richards, J. C. (Eds.) (2009). *The Cambridge guide to second language teacher education*. Cambridge: Cambridge University Press.
- California Department of Education (CDE) (n.d.). School disaster and emergency management: Guidance, grants, training, and resources for local educational agencies (LEAs) related to the management of natural disasters and emergency hazards. Retrieved from [cde.ca.gov/ls/ep/](http://cde.ca.gov/ls/ep/)
- Carpenter, J. P., & Harvey, S. (2019). “There’s no referee on social media”: Challenges in educator professional social media use. *Teaching and Teaching Education*, 86, 102904. <https://doi.org/10.1016/j.tate.2019.102904>
- Carpenter J. P., & Krutka, D. G. (2014). How and why educators use Twitter: A survey of the field. *Journal of Research on Technology in Education*, 46(4), 414–434. <https://doi.org/10.1080/15391523.2014.925701>
- Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: Educator professional development via Twitter. *Professional Development in Education*, 41(4), 707–728. <https://doi.org/10.1080/19415257.2014.939294>

- Carpenter, J. P., Kimmons, R., Short, C. R., Clements, K., & Staples, M. E. (2019). Teacher identity and crossing the professional-personal divide on twitter. *Teaching and Teacher Education, 81*, 1–12. <https://doi.org/10.1016/j.tate.2019.01.011>
- Carpenter, J. P., Krutka, D. G., & Trust, T. (2022). Continuity and change in educators' professional learning networks. *Journal of Educational Change, 23*, 85–113. <https://doi.org/10.1007/s10833-020-09411-1>
- Carpenter, J. P., Morrison, S. A., Craft, M., & Lee, Michalene, L. (2020a). How and why are educators using Instagram? *Teaching and Teacher Education, 96*(103149). <https://doi.org/10.1016/j.tate.2020.103149>
- Carpenter, J. P., Staudt Willet, K. B., Koehler, M. J., & Greenhalgh, S. P. (2020b). Spam and educators' Twitter use: Methodological challenges and considerations. *TechTrends, 64*, 460–469. <https://doi.org/10.1007/s11528-019-00466-3>
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine, 4*(1), 92–100. [https://doi.org/10.1207/s15327558ijbm0401\\_6](https://doi.org/10.1207/s15327558ijbm0401_6)
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267–283. <https://doi.org/10.1037//0022-3514.56.2.267>
- Casey, M., Shaw, E., Whittingham, J., & Gallavan, N. P. (2018). *Online teaching: Tools and techniques to achieve success with learners*. Maryland, US: Rowman & Littlefield Publishers.
- Centers for Disease Control and Prevention (CDC). (n.d.). *COVID-19*. <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- Chandler, P. D. (1988). *Teachers and computer bulletin board systems* [Unpublished master's thesis]. University of Melbourne.
- Chao, C. (2006). How WebQuests send technology to the background: Scaffolding EFL teacher professional development in CALL. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 221–234). Amsterdam: John Benjamins.
- Chao, M., Xue, D., Liu, T., Yang, H., & Hall, B. J. (2020). Media use and acute psychological outcomes during COVID-19 outbreak in China. *Journal of Anxiety Disorders, 74*, 102448. <https://doi.org/10.1016/j.janxdis.2020.102248>
- Chapelle, C. A., & Sauro, S. (Eds.). (2017). *The handbook of technology and second language teaching and learning*. NJ, USA: John Wiley & Sons, Inc.
- Cheung, Y. L., Said, S. B., & Park, K. (Eds.). (2016). *Advances and current trends in language teacher identity research*. Routledge.
- Cho, S. E., Jung, K., & Park, H. W. (2013). Social media use during Japan's 2011 earthquake: How twitter transforms the locus of crisis communication. *Media International Australia, 149*(1), 28–40. <https://doi.org/10.1177/1329878X1314900105>
- Cho, V., & Jimerson, J. B. (2016). Managing digital identity on Twitter: The case of school administrators. *Educational Management Administration & Leadership, 45*(5), 884–900. <https://doi.org/10.1177/1741143216659295>
- Civico, M. (2021, October). *COVID-19 and language barriers*. (Working Paper No. 21-4). [https://www.ulster.ac.uk/data/assets/pdf\\_file/0010/931492/REAL21-4.pdf](https://www.ulster.ac.uk/data/assets/pdf_file/0010/931492/REAL21-4.pdf)

- Clark, K. R. (2018). Learning theories: Behaviorism. *Radiologic Technology*, 90(2), 172–175.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Oxon: Routledge.
- Colpaert, J. (2006). What does it take to teach online? Towards a pedagogy for online language teaching and learning. *CALICO Journal*, 23(3), 477–497. <https://doi.org/10.1558/cj.v23i3.477-497>
- Compton, L. K. L. (2009). Preparing language teachers to teach language online: A look at skills, roles, and responsibilities. *Computer Assisted Language Learning*, 22(1), 73–99. <https://doi.org/10.1080/09588220802613831>
- Cooper, B. S. (2013). Epilogue. Overcoming teacher isolation: Collaboration, professionalism, and school quality for the future. In S. Conley & B. S. Cooper (Eds.), *Moving from teacher isolation to collaboration: Enhancing professionalism* (pp. 203–209). Maryland, US: Rowman & Littlefield Education.
- Coxhead, A. (2017). Dealing with low response rates in quantitative studies. In J. McKinley, & H., Rose, H. (Eds.), *Doing research in applied linguistics: Realities, dilemmas, and solutions* (pp. 81–90). Oxon: Routledge.
- Crandall, J., & Christison, M. (2016). An overview of research in English language teacher education and professional development. In J. Crandall & M. Christison (Eds.), *Teacher education and professional development in TESOL: Global perspectives* (pp.1–3). New York: Routledge.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks, California: Sage Publications, Inc.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research* (1st ed.). Thousand Oaks, California: Sage Publications, Inc.
- Cruz, A. G. B., Seo, Y., & Rex, M. (2018). Trolling in online communities: A practice-based theoretical perspective. *The Information Society*, 34(1), 15–26. <https://doi.org/10.1080/01972243.2017.1391909>
- Curtin, C. O., & Shinall, S. L. (1987). Teacher training for CALL and its implications. In W. F. Smith (Ed.), *Modern media in foreign language education: Theory and implementation* (pp. 255–285). Lincolnwood, IL: National Textbook Company.
- Curwood, J. S., & Biddolph, C. (2017). Understanding Twitter as a networked field site. In M. Knobel & C. Lankshear (Eds.), *Researching new literacies: Design, theory, and data in sociocultural investigation* (pp. 81–103). New York: Peter Lang.
- Daly, A. J., Liou, Y.-H., Del Fresno, Rehm, M., & Bjorklund, P., Jr. (2019). Educational leadership in the Twitterverse: Social media, social networks and the new social continuum. *Teachers College Record*, 121(14),1–20. <https://doi.org/10.1177/016146811912101>
- Danielewicz, J. (2001). *Teaching selves: Identity, pedagogy, and teacher education*. Albany, NY: State University of New York Press.
- Darby, A. (2008). Teachers' emotions in the reconstruction of professional self-understanding. *Teaching and Teacher Education*, 24(5), 1160–1172. <https://doi.org/10.1016/j.tate.2007.02.001>

- Davies, G., Otto, S. E. K., & Rüschoff, B. (2013). Historical perspectives on CALL. In M. Thomas, H. Reinders, & M. Warschauer (Eds.), *Contemporary computer-assisted language learning* (pp. 19–38). London: Bloomsbury Publishing.
- Davis, K. (2015). Teachers' perceptions of Twitter for professional development. *Disability and Rehabilitation*, 37(1), 1551–1558. <https://doi.org/10.3109/09638288.2015.1052576>
- Dawson, P. (2014). Our anonymous online research participants are not always anonymous: Is this a problem? *British Journal of Educational Technology*, 45(3), 428–437. <https://doi.org/10.1111/bjet.12144>
- Day, C., Kington, A., Stobart, G., & Sammons, P. (2006). The personal and professional selves of teachers: Stable and unstable identities. *British Educational Research Journal*, 32(4), 601–616. <https://doi.org/10.1080/01411920600775316s>
- Dede, C., Ketelhut, D. J., Whitehouse, P., Breit, L., & McCloskey, E. M. (2009). A research agenda for online teacher professional development. *Journal of Teacher Education*, 60(1), 8–19. <https://doi.org/10.1177/0022487108327554>
- Donaldson, R. P., & Haggstorm, M. A. (Eds.). (2006). *Changing language education through CALL*. London: Routledge.
- Dubé, L., Bourhis, A., & Jacob, R. (2005). The impact of structuring characteristics on the launching of virtual communities of practice. *Journal of Organizational Change*, 18(2), 145–166. <https://doi.org/10.1108/09534810510589570>
- Dubow, E. F., & Rubinlicht, M. (2011). Coping. In B. B. Brown & M. J. Prinstein (Eds.), *Encyclopedia of adolescence* (pp. 109–118). Amsterdam: Elsevier.
- Dudeney, G., Hockly, N., & Pegrum, M. (2013). *Digital literacies*. Harlow, UK: Pearson Education.
- Duncan-Howell, J. (2010). Teachers making connections: Online communities as a source of professional learning. *British Journal of Educational Technology*, 41(2), 324–340. <https://doi.org/10.1111/j.1467-8535.2009.00953.x>
- Duff, P. (2006). Beyond generalizability: Contextualization, complexity, and credibility in applied linguistics research. In M. Chalhoub-Deville, C. A. Chappelle, & P. A. Duff (Eds.), *Inferences and generalizability in applied linguistics: Multiple perspectives* (pp. 65–94). Amsterdam: John Benjamins.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. New York: Routledge.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.
- Dörnyei, Z., & Kubanyiova, M. (2014). *Motivating learners, motivating teachers: Building vision in the classroom*. Cambridge: Cambridge University Press.
- Dörnyei, Z., & Ryan, S. (2015). *The psychology of the language learning revisited*. New York: Routledge.
- Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). New York: Routledge.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (2nd ed.). New York: Routledge.

- Dörnyei, Z., & Ushioda, E. (2021). *Teaching and researching motivation* (3rd ed.). New York: Routledge.
- Egbert, J. (2006). Learning in context. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 167-181). Amsterdam: John Benjamins.
- Eccles, J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J., and Midgley, C. (1983). Expectancies, values and academic behaviors. In Spence, J. T. (Ed.), *Achievement and achievement motives* (pp. 75-76.), W. H. Freeman, San Francisco.
- Egbert, J., Paulus, T. M., & Nakamichi, Y. (2002). The impact of CALL instruction on classroom computer use: A foundation for rethinking technology in teacher education. *Language Learning & Technology*, 6(3), 108–126.  
<https://doi.org/10.125/25179>
- Eccles, J., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 61(101859),  
<https://doi.org/10.1016/j.cedpsych.2020.101859>
- Ellison, N. B. & Boyd, D. (2013). Sociality through social network sites. In W. H. Dutton (Ed.), *The Oxford handbook of internet studies* (pp. 151–172). Oxford: Oxford University Press.
- Elsheikh, A. (2016). Teacher education and the development of teacher identity. In J. Crandall & M. Christison (Eds.), *Teacher education and professional development in TESOL* (pp. 37–52). New York: Routledge.
- Eros, J. (2011). The career cycle and the second stage of teaching: Implications for policy and professional development. *Arts Education Policy Review*, 112(2), 65–70.  
<https://doi.org/10.1080/10632913.2011.546683>
- Farr, F., & Murray, L. (Eds.). (2016). *The Routledge handbook of language learning and technology*. London: Routledge.
- Farrell, T. (2001). Critical friendships: Colleagues helping each other develop. *ELT Journal*, 55(4), 368–374. <https://doi.org/10.1093/elt/55.4.368>
- Farrell, T. S. C. (2000). English teacher development: Top down, bottom-up or both? *Teaching and Learning*, 21(1), 27–35.
- Farrell, T. S. C. (2014). *Promoting teacher reflection in second language education: A framework for TESOL professionals*. New York: Routledge.
- Farrell, T. S. C. (2015). Second language teacher education: A reality check. In T.S. C. Farrell (Ed.), *International perspectives on English language teacher education* (pp. 1–15). Palgrave MacMillan.
- Farrell, T. S. C. (2021). *TESOL teacher education: A reflective approach*. Edinburgh: Edinburgh University Press.
- Farrell, T. S. C. (2022). *Insights into professional development in language teaching*. London: Castledown Publishers.
- Fink, S. (1986). *Crisis management: Planning for the inevitable*. New York, NY: American Management Association.
- First, J. M., Shin, H., Ranjit, Y. S., & Houston, J. B. (2020). COVID-19 stress and depression: Examining social media, traditional media, and interpersonal

- communication. *Journal of Loss and Trauma*, 26(2), 101–115.  
<https://doi.org/10.1080/15325024.2020.1835386>
- Felix, U. (2003). Teaching languages online: Deconstructing the myths. *Australasian Journal of Educational Technology*, 19(1), 118–138.  
<https://doi.org/10.14742/ajet.1705>
- Ford, T. G., Olsen, J., Khojasteh, J., Ware, J., & Urick, A. (2019). The effects of leader support for teacher psychological needs on teacher burnout, commitment, and intent to leave. *Journal of Educational Administration*, 57(6), 615–634.  
<https://doi.org/10.1108/JEA-09-2018-018>
- Fox, A., & Bird, T. (2017). The challenge to professionals of using social media: Teachers in England negotiating personal-professional identities. *Education and Information Technologies*, 22, 647–675. <https://doi.org/10.1007/s10639-015-9442-0>
- Garner, J. K., & Kaplan, A. (2018). A complex dynamic systems perspective on teacher learning and identity formation: An instrumental case. *Teachers and Training: Theory and Practice*, 25(1), 7–33. <https://doi.org/10.1080/13540602.2018.1533811>
- Gawronski, J. H. (2021) Teaching during the time of COVID: Learning from mentor teachers' experiences. *Journal of Digital Learning in Teacher Education*, 37(4), 217–233, <https://doi.org/10.1080/21532974.2021.1965507>
- Gil, R. M., Marcelin, J. R., Zuniga-Blanco, B., Marquez, C., Mathew, T., Piggott, D. A., (2020). COVID-19 pandemic: Disparate health impact on the Hispanic/Latinx population in the United States. *The Journal of Infectious Diseases*, 222(10), 1592–1595, <https://doi.org/10.1093/infdis/jiaa474>
- Given, L. (2008). *The SAGE encyclopedia of qualitative research methods*. Thousand Oaks: SAGE Publications, Inc.
- Goodyear, V. A., Parker, M., & Casey, A. (2019). Social media and teacher professional learning communities. *Physical Education and Sport Pedagogy*, 24(5), 421–433.  
<https://doi.org/10.1080/17408989.2019.1617263>
- Graham, M., Milanowski, A., & Miller, J. (2012). *Measuring and promoting inter-rater agreement of teacher and principal performance ratings*. Center for Educator Compensation Reform. <https://files.eric.ed.gov/fulltext/ED532068.pdf>
- Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your “house”. *Administrative Issues Journal Education Practice and Research*, 4(2), 12–26.  
<https://doi.org/10.5929/2014.4.2.9>
- Greenhow, C., Staudt Willet, K. B., & Galvin, S. (2021). Inquiring tweets want to know: #Edchat supports for #RemoteTeaching during COVID-19. *British Journal of Educational Technology*, 52, 1434–1454. <https://doi.org/10.1111/bjet.13097>
- Gregersen, T., Mercer, S., MacIntyre, P., Talbot, K., Banga, C. A. (2020). Understanding language teacher wellbeing: An ESM study of daily stressors and uplifts. *Language Teaching Research, Advance online publication*.  
<https://doi.org/10.1177/1362168820965897>
- Guppy, N., Verpoorten, D., Boud, D., Lin, L., Tai, J., & Bartolic, S. (2022). The post-COVID-19 future of digital learning in higher education: Views from educators,



- students, and other professionals in six countries. *British Journal of Educational Technology*. Advanced online publication. 1–16. <https://doi.org/10.1111/bjet.13212>
- Gwet, K. L. (2014). *Handbook of inter-rater reliability* (4<sup>th</sup> ed.). Gaithersburg, MD: Advanced Analytics, LLC.
- Haas, A., Abonneau, D., Borzillo, S., & Guillaume, L.-P. (2020). Afraid of engagement? Towards an understanding of engagement in virtual communities of practice. *Knowledge Management Research & Practice*, 19(2), 169–180. <https://doi.org/10.1080/14778238.2020.1745704>
- Hamblin, L., Barker, D., & Arghode, V. (2020). A phenomenological approach to explore faculty perceptions about invisible labor. *Community College Journal of Research and Practice*, 44(10–12), 804–818, <https://doi.org/10.1080/10668926.2020.1716874>
- Hampel, R., & Stickler, U. (2005). New skills for new classrooms: Training tutors to teach languages online. *Computer Assisted Language Learning*, 18(4), 311–326. <https://doi.org/10.1080/09588220500335455>
- Han, R., Yin, H., & Boylan, M. (2016). Teacher motivation: Definition, research development and implications for teachers. *Cogent Education*, 3(1), 1–18. <https://doi.org/10.1080/2331186X.2016.1217819>
- Hanson-Smith, E. (2006). Communities of practice for pre- and in-service teacher education. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 301–315). Amsterdam: John Benjamin Publishing.
- Hanson-Smith, E. (2016). Teacher education and technology. In F. Farr & L. Murray (Eds.), *The Routledge handbook of language learning and technology* (pp. 210–222). London: Routledge.
- Hara, N., Shachaf, P., & Storer, S. (2009). Online communities of practice typology revisited. *Journal of Information Science*, 35(6), 740–757. <https://doi.org/10.1177/0165551509342361>
- Harding, S., Morris, R., Gunnell, D., Ford, T., Hollingworth, W., Tilling, K., Evans, R., Bell, S., Grey, J., Brockman, R., Campbell, R., Araya, R., Murphy, & S., Kidger, J. (2019). Is teachers' mental health and wellbeing associated with students' mental health and wellbeing? *Journal of Affective Disorders*, 253(15), 460–466. <https://doi.org/10.1016/j.jad.2018.08.080>
- Hartung, C., Hendry, N. A., Albury, K., Johnston, S., & Welch, R. (2022). Teachers of TikTok: Glimpses and gestures in the performance of professional identity. *Media International Australia*. Advance online publication. <https://doi.org/10.1177/1329878X211068836>
- Hashim, A. K., & Carpenter J. P. (2019). A conceptual framework of teacher motivation for social media use. *Teachers College Records*, 121, 140305. <https://doi.org/10.1177/016146811912101405>
- Healey, D., Hanson-Smith, E., Hubbard, P., Ioannou-Georgiou, S., Kessler, G., & Ware, P. (2011). *TESOL technology standards*. Alexandria, VA: Teachers of English to Speakers of Other Languages, Inc.
- Heider, F. (1958). *The psychology of interpersonal relationships*. New York: Wiley.

- Henry, N., & Powell, A. (2016). Technology-facilitated sexual violence: A literature review of empirical research. *Trauma, Violence, & Abuse, 19*(2), 195–208. <https://doi.org/10.1177/1524838016650189>
- Herring, M. C., Koehler, M. J., Mishra, P., Rosenberg, J. M., & Teske, J. (2016). Introduction to the second edition of the TPACK handbook. In M. C. Herring, M. J. Koehler, & P. Mishra (Eds.), *Handbook of technological pedagogical content knowledge (TPACK) for educators* (2nd ed.) (pp. 1–8). New York: Routledge.
- Hertel, J., T., & Wessman-Enzinger, N. W. (2017). Examining Pinterest as a curriculum resource for negative integers: An initial investigation. *Education Sciences, 7*(2), 45. <https://doi.org/10.3390/educsci7020045>
- Highly, T., & Seo, K. K. (2012). Blurring the lines: Teacher insights on the pitfalls and possibilities of incorporating online social media into instructional design. In K. Seo (Ed.), *Using social media effectively in the classroom: Blogs, Wikis, Twitter, and more* (pp. 19–33). Taylor & Francis Group.
- Hiver, P., & Dörnyei, Z. (2017). Language teacher immunity: A double-edged sword. *Applied Linguistics, 38*(3), 405–423. <https://doi.org/10.1093/applin/amv034>
- Holmes, E. (2005). *Teacher well-being: Looking after yourself and your career in the classroom*. London: Taylor & Francis.
- Hong, J., Day, C., & Greene, B. (2018). The construction of early career teachers' identities: Coping or managing? *Teacher Development, 22*(2), 249–266, <https://doi.org/10.1080/13664530.2017.1403367>
- Horwitz, E. K. (1996). Even teachers get the blues: Recognizing and alleviating language teachers' feelings of foreign language anxiety. *Foreign Language Annals, 29*(3), 365–372. <https://doi.org/10.1111/j.1944-9720.1996.tb01248.x>
- Hos, R. (2016). Education in emergencies: Case of a community school for Syrian refugees. *European Journal of Educational Research, 5*(2), 53–60. <https://doi.org/10.12973/eu-jer.5.2.53>
- Howard, S. K. (2013). Risk-aversion: Understanding teachers' resistance to technology integration. *Technology, Pedagogy and Education, 22*(3), 357–372. <https://doi.org/10.1080/1475939X.2013.802995>
- Howe, E. R. (2005). Japan's teacher acculturation: Critical analysis through comparative ethnographic narrative. *Journal of Education for Teaching, 31*(2), 121–131. <https://doi.org/10.1080/02607470500127251>
- Hsieh, P.-H. (2011). Achievement motivation. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behaviour and development* (pp. 20–21). New York: Springer.
- Huack, M., & Kurek, M. (2017). Digital literacies in teacher preparation. In S. L. Thorne & S. May (Eds.), *Language, education and technology* (pp. 275–287). Berlin: Springer.
- Hubbard, P. (2018). Technology and professional development. In J. I. Lontas (Ed.), *The TESOL encyclopedia of English language teaching* (pp. 4049–4055). NJ, USA: Wiley-Blackwell.
- Hubbard, P., & Levy, M. (Eds.). (2006a). *Teacher education in CALL*. Amsterdam: John Benjamin Publishing.

- Hubbard, P., & Levy, M. (2006b). The scope of CALL education. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 3–20). Amsterdam: John Benjamin Publishing.
- Hur, J. W., & Brush, T. A. (2009). Teacher participation in online communities: Why do teachers want to participate in self-generated online communities of K-12 teachers? *Journal of Research on Technology in Education*, 41(3), 279–303. <https://doi.org/10.1080/15391523.2009.10782532>
- Impedova, M. A. (2021). *Identity and teacher professional development: A reflective, collaborative and agentic learning journey*. Cham, Switzerland: Springer.
- Iriberry, A., & Leroy, G. (2009). A life-cycle perspective on online community success. *ACM Computer Survey*, 41(2), 1-29. <http://doi.org/10.1145/1459352.1459356>
- Ishikawa, A., & Tsujimoto, A. (2009). *Risk and crisis management: 101 cases*. Singapore: Hackensack.
- Israel, M., & Hay, I. (2006). *Research ethics for social scientists*. SAGE Publications Ltd. <https://doi.org/10.4135/9781849209779>
- Jackson, J. (2018). Intervening in the intercultural learning of L2 study abroad students: From research to practice. *Language Teaching*, 51(3), 365–382. <https://doi.org/10.1017/S0261444816000392>
- Jang, I. C., & Choi, L. J. (2020). Staying connected during COVID-19: The social and communicative role of an ethnic online community of Chinese international students in South Korea. *Multilingua*, 39(5), 541-552. <https://doi.org/10.1515/multi-2020-0097>
- Jin, J., Mercer, S., Babic, S., & Mairitsch, A. (2016). Understanding the ecology of foreign language teacher wellbeing. In D. Gabryś-Barker & D. Gałajda (Eds.), *Positive psychology perspectives on foreign language learning and teaching* (pp. 19- 38). Springer.
- Johnson, L. J., Pugach, M. C., & Cook, R. (1993). Peer collaboration as a means to facilitate collegial support to reduce teacher isolation and facilitate classroom problem-solving in rural areas. *Rural Special Education Quarterly*, 12(2). <https://doi.org/10.1177/875687059301200205>
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, 20(2), 178–187. <https://doi.org/10.1108/02683940510579803>
- Jong, C. (2016). Linking reform-oriented experiences to teacher identity: The case of an elementary mathematics teacher. *The Journal of Educational Research*, 109(3), 296–310. <http://doi.org/10.1080/00220671.2014.947398>
- Kashy, D., Albertelli, G., Kashy, E., & Thoennesen, M. (2001). Teaching with ALN technology: Benefits and costs. *Journal of Engineering Education*, 90(4), 499–505. <https://doi.org/10.1002/j.2168-9830.2001.tb00631.x.com/doi/abs/10.1002/j.2168-9830.2001.tb00631.x>
- Kaufold, M.-A., Gizikis, A., Reuter, C., Habdank, M., & Grinko, M. (2019). Avoiding chaotic use of social media before, during, and after emergencies: Design and evaluation of citizens' guidelines. *Journal of Contingencies and Crisis Management*, 27(3), 198–213. <https://doi.org/10.1111/1468-5973.12249>

- Kearney, M., Schuck, S., Aubusson, P., & Burke, P. F. (2017). Teachers' technology adoption and practices: Lessons learned from the IWB phenomenon. *An International Journal of Teachers' Professional Development*, 22(4), 481–496. <https://doi.org/10.1080/13664530.2017.1363083>
- Kessler, G. (2006). Assessing CALL teacher training: What are we doing and what could we do better. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 23–42). Amsterdam: John Benjamin Publishing.
- Kessler, G. (2006). Assessing CALL teacher training: What are we doing and what could we do better? In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 23–42). Amsterdam: John Benjamins.
- Kessler, G. (2007). Formal and informal CALL preparation and teacher attitude toward technology. *Computer Assisted Language Learning*, 20(2), 173–188. <https://doi.org/10.1080/09588220701331394>
- Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals*, 51, 205–218. <https://doi.org/10.1111/flan.12318>
- Kessler, G. (2021). Current realities and future challenges for CALL teacher preparation. *CALICO Journal*, 38(1), i–xx. <https://doi.org/10.1558/cj.21231>
- Kessler, G., & Plakans, L. (2008). Does teachers' confidence with CALL equal innovative and integrated use? *Computer Assisted Language Learning*, 21(3), 269–282. <https://doi.org/10.1080/09588220802090303>
- Kim, L. E., Oxley, L., Asbury, K. (2021). “My brain feels like a browser with 100 tabs open”: A longitudinal study of teachers' mental health and well-being during the COVID-19 pandemic. *British Journal of Educational Psychology*, 92(1), 299–318. <https://doi.org/10.1111/bjep.12450>
- Kimmons, R., & Veletsianos, G. (2014). The fragmented educator 2.0: Social networking sites, acceptable identity fragments, and the identity constellation. *Computers & Education*, 72, 292–301. <http://doi.org/10.1016/j.compedu.2013.12.001>
- Kimmons, R., & Veletsianos, G. (2015). Teacher professionalization in the age of social networking sites. *Learning, Media and Technology*, 40(4), 480–501, <https://doi.org/10.1080/17439884.2014.933846>
- Kelly, N., & Antonio, A. (2016). Teacher peer support in social network sites. *Teaching and Teacher Education*, 56, 138–149. <http://doi.org/10.1016/j.tate.2016.02.007>
- Knight, S. W. P. (2020). Establishing professional online communities for world language educators. *Foreign Language Annals*, 53, 298–305. <https://doi.org/10.1111/flan.12458>
- Krutka, D. G., Nowell, S., & Whitlock, A. M. (2017). Towards a social media pedagogy: Successes and shortcomings in educative uses of Twitter with teacher candidates. *Journal of Technology and Teacher Education*, 25(2), 215–240.
- Kusuma, I. P. I. (2022). “Why this and not that social media?” Reasons for using technology during online practice teaching. *The JALT CALL Journal*, 18(2), 264–286. <https://doi.org/10.29140/jaltcall.v18n2.593>
- Kyngäs, H. (2020). Inductive content analysis. In H. Kyngäs, K. Mikkonen, M. Kääriäinen (Eds.), *The application of content analysis in nursing science research* (pp.13-21). Springer. [https://doi.org/10.1007/978-3-030-30199-6\\_2](https://doi.org/10.1007/978-3-030-30199-6_2)

- Lachman, R., Lachman, J. L., Butterfield, E. C. (1979). *Cognitive psychology and information processing: An introduction*. New York: Psychology Press.
- Lampel, J., & Bhalla, A. (2007). The role of status seeking in online communities: Giving the gift of experience. *Journal of Computer-Mediated Communication*, 12, 434–455. <https://doi.org/10.1111/j.1083-6101.2007.00332.x>
- Lantz-Andersson A., Lundin, M., & Selwyn, N. (2018). Twenty years of online teacher communities: A systematic review of formally-organized and informally-developed professional learning groups. *Teaching and Teacher Education*, 75, 302–315. <https://doi.org/10.1016/j.tate.2018.07.008>
- Lasagabaster, D., & Sierra, J. M. (2011). Classroom observation: Desirable conditions established by teachers. *European Journal of Teacher Education*, 34(1), 449–463. <https://doi.org/10.1080/02619768.2011.587113>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Lawrence, G., Ahmed, F., Cole, C., & Johnston, K. P. (2020). Not more technology but more effective technology: Examining the state of technology integration in EAP programmes. *RELC Journal*, 51(1), 101–116. <https://doi.org/10.1177/0033688220907199>
- Lazar, J., & Preece, J. (2002). Social consideration in online communities: Usability, sociability, and success factors. In H. van Oostendorp (Ed.), *Cognition in the digital world* (pp. 112–132). Lawrence Erlbaum Associates Inc. Publishers. Mahwah: NJ.
- Le, V.T., Nguyen, N.H., Tran, T.L.N., Nguyen, T.L., Nguyen, A.T., Nguyen, M.T. (2022). The interaction patterns of pandemic-initiated online teaching: How teachers adapted. *System*. Advance online publication. <https://doi.org/10.1016/j.system.2022.102755>.
- LeLoup, J. W., & Ponterio, R. (2017). *What is FLTeach?* FLTeach. <https://web.cortland.edu/flteach/index.html>
- Levy, M., & Hubbard, P. (2005). Why call CALL “CALL”? *Computer Assisted Language Learning*, 18(3), 143–149. <https://doi.org/10.1080/09588220500208884>
- Lewis-Beck, M. S., Bryman, A., & Liao, T. F. (Eds.). (2004). *The SAGE encyclopedia of social science research methods* (3rd ed.). Thousand Oaks, California: Sage Publications Inc.
- Lin, F., & Huang, H. (2012). Why people share knowledge in virtual communities?: The use of Yahoo! Kimo Knowledge + as an example. *Internet Research*, 23(2), 1066–2243. <https://doi.org/10.1108/10662241311313295>
- Liontas, J. I. (2020). Understanding language teacher identity: Digital discursive spaces in English teacher education and development. In B. Yazan & K. Lindahl (Eds.), *Language teacher identity in TESOL: Teacher education and practice as identity work* (pp. 65–82). New York: Routledge.
- Locke, E. A. (1996). Motivation through conscious goal setting. *Applied & Preventive Psychology*, 5, 117–124. [https://doi.org/10.1016/S0962-1849\(96\)80005-9](https://doi.org/10.1016/S0962-1849(96)80005-9)

- Locke, E. A., & Latham, G. P. (2019). The development of goal setting theory: A half century retrospective. *Motivation Science*, 5(2), 93–105. <https://doi.org/10.1037/mot0000127>
- Lombardo, J. (2017). *Social networking: Staying safe in the online world*. New York: Lucent Press.
- Lord, G., & Lomika, L. G. (2014). Twitter as a tool to promote community among language teachers. *Journal of Technology and Teacher Education*, 22(2), 187–212.
- Love, J.S., Blumenberg, A., & Horowitz, Z. (2020). The parallel pandemic: Medical misinformation and COVID-19. *Journal of General Internal Medicine*, 35, 2435–2436. <https://doi.org/10.1007/s11606-020-05897-w>
- Love, S. M., & Marshall, D. T. (2022). Teacher experiences during COVID-19. In D. T. Marshall (Ed.), *COVID-19 and the classroom: How teachers navigated the great disruption* (pp. 21-65). Lexington Books.
- Maciá, M., & García, I. (2016). Informal online communities and networks as a source of teacher professional development: A review. *Teaching and Teacher Education*, 55, 291–307. <http://doi.org/10.1016/j.tate.2016.01.021>
- MacIntyre, P. D., Gregersen, T., and Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, 26–38. <https://doi.org/10.1016/j.system.2020.102352>
- MacIntyre, P. D., Ross, J., Talbot, K., Mercer, S., Gregersen, T., & Banga, C. A. (2019). Stressors, personality and wellbeing among language teachers. *Systems*, 82, 26–38. <https://doi.org/10.1016/j.system.2019.02.013>
- Maslach, C., & Jackson, S. E. (1986). *Maslach burnout inventory manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.
- McIntyre, S. E., McIntyre, T. M., & Francis, D. J. (2017). Implications of an occupational health perspective for educator stress research, practice, and policy. In T. M. McIntyre, S. E. McIntyre, & D. J. Francis (Eds.), *Educator stress: An occupational health perspective* (pp. 485–505). Springer International Publishing AG.
- Mackey, A., & Gass, S. M. (2016). *Second language research: Methodology and design* (2nd ed.). New York: Routledge.
- Maher, D., & Prescott, A. (2017). Professional development for rural and remote teachers using video conferencing. *Asia Pacific Journal of Teacher Education*, 45(5), 520–538. <https://doi.org/10.1080/1359866X.2017.1296930>
- Malik, A., Mahmood, K., & Islam, T. (2021). Understanding the Facebook users' behavior towards COVID-19 information sharing by integrating the theory of planned behavior and gratifications. *Information Development*. Advance online publication. <https://doi.org/10.1177/02666669211049383>
- Makri, S., & Turner, S. (2019). “I can't express my thanks enough”: The “gratitude cycle” in online communities. *Journal of the Association for Information Science and Technology*, 71(5), 503–515. <https://doi.org/10.1002/asi.24257>
- McIntyre, D. (2005). Bridging the gap between research and practice. *Cambridge Journal of Education*, 35(3), 357–382. <https://doi.org/10.1080/03057640500319065>

- McKee, H. A., & Porter, J. E. (2009). *The ethics of Internet research: A historical, case-based process*. New York, NY: Peter Lang.
- McNeil, L. (2013). Exploring the relationship between situated activity and CALL learning in teacher education. *ReCALL*, 25(2), 215–232.  
<https://doi.org/10.1017/S0958344013000086>
- Mercer, S. (2021). An agenda for well-being in ELT: An ecological perspective. *ELT Journal*, 75(1), 14–21. <https://doi.org/10.1093/elt/ccaa062>
- Mercer, S., & Gregersen, T. (2020). *Teacher wellbeing*. Oxford: Oxford University Press.
- Mercer, S., & Kostoulas, A. (2018). Introduction to language teacher psychology. In S. Mercer, & A. Kostoulas (Eds.), *Language teacher psychology* (pp. 1–17). Bristol: Multilingual Matters.
- Mercer, S., Oberdorfer, P., & Saleem, M. (2016). Helping language teachers to thrive: Using positive psychology to promote teachers' professional well-being. In D. Gabryś-Barker & D. Gałajda (Eds.), *Positive psychology perspectives on foreign language learning and teaching* (pp. 213–229). Springer
- Mercieca, B. (2017). What is a community of practice? In J. McDonald & A. Cater-Steel (Eds.), *Communities of practice: Facilitating social learning in higher education* (pp. 3–24). Singapore: Springer.
- Merriam, S. B., & Bierema, L. L. (2013). *Adult learning: Linking theory and practice*. San Francisco: Jossey-Bass Publishers.
- Meta (2018, October 30). *Facebook reports third quarter 2018 results*.  
<https://investor.fb.com/investor-news/press-release-details/2019/Facebook-Reports-Third-Quarter-2019-Results/default.aspx>
- Meta (2019, January 30). *Facebook reports fourth quarter and full year 2018 results*.  
<https://investor.fb.com/investor-news/press-release-details/2019/Facebook-Reports-Fourth-Quarter-and-Full-Year-2018-Results/default.aspx>
- Meta (2019, April 24). *Facebook reports first quarter 2019 results*.  
<https://investor.fb.com/investor-news/press-release-details/2019/Facebook-Reports-First-Quarter-2019-Results/default.aspx>
- Meta (2019, July 24). *Facebook reports second quarter 2019 results*.  
<https://investor.fb.com/investor-news/press-release-details/2019/Facebook-Reports-Second-Quarter-2019-Results/default.aspx>
- Meta (2019, October 30). *Facebook reports third quarter 2019 results*.  
<https://investor.fb.com/investor-news/press-release-details/2019/Facebook-Reports-Third-Quarter-2019-Results/default.aspx>
- Meta (2020, January 29). *Facebook reports fourth quarter and full year 2019 results*.  
<https://investor.fb.com/investor-news/press-release-details/2020/Facebook-Reports-Fourth-Quarter-and-Full-Year-2019-Results/default.aspx>
- Meta (2020, April 29). *Facebook reports first quarter 2020 results*.  
<https://investor.fb.com/investor-news/press-release-details/2020/Facebook-Reports-First-Quarter-2020-Results/default.aspx>
- Meta (2020, July 30). *Facebook reports second quarter 2020 results*.  
<https://investor.fb.com/investor-news/press-release-details/2020/Facebook-Reports-Second-Quarter-2020-Results/default.aspx>

- Meta (2020, October 29). *Facebook reports third quarter 2020 results*.  
<https://investor.fb.com/investor-news/press-release-details/2020/Facebook-Reports-Third-Quarter-2020-Results/default.aspx>
- Meta (2021, January 27). *Facebook reports fourth quarter and full year 2020 results*.  
<https://investor.fb.com/investor-news/press-release-details/2021/Facebook-to-Announce-Fourth-Quarter-and-Full-Year-2020-Results/default.aspx>
- Meta (2021, April 28). *Facebook reports first quarter 2021 results*.  
<https://investor.fb.com/investor-news/press-release-details/2021/Facebook-Reports-First-Quarter-2021-Results/default.aspx>
- Meta (2021, July 28). *Facebook reports second quarter 2021 results*.  
<https://investor.fb.com/investor-news/press-release-details/2021/Facebook-Reports-Second-Quarter-2021-Results/default.aspx>
- Meta (2021, October 25). *Facebook reports third quarter 2021 results*.  
<https://investor.fb.com/investor-news/press-release-details/2021/Facebook-Reports-Third-Quarter-2021-Results/default.aspx>
- Meta (2022a, February 2). *Facebook reports fourth quarter and full year 2021 results*.  
<https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-Fourth-Quarter-and-Full-Year-2021-Results/default.aspx>
- Meta (2022b, April 27). *Facebook reports first quarter 2022 results*.  
<https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-First-Quarter-2022-Results/default.aspx>
- Meta (2022c, July 26). *Privacy policy*. <https://www.facebook.com/about/privacy/update>.
- Meta (2022d, July 27). *Facebook reports second quarter 2022 results*.  
<https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-Second-Quarter-2022-Results/default.aspx>
- Meta (n.d.-a). *About us*. [https://about.meta.com/company-info/?utm\\_source=about.facebook.com&utm\\_medium=redirect](https://about.meta.com/company-info/?utm_source=about.facebook.com&utm_medium=redirect)
- Meta (n.d.-b). *Names allowed on Facebook*.  
<https://www.facebook.com/help/229715077154790/>
- Meta (n.d.-c). *How do I remove an admin or moderator role from someone in my Facebook group?* Facebook Help Centre.  
<https://www.facebook.com/help/1718782575010160>
- Mills, A. J., Durepos, G., Wiebe, E. (2010). *Encyclopedia of case study research*. Thousand Oaks, CA: Sage Publications, Inc.
- Ministry of Education, Culture, Sports, Science, and Technology (MEXT). (2018, August). *ICT no katsuyo no suishin* [Promoting the use of ICT]. Retrieved March 27, 2022, from  
[https://www.mext.go.jp/b\\_menu/hakusho/html/hpab201901/detail/1422160.htm](https://www.mext.go.jp/b_menu/hakusho/html/hpab201901/detail/1422160.htm)
- Ministry of Education, Culture, Sports, Science, and Technology (MEXT). (2018, December). *Gakko bousai manuaru (jisin tsunami saigai) sakusei no tebiki* [How to create a manual for education disaster prevention (earthquake and tsunami disaster)]. Retrieved September 20, 2022, from  
[https://www.mext.go.jp/a\\_menu/kenko/anzen/\\_icsFiles/afieldfile/2018/12/04/1323513\\_01.pdf](https://www.mext.go.jp/a_menu/kenko/anzen/_icsFiles/afieldfile/2018/12/04/1323513_01.pdf)



- Ministry of Foreign Affairs. (2020, April). *Flattening the curve on COVID-19: How Korea responded to a pandemic using ICT*.  
[https://www.mofa.go.kr/eng/brd/m\\_22747/view.do?seq=4&srchFr=&srchTo=&srchWord=&srchTp=&multi\\_itm\\_seq=0&itm\\_seq\\_1=0&itm\\_seq\\_2=0&company\\_cd=&company\\_nm=](https://www.mofa.go.kr/eng/brd/m_22747/view.do?seq=4&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=)
- Ministry of Health, Labour and Welfare Prefectural Labour Bureaus Labour Standards Inspection Offices (MHLW). (2020, April 16). *Basic policies for novel coronavirus disease control by the government of Japan (summary)*.  
<https://www.mhlw.go.jp/content/10900000/000624195.pdf>
- Ministry of Health, Labour and Welfare Prefectural Labour Bureaus Labour Standards Inspection Offices. (MHLW) (n.d.-a). *Working conditions handbook*.  
<https://www.mhlw.go.jp/new-info/kobetu/roudou/gyousei/kantoku/dl/040330-3.pdf>
- Ministry of Health, Labour and Welfare. (MHLW)(n.d.-b). *Employment guidelines*.  
<https://www.mhlw.go.jp/file/06-Seisakujouhou-11200000-Roudoukijunkkyoku/0000066935.pdf>
- Ministry of Health, Labour and Welfare. (MHLW)(n.d.-c). *Coronavirus (COVID-19)*.  
[https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000164708\\_00079.html](https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000164708_00079.html)
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054.  
<https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open, 1*, 100012.  
<https://doi.org/10.1016/j.ijedro.2020.100012>
- Meskill, C. (Ed.). (2013). *Online teaching and learning: Sociocultural perspectives*. Bloomsbury.
- Moorhouse, B. L., & Kohnke, L. (2021). Responses of the English-language-teaching community to the COVID-19 pandemic. *RELC Journal, 52*(3), 359–378.  
<https://doi.org/10.1177/00336882211053052>
- Morris, B. L., Short, M., Bridges, D., Crichton, M., Velandar, F., Rush, E., Iffland, B., & Duncombe, R. (2021). Responding to student mental health challenges during and post-COVID-19. *Social Work Education*. Advance online publication.  
<https://doi.org/10.1080/02615479.2021.1962271>
- Moser, K. M., Wei, T., & Brenner, D. (2021). Remote teaching during COVID-19: Implications from a national survey of language educators. *System, 97*, 102431.  
<https://doi.org/10.1016/j.system.2020.102431>
- Motteram, G., Slauti, D., Onat-Stemla, Z. (2014). Second language teacher education for CALL: An alignment of practice and theory. In M. Thomas, H. Reinders, & M. Warschauer (Eds.), *Contemporary computer-assisted language learning* (pp. 56–71). London: Bloomsbury Publishing.
- Motteram, G., Dawson, S., & Al-Masri, N. (2020). WhatsApp supported language teacher development: A case study in the Zataari refugee camp. *Education and Information Technologies, 25*, 5731–5751. <https://doi.org/10.1007/s10639-020-10233-0>

- Nagamoto, D. H. (2016). *Identity, gender and teaching English in Japan*. Bristol, UK: Multilingual Matters Ltd.
- Najmul Islam, A. K. M., Latoo, S., Talukder, S., & Sutinen, E. (2020). Misinformation sharing and social media fatigue during COVID-19: An affordance and cognitive load perspective. *Technological Forecasting and Social Change*, 159, 120201. <https://doi.org/10.1016/j.techfore.2020.120201>
- Nassaji, H. (2012). The relationship between SLA research and language pedagogy: Teachers' perspectives. *Language Teaching Research*, 16(3), 337–365. <https://doi.org/10.1177/1362168812436903>
- Nava, A., & Pedrazzini, L. (2018). *Second language acquisition in action: Principles from practice*. Bloomsbury Publishing.
- Neal, A., Ballard, T., & Vancouver, J. B. (2017). Dynamic self-regulation and multiple-goal pursuit. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 401–423. <https://doi.org/10.1146/annurev-orgpsych-032516-113156>
- Neuendorf, K. A. (2008). Reliability for content analysis. In A. Jordon, D. Kunkel, J. Manganello, & M. Fishbein (Eds.), *Media messages and public health: A decisions approach to content analysis* (pp. 67–87). Taylor & Francis Group.
- Nelimarkka, M., Leinonen, T., Durall, E., & Dean, P. (2021). Facebook is not a silver bullet for teachers' professional development: Anatomy of an eight-year-old social media community. *Computers & Education*, 173, 1–13. <https://doi.org/10.1016/j.compedu.2021.104269>
- Neuendorf, K. A. (2017). *The content analysis guidebook* (2nd ed.). Thousand Oaks: SAGE Publications, Inc.
- Nunan, D. (1992). *Research methods in language learning*. Cambridge: Cambridge University Press.
- OECD (2021). *Education at a glance 2021: OECD indicators*. Paris: OECD Publishing. <https://doi.org/10.1787/b35a14e5-en>.
- Ogyz, E. S., & Kajberg, L. (20). Collaboration through communities of practice in the digital age. In S. Kurbanoglu, U. Al., P. L., Erdogan, Y. Tonta, & N. Ucak. (Eds.), *Technological convergence and social networks in information management* (pp. 18–44). Berlin: Springer.
- Olliffe, J. L., Kelly, M. T., Gonzalez Montaner, G., & Yu Ko, W.F. (2021). Zoom interviews: Benefits and concessions. *International Journal of Qualitative Methods*, 20, 1–8. <https://doi.org/10.1177/16094069211053522>
- Patahuddin, S. M., & Logan, T. (2018). Facebook as a mechanism for informal teacher professional learning in Indonesia. *Teacher Development*, 23(1), 101–120. <https://doi.org/10.1080/13664530.2018.1524787>
- Piller, I., Zhang, J., & Li, J. (2020). Linguistic diversity in a time of crisis: Language challenges of the COVID-19 pandemic. *Multilingua*, 39(5), 503–515. <https://doi.org/10.1515/multi-2020-0136>
- O'Toole, V. M., & Friesen, M. D. (2017). Teachers as first responders in tragedy: The role of emotion in teacher adjustment eighteen months post-earthquake. *Teaching and Teacher Education*, 59, 57–67. <http://doi.org/10.1016/j.tate.2016.05.012>

- Owens, R. L. (2010). Informed consent. In N. J. Salkind (Ed.), *Encyclopedia of research design* (pp. 603–607). Thousand Oaks: SAGE Publications Ltd.
- Park, C. N., & Son, J.-B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teacher perceptions and perspectives. *International Journal of Pedagogies and Learning*, 5(2), 80–101. <https://doi.org/10.5172/ijpl.5.2.80>
- Park, M., & Son, J. B. (2020). Pre-service EFL teachers' readiness in computer-assisted language learning and teaching. *Asia Pacific Journal of Education*, 42(2) 1–15. <https://doi.org/10.1080/02188791.2020.1815649>
- Peña-Ayala, A. (Ed.) (2020). *Educational networking: A novel discipline for improved learning based on social networks*. Cham: Springer.
- Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development*, 15(1), 1–12. <https://doi.org/10.1159/000271225>
- Piechurska-Kuciel, E. (2011). Foreign language teacher burnout: A research proposal. In M. Pawlak (Ed.), *Extending the boundaries of research on second language learning and teaching* (pp. 211–223). Heidelberg: Springer.
- Pelgrum, W. J. (2001). Obstacles to the integration of ICT in education: Results from a worldwide educational assessment. *Computers & Education*, 37(2), 163–178. [https://doi.org/10.1016/S0360-1315\(01\)00045-8](https://doi.org/10.1016/S0360-1315(01)00045-8)
- Popover, M., & Fullwood (2018). The psychology of online lurking. In A. Attrill-Smith, C. Fullwood, M. Keep, & D. J. Kuss (Eds.). *The Oxford handbook of cyberpsychology* (pp. 287–305). Oxford: Oxford University Press.
- Poushter, J., Bishop, C., & Chwe, H. (2018, June 19). *Social media use continues to rise in developing countries but plateaus across developed ones*. Pew Research Center. <https://www.pewresearch.org/global/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/>
- Preece, J., & Maloney-Krichmar, D. (2006). Online communities: Design, theory, and practice. *Journal of Computer-Mediated Communication*, 10(4), <https://doi.org/10.1111/j.1083-6101.2005.tb00264.x>
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6. <https://doi.org/10.1108/10748120110424816>
- Pressley, T., & Ha, C. (2021). Teacher exhaustion during COVID-19: Exploring the role of administrators, self-efficacy, and anxiety. *The Teacher Educator*, 57(1), 61–78. <https://doi.org/10.1080/08878730.2021.1995094>
- Pruchniewka, U. (2019). “A group that’s just women for women”: Feminist affordances of private Facebook groups for professionals. *New Media & Society*, 21(6), 1362–1379. <https://doi.org/10.1177/1461444818822490>
- Radner, K., & Robson, E. (2011). Experts and novices. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 225–227). Oxford: Oxford University Press.
- Redmond, P., Albion, P. R., & Maroulis, J. (2005, March). Intentions v reality: Pre-service teachers' ICT integration during professional experience. *16th International Conference of the Society for Information Technology & Teacher Education (SITE 2005)*, 1–5 March (pp.1566–1571), Phoenix, USA.

- Reinders, H. (2009). Technology and second language teacher education. In A. Burn & J. C. Richards (Eds.), *The Cambridge guide to second language teacher education* (pp. 230–238). Cambridge: Cambridge University Press.
- Reinders, H., & Hubbard, P. (2012). CALL and learner autonomy: Affordances and constraints. In M. Thomas, H. Reinders, & M. Warschauer (Eds.), *Contemporary computer-assisted language learning* (pp. 359–375). London & New York: Continuum Books.
- Reio, Jr., T. G. (2012). Socialization-related learning. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 3126–3128). [https://doi.org/10.1007/978-1-4419-1428-6\\_333](https://doi.org/10.1007/978-1-4419-1428-6_333)
- Richards, J. (2012). Teacher stress and coping strategies: A national snapshot. *The Educational Forum*, 76(3), 299–316. <https://doi.org/10.1080/00131725.2012.682837>
- Richards, J. C., & Farrell, T. S. C. (2005). *Professional development for language teachers: Strategies for teacher learning*. Cambridge: Cambridge University Press.
- Richards, K. A. R., Hemphill, M. A., & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching*, 24(7), 768–787, <https://doi.org/10.1080/13540602.2018.1476337>
- Riding, P. (2001). Online teacher communities and continuing professional development. *Teacher Development*, 5(3), 283–296, <https://doi.org/10.1080/13664530100200144>
- Robson, J. (2017). Participant anonymity and participant observations: Situating the researcher within digital ethnography. In M. Zimmer & K. Kinder-Kurlanda (Eds.), *Internet research ethics for the social age: New challenges, cases, and contexts* (pp.195–202). New York: Peter Lang.
- Robb, T. N. (2006). Helping teachers to help themselves. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 335–347). Amsterdam: John Benjamins.
- Rosell-Aguilar, F. (2018). Twitter: A professional development and community of practice tool for teachers. *Journal of Interactive Media in Education*, 1(6), 1–12. <http://doi.org/10.5334/jime.452>
- Rothwell, W., & Whiteford, A. (2021). Corporate employee training and development strategies. In M. London (Ed.), *The Oxford handbook of lifelong learning* (2nd ed., pp. 679–695). Oxford: Oxford University Press.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1–28. <https://doi.org/10.1037/h0092976>
- Rutherford, C. (2010). Facebook as a source of informal teacher professional development. *in education*, 16(1), 60–74. <https://doi.org/10.37119/ojs2010.v16i1.76>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61(10186), 1–11. <https://doi.org/10.1016/j.cedpsych.2020.101860>

- Ryan, R. M., Ryan, W. S., Di Domenico, S. I., & Deci, E. L. (2019). The nature and the conditions of human autonomy and flourishing: Self-determination theory and basic psychological needs. In R. M. Ryan (Ed.), *The Oxford handbook of human motivation* (2nd ed.) (pp. 89–110). Oxford: Oxford University Press.
- Saarijärvi, M., & Bratt, E-L. (2021). When face-to-face interviews are not possible: Tips and tricks for video, telephone, online chat, and email interviews in qualitative research. *European Journal of Cardiovascular Nursing*, 20(4), 392–396. <https://doi.org/10.1093/eurjcn/zvab038>
- Salam, R. (2022). In a world where you can be anyone: An investigation into the gendered social practices of Pakistani Facebook users. *Gender Issues*, 39, 253–274. <https://doi.org/10.1007/s12147-021-09289-0>
- Salerno-Ferraro, A. C., Erentzen, C., & Schuller, R. A. (2022). Young women's experiences with technology-facilitated sexual violence from male strangers. *Journal of Interpersonal Violence*, 37(19–20), NP17860-NP17885. <https://doi.org/10.1177/08862605211030018>
- Sato, M., & Loewen, S. (2019). Do teachers care about research? The research-pedagogy dialogue. *ELT Journal*, 73(1), 1–10. <https://doi.org/10.1093/elt/ccy048>
- Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to burnout: Case studies in teacher isolation and alienation. *Preventing School Failure*, 50, 35–40. <https://doi.org/10.3200/PSFL.50.1.35-40>
- Schoberth, T., Heinzl, A., & Preece, J. (2006). Exploring communication activities in online communities: A longitudinal analysis in the financial services industry. *Journal of Organizational Computing and Electronic Commerce*, 16(3–4), 247–265. <https://doi.org/10.1080/10919392.2006.9681202>
- Schreier, M. (2013). Qualitative content analysis. In U. Flick (Ed.) *The SAGE handbook of qualitative data analysis* (pp. 170–183). London: SAGE Publications Ltd.
- Schroeder, S., Curcio, R., & Lundgren, L. (2019). Expanding the learning network: How teachers use Pinterest. *Journal of Research on Technology in Education*, 51(2), 166–186. <https://doi.org/10.1080/15391523.2019.1573354>
- Schrock, K. (2022). *Professional development offerings*. Kathy Schrock. <https://www.kathyschrock.net/offerings.html>
- Segers, M., Endedijk, M., & Gijbels, D. (2022). From classic perspectives on learning to current views on learning. In F. Dochy, D. Gijbels, M. Segers, & P. V. D. Bossche (Eds.), *Theories of workplace learning in changing times* (2nd ed.) (p. 3–14). Oxon: Routledge.
- Sessions, L. F. (2010). How offline gatherings affect online communities: When virtual community members 'meetup'. *Information, Communication & Society*, 13(3), 375–395. <https://doi.org/10.1080/13691180903468954>
- Sharp, E. N., & Carter, H. (2020). Examination of how social media can inform the management of volunteers during a flood disaster. *Journal of Flood Risk Management*, 13(4), 1–10. <https://doi.org/10.1111/jfr3.12665>
- Sheal, P. (1989). Classroom observation: Training the observers. *ELT Journal*, 43(2), 92–104. <https://doi.org/10.1093/elt/43.2.92>

- Sheldon, P., Antony, M. G., & Ware, L. J. (2021). Baby boomers' use of Facebook and Instagram: Uses and gratifications theory and contextual age indicators. *Heliyon*, 7(4), e06670. <https://doi.org/10.1016/j.heliyon.2021.e06670>
- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14.
- Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
- Skinner, B. F. (1957). *Verbal behaviour*. New York: Appleton-Century-Crofts.
- Slaouti, D., & Motteram, G. (2006). Reconstructing practice: Language teacher education and ICT. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 81–97). Amsterdam: John Benjamins.
- Son, J.-B. (2009). Using web-based portfolios in CALL teacher education. In J.-B. Son (Ed.), *Internet-based language learning: Pedagogies and technologies* (pp. 107–118). APACALL Book Series Volume 2. Raleigh, NC: Lulu. Retrieved from [http://drjbson.com/papers/Son\\_Ch6\\_2009.pdf](http://drjbson.com/papers/Son_Ch6_2009.pdf)
- Son, J.-B. (2014). Learning about computer-assisted language learning: Online tools and professional development. In J.-B. Son (Ed.), *Computer-assisted language learning: Learners, teachers and tools* (pp. 173–186). Cambridge: Cambridge Scholars Publishing.
- Son, J.-B. (2015). *Digital literacy*. <https://drjbson.com/projects/dl/>
- Son, J.-B. (2018). *Teacher development in technology-enhanced language teaching*. Cham, Switzerland: Palgrave Macmillan.
- Son, J.-B., Park, S., & Park, M. (2017). Digital literacy of language learners in two different contexts. *The JALT CALL Journal*, 13(2), 77–96. <https://doi.org/10.29140/jaltcall.v13n2.213>
- Son, J.-B., & Windeatt, S. (2017). *Language teacher education and technology: Approaches and practices*. London: Bloomsbury Publishing.
- Spinks, M., Metzler, M., Langdon, J., Gurvitch, R., Smitherman, M., Esmat, T., Bhattacharya, S., Carruth, L., Crowther, K., Denton, R., Edwards, O. V., Shrinkhande, M., & Strong-Green, A. (2021). “This wasn’t pedagogy, it was panicgogy”: Perspectives of the challenges faced by students and instructors during the emergency transition to remote learning due to COVID-19. *College Teaching*. *Advanced online publication*. <https://doi.org/10.1080/87567555.2021.2018395>
- Stannard, R. (n.d.) *About us*. TTV: Teacher Training Videos. <https://www.teachertrainingvideos.com/about-teacher-training-videos>
- Staudt Willet, K. B. (2019). Revisiting how and why educators use Twitter: Tweet types and purposes in #Edchat. *Journal of Research on Technology in Education*, 51(3), 273–289. <https://doi.org/10.1080/15391523.2019.1611507>
- Staudt Willet, K. B., & Carpenter, J. P. (2020). Teachers on Reddit? Exploring contributions and interactions in four teaching-related subreddits. *Journal of Research on Technology in Education*, 52(2), 216–233. <https://doi.org/10.1080/15391523.2020.1722978>

- Stitzlein, S. M., & Quinn, S. (2012). What can we learn from teacher dissent online? *The Educational Forum*, 76(2), 190–200.  
<https://doi.org/10.1080/00131725.2011.653870>
- Stockwell, G. (2009). Teacher education in CALL: Teaching teachers to educate themselves. *International Journal of Innovation in Language Learning and Teaching*, 3(1), 99–112. <https://doi.org/10.1080/17501220802655524>
- Stockwell, G. (Ed.). (2012). *Computer-assisted language learning: Diversity in research and practice*. Cambridge: Cambridge University Press.
- Stockwell, G. (2022). *Mobile assisted language learning: Concepts, contexts, and challenges*. Cambridge: Cambridge University Press.
- Sugiura, L., Wiles, R., & Pope, C. (2017). Ethical challenges in online research: Public/private perceptions. *Research Ethics*, 13(3–4), 184–199.  
<https://doi.org/10.1177/1747016116650720>
- Tagliabue, F., Galassi, L., & Mariani, P. (2020). The “pandemic” of disinformation in COVID-19. *SN Comprehensive Clinical Medicine*, 2, 1287–1289.  
<https://doi.org/10.1007/s42399-020-00439-1>
- Thomas, M., Reinders, H., & Warshauer, M. (Eds.). (2012). *Contemporary computer-assisted language learning*. Bloomsbury Academic.
- Thunman, E., & Persson, M. (2018). Ethical dilemmas on social media: Swedish secondary teachers’ boundary management on Facebook. *Teacher Development*, 22(2), 175–190, <https://doi.org/10.1080/13664530.2017.1371634>
- Tomczyk, Ł., & Fedeli, L. (2022). Introduction—On the need for research on the digital literacy of current and future teachers. In Ł. Tomczyk & L. Fedeli (Eds.), *Digital literacy for teachers* (pp. 1–6). Singapore: Springer.
- Townsend, T., & Bates, R. (2007). Teacher education in a new millennium: Pressures and possibilities. In T. Townsend & R. Bates (Eds.), *Handbook of teacher education* (pp. 3–22). Dordrecht: Springer.
- Trent, J. G. (2015). Towards a multifaceted, multidimensional framework for understanding teacher identity. In Y. L. Cheung & K. Park (Eds.), *Advances and current trends in language teacher identity research* (pp. 44–58). London: Routledge.
- Tromble, R. (2021). Where have all the data gone? A critical reflection on academic digital research in the post-API age. *Social Media + Society*, 7(1).  
<https://doi.org/10.1177/2056305121988929>
- Trust, T., Carpenter, J. P., Krutka, D. G., & Kimmons, R. (2020). #RemoteTeaching & #RemoteLearning: Educator tweeting during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 151–159.
- Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 189–199.
- UNESCO (n.d.). *COVID-19 educational disruption and response*.  
<https://en.unesco.org/node/320920>
- UNESCO (2020, November 26). *What you need to know about the right to education*.  
<https://en.unesco.org/news/what-you-need-know-about-right-education>

- Unsworth, L., Yeo, G., & Beck, J. (2014). Multiple goals: A review and derivation of general principles. *Journal of Organizational Behavior*, 35(8), 1064–1078. <https://doi.org/10.1002/job.1963>
- Varghese, M., Morgan, B., Johnston, B., & Johnson, K. A. (2005). Theorizing language teacher identity: Three perspectives and beyond. *Journal of Language Identity & Education Identity*, 1, 21–44. [https://doi.org/10.1207/s15327701jlie0401\\_2](https://doi.org/10.1207/s15327701jlie0401_2)
- Veletsianos, G., Houlden, S., Hodson, J., Gosse, C. (2018). Women scholars' experiences with online harassment and abuse: Self-protection, resistance, acceptance, and self-blame. *new media & society*, 20(12), 4689–4708. <https://doi.org/10.1177/14614448187813>
- Versmesse, I., Derluyn, I., Masschelein, J., & Haene, L. D. (2017). After conflict comes education? Reflections on the representations of emergencies in 'education in emergencies'. *Comparative Education*, 53(4), 538–557. <https://doi.org/10.1080/03050068.2017.1327570>
- Vodanovich, S. & Piotrowski, C. (2005). Faculty attitudes toward web-based instruction may not be enough: Limited use and obstacles to implementation. *Journal of Educational Technology Systems*, 33(3), 309–318. <https://doi.org/10.2190/V2N7-DMC4-2JWB-5Q88>
- Vygotsky, L. S. (1987). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wajnryb, R. (1993). *Classroom observation tasks: A resource book for language teachers and trainers*. Cambridge: Cambridge University Press.
- Wang, Y. (2021). In service teachers' perceptions of technology integration and practices in a Japanese university context. *The JALT CALL Journal*, 17(1), 45–71. <https://doi.org/10.29140/jaltcall.v17n1.377>
- Wang, Y., Chen, N.-S., & Levy, M. (2010). Teacher training in a synchronous cyber face-to-face classroom: Characterizing and supporting the online teachers' learning process. *Computer Assisted Language Learning*, 23(4), 277–293. <https://doi.org/10.1080/09588221.2010.493523>
- Warschauer, M. (1995). *E-mail for English teaching: Bringing the Internet and computer learning networks into the language classroom*. Alexandria, VA: Teachers of English to Speakers of Other Languages.
- Wasko, M. M., & Faraj, S. (2000). "It is what one does": Why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems*, 9(2–3), 155–173. [https://doi.org/10.1016/S0963-8687\(00\)00045-7](https://doi.org/10.1016/S0963-8687(00)00045-7)
- Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 29(1), 35–57. <https://doi.org/10.2307/25148667>
- Wästerfors, D. (2018). Observations. In Flick, U. (Ed.), *The SAGE handbook of qualitative data collection* (pp. 314–326). SAGE Publications Ltd, <https://dx.doi.org/10.4135/9781526416070.n20>
- Watkins, D. R., McDaniel, A., & Erskine, M. A. (2017). Building a faculty-centric virtual communities of practice (vCoP) within the post-secondary education environment.



- In J. McDonald & A. Cater-Steel (Eds.), *Communities of practice: Facilitating social learning in higher education* (pp. 241–260). Singapore: Springer.
- Watson, H., & Finn, R. (2013, May). Privacy and ethical implications of the use of social media during a volcanic eruption: Some initial thoughts. In J. G. & T. M. T. Comes, F. Fiedrich, & S. Fortier (Eds.). *Proceedings of the 10th International ISCRAM Conference*, Baden-Baden, Germany.  
[http://idl.iscram.org/files/watson/2013/1070\\_Watson+Finn2013.pdf](http://idl.iscram.org/files/watson/2013/1070_Watson+Finn2013.pdf)
- Watson, H., Wadhwa, K., Baruh, L., & Scifo, S. (2016). Social networking in times of crisis. In A. Kurylo & T. Dumova (Eds.), *Redefining communication in the digital age* (pp. 111–129). New Jersey, US, Fairleigh Dickinson University Press.
- Watson, J. (1924). *Behaviourism*. New York: Norton.
- Weiner, B. (2010). The development of an attribution-based theory of motivation: A history of ideas. *Educational Psychologist*, 45(1), 28–36.  
<https://doi.org/10.1080/00461520903433596>
- Wenger, E., McDermott, R., & Snyder, W. (2002). *Cultivating communities of practice*. Boston, Massachusetts: Harvard Business School Press.
- Wenger, L. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
- Wenger, E., White, N., & Smith, J. D. (2009). *Digital habitats: Stewarding technology for communities*. Portland, US: CPsquare
- Wenger-Trayner E., & Wenger-Trayner, B. (2015, April 15). *Communities of practice: A brief introduction*. Wenger-Trayner.com. <https://wenger-trayner.com/wp-content/uploads/2015/04/07-Brief-introduction-to-communities-of-practice.pdf>
- Wentzel, K. R. (2000). What is it that I'm trying to achieve? Classroom goals from a content perspective. *Contemporary Educational Psychology*, 25(1), 105–115.  
<https://doi.org/10.1006/ceps.1999.1021>
- Wentzel, K. R. (2007). Peer relationships, motivation, and academic performance at school. In A. J. Elliot & C. S. Dweck (Ed.), *Handbook of competence and motivation* (pp. 279–296). New York: Guilford.
- Wesely, P., & Plummer, E. (2017). Situated learning for foreign language teachers in one-to-one computing initiatives. *CALICO Journal*, 34(2), 179–195.  
<https://doi.org/10.1558/cj.26907>
- Wesely, P. M. (2013). Investigating the community of practice of world language educators. *Journal of Teacher Education*, 64(4), 305–318.  
<http://doi.org/10.1177/0022487113489032>
- Wigfield, J., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25, 68–81.  
<https://doi.org/10.1006/ceps.1999.1015>
- Wigfield, A., Tonks, S., & Eccles, J. S. (2004). Expectancy value theory in cross-cultural perspective. In D. M. McInerney & S. V. Etten (Eds.). *Big theories revisited* (pp. 165–198). Charlotte, NC: Information Age Publishing.
- Williams, J. R. (2019). The use of online social networking sites to nurture and cultivate bonding social capital: A systematic review of the literature from 1997 to 2018.

- New Media & Society*, 21(11–12), 2710–2729.  
<https://doi.org/10.1177/1461444819858749>
- Williamson, J., & Myhill, M. (2008). Under constant bombardment: Work intensification and the teachers' role. In D. Johnson & R. Maclean (Eds.), *Teaching: Professionalization, development and leadership* (pp. 25–43). Switzerland Dordrecht: Springer
- Woodfield, K., & Iphofen, R. (2017). Introduction to volume 2: The ethics of online research. In K. Woodfield (Ed.), *The ethics of online research* (pp. 1–12). Bingley: Emerald Publishing Limited.
- Wästerfors, D. (2018). Observations. In U. Flick (Ed.), *The SAGE handbook of qualitative data collection* (pp. 314–326). London: Sage Publications Ltd.
- Xing, W., & Gao, F. (2018). Exploring the relationship between online discourse and commitment in Twitter professional learning communities. *Computers & Education*, 126, 388–398. <https://doi.org/10.1016/j.compedu.2018.08.010>
- Yazan, B., & Lindahl, K. (2020). (Eds.). *Language teacher identity in TESOL: Teacher education and practice as identity work*. New York: Routledge.
- Yildirim, I. (2019). Using Facebook groups to support teachers' professional development. *Technology, Pedagogy and Education*, 28(5), 589–609.  
<https://doi.org/10.1080/1475939X.2019.1686714>
- Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, 86, 981–1015.  
<https://doi.org/10.3102/0034654315626801>
- Zembylas, M. (2018). Rethinking the demands for 'preferred' teacher professional identities: Ethical and political implications. *Teaching and Teacher Education*, 76, 78–85. <https://doi.org/10.1016/j.tate.2018.08.011>
- Zembylas, M., & Chubbuck, S. (2018). Conceptualizing 'teacher identity': A political approach. In P. A. Schutz, J. Hong, & D. C. Francis (Eds.), *Research on teacher identity: Mapping challenges and innovations* (pp. 183–194). Cham, Switzerland: Springer.
- Zhang, J. (2009). Toward a creative social web for learners and teachers. *Educational Researcher*, 38, 274–279. <https://doi.org/10.3102/0013189X09336674>
- Zimmer, M. (2010). "But the data is already public": On the ethics of research in Facebook. *Ethics and Information Technology*, 12(4), 313–325.  
<https://doi.org/10.1007/s10676-010-9227-5>
- Zimmer, M., & Kinder-Kurlanda (Eds.). (2017). *Internet research ethics for the social age: New challenges, cases, and contexts*. New York: Peter Lang.

## Appendices

### Appendix A: The Initial Questionnaire (English Version)

#### Front page: Consent form

This survey is conducted as part of my PhD research on language teacher professional development. I am asking language teachers who are currently teaching a second or foreign language to fill out this survey.

There are three short sections (Part 1: Background Information; Part 2: Technology for Language Teaching and Learning; and Part 3: Use of Social Networking Sites). This survey will take about 5–7 minutes. There are no right or wrong answers to these questions, so please be as honest as you can.

All the information collected will be only used for research purposes. You will remain anonymous, and you will not be identifiable (the IP address of your computer will not be collected). By checking the box below you understand and agree that the data collected from this survey will be used for research purposes.

If you have any questions or comments, please send me an email (XXX@waseda.jp). Thank you for taking the time to help me out with my research.

Yurika Ito, Waseda University PhD student

- I agree to participate in this research. Yes / No

#### Second page: Survey language preference

- Do you prefer to conduct this survey in English or Japanese?

#### Third page: Part 1: Background Information

1. Please select your gender. Female/Male/Prefer not to say
2. Please select your age group. 20–29/30–39/40–49/50–59/60–69/70–
3. Please state your nationality.
4. Please state your current place of residence (city and country).
5. Which language do you mainly teach?
6. What is your main teaching context?
7. What is your current employment status?
8. How long have you been teaching a second/foreign language?

#### Fourth page: Part 2: Technology in Language Teaching and Learning

1. Do you use technology in your classes? Yes/No

Those who answered “Yes” for Part 2 Q1:

2. How do you use technology in your classes? (If you changed the way you use technology due to the COVID-19 situation, please explain how you used technology before the COVID-19 situation. Please explain how you are using technology during the COVID-19 situation in Q4a. )
3. What are your main reasons for using technology in your classes? Please provide 3 reasons if possible.
4. Has your technology use in your classes changed due to the COVID-19 pandemic?
  - 4a. For those who answered "yes" to the previous question (Q4), how has your technology use in your classes changed?
5. Are you currently learning anything about how to use technology in language teaching and learning? Yes/No
  - 5a. How often do you do the following activities to learn about how to use technology in language teaching and learning?

|   | Daily                 | 2-3<br>times a<br>week | Once a<br>week        | Once a<br>month       | Twice a<br>year       | Once a<br>year        | Rarely                | Never                 |
|---|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Attend face-to-face (not online) academic conferences   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Attend online conferences                               | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Take face-to-face (not online) lectures/courses         | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Take online lectures/courses                            | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Search the web  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Watch videos  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read journals articles                                  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read books  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read blog posts   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read email list messages                                | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Connect with teachers on Social Networking Sites (SNSs) | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ask coworkers   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Observe other teachers' classrooms                      | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. Do you wish to learn more about how to use technology in language teaching and learning in the future?

6a. Those who answered "Yes" to the previous question (Q6): What would you specifically want to learn about?

6b. Those who answered "No" to Q6: Why do you not want to learn about it?

Those who answered "No" for Part 2 Q1:

2. What are your reasons for not using technology in your classes? Please provide 3 reasons if possible.

3. Have you ever used technology in your classes in the past?
- 3a. Those who answered “Yes” to the previous question(Q3): Why did you stop using it?
- 3b. Those who answered “No” to Q3: Why have you not used technology in the past?
4. Are you currently learning anything about how to use technology in language teaching and learning? Yes/No
- 4a. How often do you do the following activities to learn about how to use technology in language teaching and learning? (Same multiple-choice options as above)
5. Do you wish to learn more about how to use technology in language teaching and learning in the future?
- 5a. Those who answered “Yes” to the previous question (Q6): What would you specifically want to learn about?
- 5b. Those who answered “No” to Q6: Why do you not want to learn about it?

**Fifth page: Part 3: Use of social networking sites (SNSs)**

1. How often do you use the following Social Networking Sites (SNSs) in your daily life?

|           | Daily                 | 2-3<br>times a<br>week | Once a<br>week        | Once a<br>month       | Twice a<br>year       | Once a<br>year        | Rarely                | Never                 |
|-----------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Twitter   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Facebook  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| LinkedIn  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Instagram | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Line      | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| WhatsApp  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. How do you use Twitter, Facebook, and LinkedIn? \*Tick all that apply

- I do NOT use Twitter, Facebook, and LinkedIn.
- I use Twitter for professional purposes
- I use Twitter for personal purposes
- I use Facebook for professional purposes
- I use Facebook for personal purposes
- I use LinkedIn for professional purposes
- I use LinkedIn for personal purposes

3a. For what professional purpose do you use Twitter? \*Tick all of the reasons that apply

- I do NOT use Twitter for professional purposes
- To share resources
- To acquire resources
- To collaborate with other teachers
- To connect with new teachers
- To get emotional support
- To communicate with students
- To communicate with parents (of students)
- To communicate with coworkers (who work at the same institution)
- To communicate with teachers (other than my coworkers)
- Other: \_\_\_\_\_

3b. For what professional purpose do you use Facebook? \*Tick all of the reasons that apply

- I do NOT use Facebook for professional purposes
- To share resources
- To acquire resources
- To collaborate with other teachers
- To connect with new teachers
- To get emotional support
- To communicate with students
- To communicate with parents (of students)
- To communicate with coworkers (who work at the same institution)
- To communicate with teachers (other than my coworkers)
- Other: \_\_\_\_\_

3c. For what professional purpose do you use LinkedIn? \*Tick all of the reasons that apply

- I do NOT use LinkedIn for professional purposes
- To share resources
- To acquire resources
- To collaborate with other teachers
- To connect with new teachers
- To get emotional support
- To communicate with students
- To communicate with parents (of students)
- To communicate with coworkers (who work at the same institution)
- To communicate with teachers (other than my coworkers)
- Other: \_\_\_\_\_



4. Are you currently a member of any online communities/groups related to language, teaching, or technology? Tick all that apply.

- Yes, on Twitter
- Yes, on Facebook
- Yes, on LinkedIn
- Yes, but not on Twitter, Facebook, or LinkedIn
- No

4a. Those who are a member of any other online community related to language, teaching, or technology: please write the name of ALL the online communities/groups you are a member of and briefly explain each one.

4b-1. Those who are not a member of any online community/group: Do you want to join any online communities related to language, teaching, or technology? Yes/No

4b-2. Please state the reason(s) for your answer to Q4b-1.

5. Are you a member of any in-person face-to-face (not online) communities/groups related to language, teaching, or technology?

5a. Those who answered “Yes” to the previous question (Q5): please write the name of ALL the in-person face-to-face (not online) communities/groups you are a member of and briefly explain each one.

5b-1. Those who answered “No” to Q5: Do you want to join any in-person face-to-face (not online) communities/groups related to language, teaching, or technology?

5b-2. Please state the reason(s) for your answer to Q5b-1.

Thank you so much for filling out this survey!

- I am currently recruiting people who can participate in my online interviews. Please write down your email address if you are willing to be interviewed for this study.

\*OPTIONAL

## Appendix B: Consent Form for the Interview Participants

### Brief overview of the PhD research

This research is on language teacher professional development, especially with regards to learning about how to use technology in language teaching and learning. I am trying to understand how language teachers are learning about how to use technology and how online communities on SNSs can be used as a support for learning about how to use technology in language teaching and learning.

### Consent to take part in research

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview(s) after the interview(s), in which case the material will be deleted.
- I agree to my interview(s) being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview(s) which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview(s) may be quoted in dissertation, conference presentation, and published papers.
- I understand that I am free to contact the researcher to seek further clarification and information.

Yurika Ito

PhD student at Waseda University

- Please write your full name if you agree to the terms above and voluntarily agree to participate in this research study.
- Please write your email address.
- Please write the date you have filled out this form.

Thank you for filling out this form. If you have any questions or concerns, please do not hesitate to contact me. My email address is XXX@waseda.jp

## **Appendix C: List of Main Interview Questions**

### **Opening questions**

- Could you briefly introduce yourself?
- What is your educational background?
- How long have you been teaching a language as a second/foreign language?

### **Technology use in class**

- Do you use any technology in your language classes?
- How do you use technology in your language classes?
- Why do you use technology in your language classes?
- Has the COVID situation affected your teaching?
- How has it changed?
- What is your view towards using technology for language teaching purposes?

### **Learning about technology in language teaching and learning**

- Are you currently doing anything to learn about how to use technology in language teaching and learning?

Those who answered “Yes”:

- What are you currently doing to learn about how to use technology in language teaching and learning?
- Why have you chosen such a method to learn?
- What motivates you to learn about how to use technology in language teaching and learning?
- Do you want to continue learning about how to use technology in the future? Why / Why not?

Those who answered “No”:

- Have you had any formal/informal training (e.g., at your institution, university) in using technology for language teaching and learning in the past?
- Why are you not learning about how to use technology in language teaching and learning?
- Do you want to learn about how to use technology in the future? Why/ Why not?

### **Use of Facebook communities**

- How do you use Facebook for professional purposes?
- Are you currently in any online communities related to language, teaching, or technology on SNSs?

Those who answered “Yes”:

- What were your reasons for joining the online community?
- How and when did you hear about the online community?
- When did you join the online community?
- How often do you browse and follow the online community?
- Could you describe your involvement with the online community?

- Have you posted anything in the online community?
- Do you comment on the posts in the group? If so, what kind of posts do you comment on? Why?
- What kind of posts/discussion threads have been particularly useful for you?
- Has your involvement with the online community changed over time?
- Do you think the online community has helped you to learn about how to use technology in language teaching and learning? Why / Why not?

Those who answered “No”:

- Do you want to join any online community related to language, teaching, or technology on SNSs? Why / Why not?
  - Do you think online communities can help you to learn about how to use technology in language teaching and learning?
- 
- What do you think are the benefits / negative aspects of being in an online community?
  - What are your views towards using online communities to learn about how to use technology in language teaching and learning?

**Closing questions**

- Do you have anything that you want to add on about your experience in using online communities?
- Is there anything you would like to ask me?

## Appendix D: Post-Interview Questionnaire

### Front page: Consent form

Thank you very much for helping out with my PhD research. I am asking all interview participants to fill out this post-interview questionnaire.

In the questionnaire, I will be asking how you are currently teaching, learning about technology, and using online communities on SNSs. The questionnaire has 14 main questions and will take about 10~15 minutes.

All the information collected will be only used for research purposes. You will remain anonymous, and you will not be identifiable (the IP address of your computer will not be collected). By checking the box below, you understand and agree that the data collected from this survey will be used for research purposes.

If you have any questions or comments, please send me an email (XXX@waseda.jp)

Once again, thank you very much for taking the time to help me out with my research.

Yurika Ito  
Waseda University  
PhD candidate

- I agree to participate in this research. Yes / No

### Second page:

1. What were your expectations for the (technology-focused) online language teacher communities when you first joined?
2. Have those expectations been met (and in which online communities)?
3. Has your teaching practice changed as a result of participating in the (technology-focused) online language teacher communities? Yes/No
  - 3a. Those who answered “Yes” to the previous question (Q3): How has it changed?
  - 3b. Those who answered “No” to Q3: Why do you think it has not affected the way you teach?
4. Has your use of online language teacher communities changed in the past year? Yes/No
  - 4a: Those who answered “Yes” to the previous question (Q4): How has it changed?
  - 4b: Those who answered “No” to Q4: Why do you think your use has not changed?
5. Have you joined any new online language teacher communities in the past year? Yes/No
  - 5a: Those who answered “Yes” to the previous question (Q5): Please briefly describe the new online communities you joined and explain why you joined them?
  - 5b: Those who answered “No” to Q5: Why have you not joined any new online language teacher communities?

6. Have any of the online language teacher communities provided you with emotional support? Yes/No
- 6a: Those who answered “Yes” to the previous question (Q6): In what way have they supported you emotionally?
- 6b: Those who answered “No” to Q6: Why do you think they have not been able to provide you with emotional support?
7. How often is work (e.g., teaching, preparing for classes, professional learning) stressful? Always/Often/Sometimes/ Hardly ever/ Never
- 7a. What is the most stressful part of your work (e.g., teaching, preparing for classes, professional learning)? Could you briefly elaborate on your answer? \*If you do not think work (teaching) is stressful, please leave this section blank.
8. Do you currently do anything to manage your work (teaching)-related stress?
- 8a. Those who answered “Yes” to the previous question (Q7): What are some strategies you employ to alleviate your work (teaching)-related stress?
- 8b. Those who answered “No” to Q7: Would you like to do anything to alleviate your work (teaching)-related stress? Yes/No
9. As of 2022, are you teaching online? Yes/No
- 9a. Those who answered “Yes” to the previous question (Q9): Why are you teaching online?  
Because of the pandemic/ Other
- 9b. Those who answered “Because of the pandemic” to the previous question (Q9a): Do you think you will use technology in class the same way as pre-pandemic times when online classes are no longer a requirement? Yes/No
- 9c: Those who answered “No” to Q9: Are you using technology in class the same way as pre-pandemic times since going back to face-to-face teaching? Yes/No
10. Have you acquired any new skills and knowledge in using technology for teaching purposes since the COVID-19 pandemic (i.e., since February 2020)? If so, could you elaborate on your answer?
11. How confident were you in using technology for teaching purposes before the COVID-19 pandemic? (1: Not confident at all; 6: Very confident)
12. How confident are you in using technology for teaching purposes now? (1: Not confident at all; 6: Very confident)
13. Why do you think that your confidence level has changed/not changed?

14. How often have you been doing the following activities to learn about how to use technology in language teaching and learning over the past year (2021–2022)?

|   | Daily                 | 2-3<br>times a<br>week | Once a<br>week        | Once a<br>month       | Twice a<br>year       | Once a<br>year        | Rarely                | Never                 |
|---|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Attend face-to-face (not online) academic conferences   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Attend online conferences                               | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Take face-to-face (not online) lectures/courses         | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Take online lectures/courses                            | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Search the web  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Watch videos  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read journals articles                                  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read books  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read blog posts   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Read email list messages                                | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Connect with teachers on Social Networking Sites (SNSs) | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ask coworkers   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Observe other teachers' classrooms                      | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

\*Optional\* Do you have anything that you would like to add on about your experience in using online language teacher communities and learning about technology in language teaching and learning?

Thank you very much for filling out the post-interview questionnaire. From the bottom of my heart, I appreciate your support. If you have any further questions or concerns, please do not hesitate to contact me (XXX@waseda.jp)