# Pre-service EFL Teachers' Psychology and Rehabilitation about SLA through WhatsApp in Blended Learning for Special Education

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#### Abstract

Using discussion boards on the internet as part of a blended learning strategy is becoming more and more common. Although this medium is widely used, little study has been conducted on pre-service English as a Foreign Language (EFL) educators' ideas of acquiring disciplinary topics using online discussion forums. This research intends to address this vacuum by documenting the ideas of learning via like forums held by a team of fifteen pre-service EFL instructors engaged in a second language acquisition (SLA) course at the university level. Phenomenography was used to the analysis of interviews. We identified three experience classifications: reviewing material, metacognitively increasing knowledge, and negotiating knowledge. These include various approaches to course content, sending and replying to messages, and interactions with the instructor. Without the teacher's presence, possible issues were resolved using WhatsApp as an alternative venue. According to the findings, pre-service teachers must be trained in a deep learning strategy that involves meaning negotiation when they use online discussion forums (ODFs).

**Keywords**: WhatsApp, blended learning, phenomenography, online discussion forums, Pre-service EFL Educators, Special Education, Psychology and Rehabilitation

#### Introduction

In higher education, computer-mediated communication (CMC) has become an important instrument for teaching and learning. Asynchronous online discussion forums, or ODFs, are the most often utilized CMC medium for student-to-student and student-to-instructor communication, according to Panigrahi et al. (2018). Using ODFs in a blended-learning course is common, as shown by these authors. Using ODFs for educational purposes relies on the belief that students learn better when they are able to collaborate with their peers. An additional advantage of ODFs is the possibility of motivating language learners to take an active role in their education and express themselves creatively (Naghdipour, 2022). (Han & Ellis, 2019). Study after study shows the drawbacks of Open Document Format (ODF), including the spread of misinformation, failure to collaborate, and the idea that ODFs are pointless and dull (Tawfik et al. 2018, Delahunty, 2018). (Han & Ellis, 2019).

In a meta-analysis, Wang et al. (2020) revealed that collaborative knowledge development was restricted in the majority of research employing the Interaction Analysis Model or IAM (Galikyan & Admiraal, 2019) to examine ODFs and learning. Wang et al. (2020) argue that there is a need for more study on the viewpoints of students about what constitutes collaborative knowledge development in ODFs. Particularly, Asian instructors are unwilling to analyze and refute the statements of others, according to research (Prestridge, 2019).

Several research in the field of language teacher education have examined educators' impressions of the usage of ODFs in their training (Walsh & Rsquez, 2020; Delahunty, 2018; Martin et al., 2020; Bruggeman et al., 2021; Mumford & Dikilitaş, 2020). As with research concentrating on learners, the conclusions of these investigations are varied. Some research has indicated, for instance, that ODFs are helpful in fostering a a sense of belonging in a professional setting (Bruggeman et al., 2021), in fostering the autonomy of pre-service instructors, and in offering appropriate models for future technology usage (Mumford & Dikilitaş, 2020). Nevertheless, certain pre-service instructors choose face-to-face tasks over ODFs (Mumford & Dikilitaş, 2020) or see ODF contact as forced, unnatural, and onerous (Walsh & Rsquez, 2020).

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Building strong interpersonal interactions and the professor's presence have been proven to be essential for fostering pre-service ESL educators' collaborative learning, according to research examining both perceptions and online dialogue (Martin et al., 2020). The active attention of learners to the postings of others is equally crucial; its insufficiency has detrimental effects on learning and motivation (Delahunty, 2018). Studies assessing in-service FL instructors' messages in ODFs have shown generally favorable sentiments (Xu et al., 2020) and some knowledge growth (Hernández-Sellés et al., 2019), while also highlighting the need for increased cooperation among educators.

According to MacIntyre et al. (2020), additional study is required on the utilization of online technologies for language instructor education in light of these varied outcomes. Such tools, particularly ODFs, are crucial to focus on since the quality of pre-service teachers' ODF experiences will have an impact on their future judgments about whether and how to employ ODFs in their teaching. To this end, knowing how pre-service teachers learn about language instruction via the use of ODFs may have a significant impact on the development of pedagogical strategies that meet the learning requirements of pre-service teachers. With current demands to examine strategies to enhance the influence of language teacher education on instructors' thinking and practice, this is a good objective to pursue (Atai & Taherkhani, 2018). There have been requests to raise understanding of the "constraints and opportunities for generating meaning and communicating in online arenas" by language instructors (Chao & Liu, 2022).

The findings of a phenomenographic case study conducted with a group of pre-service EFL instructors in a blended learning SLA course are investigated in this report. Using ODFs in a blended learning SLA course using Moodle is the purpose of this research. On how well students acquire new concepts, the focus isn't placed on their performance. Instead, we look at how ODFs are seen as learning tools by the learners themselves.

#### **Research Questions**

Discussed topics included the following:

- 1. What ideas do the respondents have about learning using ODFs?
- 2. What learning tactics using ODFs are described by the respondents?
- 3. What motivations do respondents have for employing specific techniques?

The approach used was phenomenography, which is becoming more prominent in the study of languages (Loh, 2019). Peer-reviewed phenomenological studies have been utilized to analyze e-learning in other fields (Han and Ellis, 2019; Kuo et al., 2021), but they have not been extensively employed in the study of ODF-mediated language teacher education.

## Methods

Phenomenography is a methodological technique as well as a theoretical viewpoint on learning. 'Within the phenomenographic study technique, concepts are the primary unit of description regarding individuals' experiences,' according to Sanusi et al. (2022). 'Various methods of knowing' is how concepts are defined (Montenegro, 2020). A notion may be described as a self-aware internal view and interpretation of external events, and they are the smallest experience units (Murillo & Hidalgo, 2020). According to Qazi et al. (2021), there will be fewer and more complicated ways of perceiving any given phenome- non. The more sophisticated approaches take into account more facets of the phenomena (for example, more concepts) and bring it into clearer focus.

The purpose of phenomenographic research is to create a hierarchical grouping and organization of ideas. Categorizations like this are referred to as categories (Kuo et al., 2021). An outcome space is a hierarchical organization of their work (Qazi et al., 2021). The result space may also contain themes that are recognized across classifications (Qazi et al., 2021); these are referred to as dimensions (Osborne et al., 2018), or key aspects of variation. The result space's classifications are designed to 'help instructors to approach learning from their learners' viewpoints, or at the very least to comprehend why their learners would believe or do particular things' (Loh, 2019). The result space's classifications must be credible, distinct, sparse, and hierarchically connected (Qazi et al., 2021). The result space may be presented in a variety of ways. Quantifications of the number of people who hold a conception, as well as variable and invariant conceptions, are among them. We employ Norbert et al. (2018)'s purely qualitative strategy to portray the result space since it closely matches our data and methods.

Learning experiences involve referential and structural characteristics, according to Qazi et al. (2021). Scholars should define these concepts clearly since phenomenographers' understanding and use of them varies (Sanusi et al., 2022). Referential aspects, in our opinion, concern how students comprehend the learning object (for example, their understanding of ideas), while structural elements concern how they approach learning (i.e., how they comprehend the process of learning and the tools they employ to study) and why they do so. This essay focuses mostly on structural features, in keeping with our objective of focusing on ODF conceptions as a means of learning rather than the ideas being learnt. Only inasmuch as they are necessary for understanding structural features are referential aspects addressed.

#### Participants, Context, and Data Collection

As part of a Bachelor of Arts degree in English course at an urban, public university's SLA program, the study was carried out. This course was chosen for both practical and theoretical purposes. It is a long-standing concern of language teacher education to examine the linkages between SLA theory and classroom instruction. As a further theoretical justification for why this course is so intriguing is that the instructor of the course has a lot of experience and international reputation in applied linguistics. Master's and doctoral degrees were earned in the United States under the tutelage of notable American and British academics. This lecturer is a long-time friend of the principal author, who provided the team access to the course as a practical explanation. On September/October 2019, a professor was called to describe the study and ask for his consent for its implementation in the next academic year, which took place in 2019. He was of the same opinion. The school's Research Office approved and submitted the project at his request, and the main author served as the project's chief researcher.

SLA data was collected in the fall/autumn of 2019 when 25 pre-service instructors were enrolled. Everyone was asked to join the course at the beginning by the author. Students were introduced to the research's goals and procedures by the study's main author on the first day of class. They signed informed consent forms after hearing about the study and agreeing to participate. They all did it. In order to get saturation of the various categories of description, we used a sample of 15 participants for this research. Phenomenographic research sometimes uses smaller sample sizes (Osborne et al., 2018), whereas our sample has at least 15 individuals to account for variance. Ten ladies and five men ages of 18 to20 engaged in the study. Their major was English as a Foreign Language (ELT), and they were all in their second year of the BA in English program. None of them had any previous knowledge of Moodle, ODFs, or blended learning. As a result of the project's time restrictions, we chose saturation over a census sample for our sampling technique.

Three semi-structured interviews were done with the respondents, one at the beginning, one in the middle, and one at the conclusion of the teaching time. Seven minutes and five seconds was the quickest interview, while 19 minutes and three seconds was the longest. A Motorola G6-plus mobile phone was used to record the interviews, which took place at the workplace of the principal author. Their transcription was done by hand by a coworker. When gathering phenomenographic data, interviews are by far the most prevalent method of data collecting. 'How' and 'Why' questions were incorporated in the interview procedures based on Qazi et al. (2021) and Novais et al. (2018) standards. Interviews took place in the individuals' native tongue of Spanish. Translated portions of the interviews that appear in this article were conducted by the author.

After a two-hour weekly class session, students completed their assignments using the Moodle platform, which used a blended learning strategy to teach the SLA course. Only one interlanguage development unit, lasting for five weeks, was studied in this study. A unit of an ODF consists of five online activities. A wealth of information about them may be found in Table 1. The main author conducted an interview with the professor and gathered data by taking screenshots of the Moodle platform. In order to count as more than two contributions, each one must be a completely new contribution and a reaction to another one. This was true of all the ODFs I looked at. Each ODF, with the exception of four, ended with a paragraph summarizing the findings of the team members. There were no grades assigned for the quality of the messages, and students were invited to raise questions and voice disagreement. Solo submissions and the final paragraph did not have a word restriction, but the professor stepped in when learners displayed misconceptions or misunderstandings of the material being covered. The guidelines for each ODF specified its objective, enumerated key ideas, set the anticipated outcome, and detailed the involvement conditions. For example, it is OK to raise questions and argue. However, there were no specific etiquette norms given. Teams of four students participated in the competition. Intra-team participation was the norm except for ODF 3, which incorporated an inter-team component.

#### Data Analysis

We used a team-based, discovery-oriented strategy. Discovery research is characterized by a lack of preconceptions about the phenomena and the absence of preexisting hypotheses, at least in the beginning. Phenomenography may be carried out by a single researcher or by a group of researchers working together (Novais et al., 2018). (Ljunggren et al., 2021). For phenomenographic data analysis, our method was iterative; it comprised both solo and group labor, and frequent verification of developing categories against the data (Ljunggren et al., 2021). Below you'll find a breakdown of the procedures we took.

Week	Title	Purpose	Relevant concepts	Outcome
1	Confidence in one's abilities	To discuss and reflect on sentiments about "proper" and "improper" L1 characteristics, prescriptivism and descriptivism.	Prescriptivism and descriptivism	Posts including the thoughts and reflections of team members and a paragraph summing the group reflections.
2	Initial activity connecting concepts	To link a collection of ideas	Interlanguage, input, output, mistake, error, non-target-like forms, foreign language, L2, second language.	Posts discussing linkages between ideas, final paragraph stating agreed- upon thoughts
3	Second conceptual linkage activity	To link two sets of ideas and to assess another group's	Set 1: Interlanguage development, descriptivism, prescriptivism, target- like and non-target-like forms, standard linguistic Set 2: Creating a system, input, output, intake, observation, accommodation, reorganization, mind, second language, foreign language	Posts discussing linkages among concepts, conclusion paragraph presenting agreed- upon views about set 1, concluding paragraph expressing agreed-upon ideas regarding set 2, concluding paragraph expressing agreed- upon ideas regarding the relationship between the two groups of concepts. Posts criticizing another team's paragraphs, and a paragraph indicating the overall opinion of those paragraphs*
4	Assessment task	To score a test given by a hypothetical student with several non-target-like forms, taking into consideration what has been acquired about interlanguage development, and to allocate points in accordance with this scale. 02575-1	All of the preceding plus self-referential evaluation (Xu, 2019)	Posts detailing every response's score and the reasoning behind it, a table with the agreed-upon score for every response
5	Reflection on evaluation task	To consider the reasons behind their grading practices.	All of the preceding plus self-referential evaluation (Xu, 2019)	Posts containing the observations of team members, with a conclusion paragraph summarizing consensus opinions

Table 1. These are the Five ODFs.

- 1. The primary author transcribed every interview.
- 2. The main author picked respondents at random and went through all 12 interviews exhaustively to establish an first set of in categories, dimensions, and vivo codes. The transcripts were reviewed and compared for similarities and differences (Novais et al., 2018), and the structural aspects of the concepts were analyzed and grouped into categories and dimensions. The interviews were coded with the help of MAXQDA 2018 software.
- 3. In order to verify and confirm the original coding scheme and preliminary categories, the fourth author examined and analyzed two uncoded interviews. He identified almost identical codes in the same areas as the main authors but also proposed a few additional codes, as seen by his coding comparison with theirs. In phenomenographic study, this is the strongest kind of validation. An audience and co-authors provided input on these early findings during a conference. Phenomenographic validation is also used here (Novais et al., 2018).
- 4. The three first authors worked together to apply this resultant coding method and categories to the remaining inter-views until saturation was attained. Because of the changes that resulted, there are now a few new codes and an improved set of categories and dimensions for outcomes. Transcripts and pre-existing codes, categories, and dimensions were used to check these all the time. With MAXQDA, this study was also carried out.
- 5. Each of the 45 transcripts was re-read by the primary author to ensure that the modified categories, dimensions, and outcome space were still applicable and descriptive. There were no alterations required.
- 6. Five interviews were randomly chosen and used as a test group for this new outcome space. In his opinion, it was accurate and didn't require any changes.

#### Results

ODFs were expected to provide a wide range of educational experiences. Respondents' perceptions of their roles in the activities, the role of face-to-face sessions, and their relationship with the instructor in an ODF environment all played a role in these findings. The following three classifications explain the many ways in which students may use ODFs to study.

Classification 1. Reviewing the material.

Classification 2. Metacognitive expansion of knowledge

Classification 3. Knowledge negotiations

As stated before, the classifications arose from students' views of diverse activity and contextual characteristics. These were ordered according to the following measurements:

- Connections to the subject matter addressed in the classroom.
- Personal message writing.
- Reading and replying to others' messages.
- Interacting with the instructor.

Classification 1. Reviewing the material.

The Spanish verb'repasar' was often used by respondents to describe their perception of ODF-based education. This verb implies "to review what you've learned", which is why we've given it this name. For the sake of making links with what students learn in traditional face-to-face lectures, this approach is straightforward and self-explanatory: ODFs gave students the chance to recap what their professors had already taught them. Re-reading and summarizing text is the approach connected with this category.

Example 1. We arrived at somewhat of a summary thanks to Moodle. . . a quick review of everything we learned in class today. . . These exercises require us to re-read our material (P1)

To put it simply, the purpose of this method is to make the notions stick in your mind by making you repeat them over and over again. Examples 2 and 3 show that composing one's own messages serves the same purpose as talking to the instructor in terms of repetition-memorization (Example 4).

Example 2: When logging into Moodle, it's time to put what we've acquired into practice. (P2).

Example 3. A lot of repetition can help you remember things better... Since I place a high value on memorization, I feel the forums were beneficial in this regard (P6).

Example 4. At that point, the instructor stepped in and clarified the topic for the students. (P15).

This classification did not include a focus on reading and replying to other people's communications. As a result, the more sophisticated classifications tend to have unique views of how one learns beyond just reciting or remembering information.

Classification 2. Metacognitive expansion of knowledge

This section focuses on seeing ODFs as a way to enhance one's knowledge and challenge oneself. Respondents' knowledge or positions are examined and/or noticed to be inconsistent as a consequence of ODF task characteristics, and knowledge or positions change as a result of interaction with others in ODFs. When issues arose during the ODFs that couldn't be addressed by the content presented in the face-to-face sessions, some respondents contributed material to the one covered in those classes to address them. Thus, under this view, searching for extra, relevant content online is a technique for learning more and satisfying curiosity.

Example 5. For the sake of expanding my knowledge on the subject, I used my notes and the internet (P8).

Example 6. As a student, working on Moodle was beneficial because, if I didn't understand a technical phrase, I could look it up on the Internet (P12).

Write your own messages as a chance to confirm your understandings (Example 7) or uncover questions that you may subsequently ask the instructor in this experiential area (Example 8).

Example 7. It's only after you've entered your thoughts into Moodle that you can question yourself, "Did I truly get it?" (P7).

Example 8. This information was provided to us in class, and we took note of it. However, after posting our thoughts on Moodle, we found we had more questions than answers, so we did just that in the face-to-face portion of the session (P13).

In addition to learning from the examples and ideas of others, it was thought that reading and reacting to the messages of others may help one find one's own knowledge gaps (Example 9). (Example 10)

Example 9. Classmates' explanations sometimes made me realize that I hadn't previously realized that I didn't understand anything, but before reading I hadn't even realized it.. (P4).

Example 10. X's contributions were particularly valuable to me since they weren't based on abstract principles; rather, she provided concrete instances, which were illustrative and instructive (P12).

In this classification, the teacher was viewed as playing a metacognitive role: correcting misconceptions, as shown in Example 8. While reading the teacher's comments to other respondents' messages, I became aware of these misconceptions:

Example 12. If only I'd seen the instructor correct them while reading, I'd have been able to grasp the topic better myself (P14).

#### Classification 3. Knowledge negotiations

The term 'negotiation' refers to the idea that ODFs may be used to present and debate assertions, voice disputes, and reach agreements. Because each respondent's posts are either a reaction to another's post or an invitation for a response, this category includes both the writing of one's own posts and the reading and replying to those of others. This is a significant departure from the previous classifications' conceptions of one's own work. Writing one's own communications was envisioned in classification 2 as a technique to uncover where one's knowledge was lacking. For example, a writer in this area challenges the message of others.

Example 13. When we came to the conclusion that we were correct and they were not, As a means of pointing out their mistake, we explained to them what we thought so that they might see their own misinterpretation (P11)

In this classification, face-to-face courses are considered as the highest authority on the subject matter addressed. Using the material, Participant 10 and her colleagues were able to resolve a conflict with another team. Similar to this, the student's view of the instructor was that of an arbitrator. Despite the fact that undergraduate pre-service instructors are just starting out in their professions, there were no examples of students questioning the authority of their professors or the content they were teaching.

Example 16. While reading their messages, we began to believe we were mistaken, but after checking our notes and the professor's remarks in class, we realized we were correct. (P11)

Using WhatsApp to coordinate Moodle ODFs is a pretty intriguing component of this approach. There were a variety of objectives for this approach. WhatsApp messaging may have helped with logistics of asynchronous involvement and answers, according to one theory.

Example 17. So, they might begin to think about how to reply to me, I provided them photographs of my postings (P10).

Another reason for having many WhatsApp discussions was to avoid, negotiate, or mitigate conflict. As a result of WhatsApp, it was possible to inform one's friends in advance of unfavorable assessments and objections to claims in order to avoid offending them. Examples 18 and 19 (enhanced emphasis with a boldfaced letter) demonstrate this:

Example 17. Then, if one of us made a mistake on Moodle, the others would inform her on WhatsApp, "**Hey**, **that remark is erroneous, but don't delete it so we can follow up on it and deepen the topic**" (P11).

Example 18. It was agreed upon what the task was, how it would be accomplished, what we would say, and the manner in which we would **respect one another's views** (P13)

To avoid causing interpersonal tension, participants in these cases explain why they're using WhatsApp to conduct parallel discussions, which are based on their agreement on the linguistic-discussive representation of meaning negotiation. According to the results of earlier research on Asian students' collaborative knowledge development, this is an intriguing structural notion.

#### **Discussion and Conclusions**

This study's first research question centered on the respondents' views about ODF learning. A total of three categories were identified: Reviewing the material, Metacognitive expansion of knowledge, Knowledge negotiations. The second question inquired about the methods used to learn. These include 1) repeating something you've already read, 2) paying close attention to what other students and professors have to say, 3) looking for further data, and 4) Use WhatsApp as an alternative ODF site to resolve logistical and interpersonal conflicts. The first technique was used primarily for the purpose of memory, but it was also read a second time in order to evaluate claims. The second and third strategies were used out of curiosity and a desire to verify comprehension. The fourth technique was used for logistical reasons and, more interestingly, because of the necessity to adhere to politeness conventions.

To avoid interpersonal conflict that may have arisen in the Moodle ODFs, the parallel conversations on WhatsApp were devised. As a result, respondents were unwilling to engage in potentially face-threatening behavior in the Moodle ODFs, according to this interpretation. Even more intriguing is the fact that the respondents were able to voice their disapproval and settle their differences on WhatsApp, which shows that face-threatening potential lies in the professors' observation of these activities. Similarly, Leng et al. (2021) found that learners in a variety of social science subjects avoid expressing and resolving dispute in ODFs because of this reluctance. Politeness traditions may dictate the need of first resolving any possible misunderstandings and then staging the discussion. For a variety of cultural and etiquette reasons, EFL students have historically been hesitant to express disagreement or criticism with their classmates (Borris & Zecho, 2018). Similarly, cultural norms have been blamed for the low level of ODF participation in claims appraisal and bargaining by Asian instructors and students (Walsh & Rsquez, 2020; Wang et al., 2020).

Master of Arts TESOL learners have reported that creating healthy interpersonal connections and feeling secure to share criticisms and disagreements aided collaborative knowledge creation in Organizational Development Framework (ODF) (Delahunty, 2018; Martin et al., 2020). Therefore, future research should pay greater

attention to the importance of discursive cultural norms in learning via ODFs. Pre-service educators must be taught discursive skills for assessing and negotiating claims by teacher trainers as well. Using treatments such as those established by Lenkaitis, this is possible (2020). An example of this is the Moodle fishbowl approach (Lenkaitis, 2020), in which experts' model and pre-service teachers observe and analyze how disagreement is expressed and negotiated (Lenkaitis, 2020). Using ODFs, these exercises should examine politeness standards and how they help or hinder learning.

Whatsapp and other social networks might be seen as analogous places for meaning negotiation, and knowledge building in future research However, such study would not be without danger. In theory, students may create and utilize such places to avoid being seen by their teachers, allowing for deeper, more genuine conversations to take place. If we wish to better understand how social networks might be used to facilitate knowledge development, we must be careful not to squander valuable resources that are currently being used for this purpose.

We came up a few categories that are comparable to Han and Ellis' (2019) research on engineering students. Checking and Acquiring concepts were the least advanced e-learning classifications in that research; Developing and Challenging were the most advanced. They didn't have any data on our simple repeat or reiteration of information. Our second category, expanding knowledge metacognitively, seems to incorporate their classifications of acquiring, checking, and developing ideas. As far as I can tell, the most advanced level of both ours and theirs involves a lot of time spent arguing various concepts.

Furthermore, our research shows that the more sophisticated category, negotiating meaning, entails not just reading but also reacting and writing with the intention of generating a reaction from others. As Delahunty (2018) found, it is critical for ODF-based collaborative knowledge development that participants pay close attention to and be heard while communicating with one another. But even in the more advanced clasification, the professor and the material were not questioned and stayed the primary source for adjudicating claims. At the college level, it may be good to encourage students to challenge the curriculum and their professors, although this may not be necessary.

We might say that going over the information is the least advanced category in our outcome space since it represents a shallow and fragmented method of learning. Learning via ODFs is seen in this classification as providing possibilities for repetition-based remembering. When it comes to learning on one's own, this is not a very good way to go about it. As a consequence, interventions must be developed to support shifts away from this view and toward others that are more advanced. Aside from using the Moodle fishbowl and other strategies indicated above, therapies should involve training on self-regulation, metacognition, and ideas regarding collaborative knowledge production and learning as well.

This research has a restriction since we didn't look at Moodle or WhatsApp postings. Respondents who aren't conscious of their practices of knowledge expansion and meaning negotiation may be caught off guard by such an investigation. In addition, the fact that none of our respondents had any prior knowledge of Moodle ODFs suggests that a diverse sample of respondents with greater expertise would provide various results. Key SLA topics like interlanguage and attitudinal changes from prescriptivism to descriptivism were omitted from this study because of a deliberate choice by the researcher. It is thus necessary to evaluate ODFs in conjunction with interview transcripts in order to describe reference notions and investigate probable relationships between them and the structural elements discussed here. Pre-service instructors' perceptions of face-to-face courses should be examined in future research. To adjudicate claims in our research, we primarily considered the face-to-face context, but more targeted interview queries with a various sample should shed additional insight on its relevance in relation to ODFs.

## References

- 1. Atai, M. R., & Taherkhani, R. (2018). Exploring the cognitions and practices of Iranian EAP teachers in teaching the four language skills. Journal of English for Academic Purposes, 36, 108-118. https://doi.org/10.1016/j.jeap.2018.09.007
- 2. Borris, D., & Zecho, C. (2018). The linguistic politeness having seen on the current study issue. Linguistics and Culture Review, 2(1), 32-44. https://doi.org/10.21744/lingcure.v2n1.10
- Bruggeman, B., Tondeur, J., Struyven, K., Pynoo, B., Garone, A., & Vanslambrouck, S. (2021). Experts speaking: Crucial teacher attributes for implementing blended learning in higher education. The Internet and Higher Education, 48, 100772. https://doi.org/10.1016/j.iheduc.2020.100772

- Chao, C. C., & Liu, Q. (2022). Revisiting CALL normalization through a Yin–Yang ecological perspective: A study on teacher intentionality and classroom technology use of a claimed reluctant user. System, 102830. https://doi.org/10.1016/j.system.2022.102830
- 5. Delahunty, J. (2018). Connecting to learn, learning to connect: Thinking together in asynchronous forum discussion. Linguistics and Education, 46, 12-22. <u>https://doi.org/10.1016/j.linged.2018.05.003</u>
- Desa, M.B.M., Nasir, N.B.C.M., Jasni, M.A.B., Yusof, Y.B., Nordin, M.N. (2022). ISIS Uses A Social Influence Techniques To Induce Individuals To Become Terrorist Sympathizers: A Review. Journal of Pharmaceutical Negative Results, 2022, 13, pp. 5622–5630.
- Galikyan, I., & Admiraal, W. (2019). Students' engagement in asynchronous online discussion: The relationship between cognitive presence, learner prominence, and academic performance. The Internet and Higher Education, 43, 100692. https://doi.org/10.1016/j.iheduc.2019.100692
- 8. Han, F., & Ellis, R. A. (2019). Identifying consistent patterns of quality learning discussions in blended learning. The Internet and Higher Education, 40, 12-19. https://doi.org/10.1016/j.iheduc.2018.09.002
- Hernández-Sellés, N., Muñoz-Carril, P. C., & González-Sanmamed, M. (2019). Computer-supported collaborative learning: An analysis of the relationship between interaction, emotional support and online collaborative tools. Computers & Education, 138, 1-12. <u>https://doi.org/10.1016/j.compedu.2019.04.012</u>
- 10. Kadir, M.A.B.A., Muhammad, A.B., Yusoff, M.Z.B.M., Hassan, M.H., Nordin, M.N. The Relationship Between Learning Style And Jawi Writing Skills Among Primary School Student. Journal of Pharmaceutical Negative Results, 2022, 13, pp. 5524–5534.
- Kuo, T. M., Tsai, C. C., & Wang, J. C. (2021). Linking web-based learning self-efficacy and learning engagement in MOOCs: The role of online academic hardiness. The Internet and Higher Education, 51, 100819. https://doi.org/10.1016/j.iheduc.2021.100819
- 12. Leng, J., Yi, Y., & Gu, X. (2021). From cooperation to collaboration: investigating collaborative group writing and social knowledge construction in pre-service teachers. Educational Technology Research and Development, 69(5), 2377-2398. https://doi.org/10.1007/s11423-021-10020-9
- Lenkaitis, C. A. (2020). Teacher candidate reflection: Benefits of using a synchronous computermediated communication-based virtual exchange. Teaching and Teacher Education, 92, 103041. https://doi.org/10.1016/j.tate.2020.103041
- 14. Ljunggren, C., Carlson, E., & Isma, G. E. (2021). Drama with a focus on professional communication– A phenomenographic study. Nurse Education in Practice, 52, 103022. https://doi.org/10.1016/j.nepr.2021.103022
- Loh, E. K. (2019). What we know about expectancy-value theory, and how it helps to design a sustained motivating learning environment. System, 86, 102119. https://doi.org/10.1016/j.system.2019.102119
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. System, 94, 102352. <u>https://doi.org/10.1016/j.system.2020.102352</u>
- Magiman, Mohamad Maulana; Nordin, Mohd Norazmi (2021). A Study of Ritual Communication In Kadayan Community In Sarawak. Journal for the Study of Religions and Ideologies, Vol. 20, Iss. 60, (Winter 2021): 211-224.
- Martin, F., Sun, T., & Westine, C. D. (2020). A systematic review of research on online teaching and learning from 2009 to 2018. Computers & education, 159, 104009. https://doi.org/10.1016/j.compedu.2020.104009
- 19. Montenegro, H. (2020). Teacher educators' conceptions of modeling: A phenomenographic study. Teaching and Teacher Education, 94, 103097. https://doi.org/10.1016/j.tate.2020.103097
- Mumford, S., & Dikilitaş, K. (2020). Pre-service language teachers reflection development through online interaction in a hybrid learning course. Computers & Education, 144, 103706. https://doi.org/10.1016/j.compedu.2019.103706
- Murillo, F. J., & Hidalgo, N. (2020). Fair student assessment: A phenomenographic study on teachers' conceptions. Studies in Educational Evaluation, 65, 100860. https://doi.org/10.1016/j.stueduc.2020.100860
- 22. Naghdipour, B. (2022). ICT-enabled informal learning in EFL writing. Journal of Second Language Writing, 56, 100893. https://doi.org/10.1016/j.jslw.2022.100893
- 23. Novais, M. A., Ruhanen, L., & Arcodia, C. (2018). Destination competitiveness: A phenomenographic study. Tourism management, 64, 324-334. https://doi.org/10.1016/j.tourman.2017.08.014
- 24. Omar, S.A., Latif, M.S.A., Bujang, S., Musa, P.I.P., Nordin, M.N. (2022). Determination of Uruf Rate of Gold Jewelry In The State of Sarawak. Journal of Pharmaceutical Negative Results, 2022, 13, pp. 5607–5612.

- Osborne, D. M., Byrne, J. H., Massey, D. L., & Johnston, A. N. (2018). Use of online asynchronous discussion boards to engage students, enhance critical thinking, and foster staff-student/student-student collaboration: A mixed method study. Nurse education today, 70, 40-46. https://doi.org/10.1016/j.nedt.2018.08.014
- 26. Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online learning: Adoption, continuance, and learning outcome—A review of literature. International Journal of Information Management, 43, 1-14. Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online learning: Adoption, continuance, and learning outcome—A review of literature. International Journal of Information Management, 43, 1-14.
- Prestridge, S. (2019). Categorising teachers' use of social media for their professional learning: A selfgenerating professional learning paradigm. Computers & education, 129, 143-158. https://doi.org/10.1016/j.compedu.2018.11.003
- Qazi, A., Qazi, J., Naseer, K., Zeeshan, M., Qazi, S., Abayomi-Alli, O., ... & Haruna, K. (2021). Adaption of distance learning to continue the academic year amid COVID-19 lockdown. Children and Youth Services Review, 126, 106038. https://doi.org/10.1016/j.childyouth.2021.106038
- 29. Rani, M.A.M., Jasmi, Z.S., Abbas, M.S., Nordin, M.N., Musa, P.I.P. (2023). Empowering The Competitiveness Of Asnaf Rural Zakat Entrepreneurs Policy: National Development Aspirations 2030. Journal of Pharmaceutical Negative Results, 2022, 13, pp. 5613–5621.
- Rani, M.A.M., Mohd Arif, M.I.A., Adenan, F., Nordin, M.N., Izham, S.S. (2022). Contemporary Research In Islamic Philantrophy: An Analysis of The Needs And Directions of The Field of Waqf. Journal of Pharmaceutical Negative Results, 2022, 13, pp. 5805–5813.
- Sanusi, I. T., Oyelere, S. S., & Omidiora, J. O. (2022). Exploring teachers' preconceptions of teaching machine learning in high school: A preliminary insight from Africa. Computers and Education Open, 3, 100072. https://doi.org/10.1016/j.caeo.2021.100072
- Tawfik, A. A., Giabbanelli, P. J., Hogan, M., Msilu, F., Gill, A., & York, C. S. (2018). Effects of success v failure cases on learner-learner interaction. Computers & Education, 118, 120-132. https://doi.org/10.1016/j.compedu.2017.11.013
- 33. Walsh, J. N., & Rísquez, A. (2020). Using cluster analysis to explore the engagement with a flipped classroom of native and non-native English-speaking management students. The International Journal of Management Education, 18(2), 100381. https://doi.org/10.1016/j.ijme.2020.100381
- Wang, C., Fang, T., & Gu, Y. (2020). Learning performance and behavioral patterns of online collaborative learning: Impact of cognitive load and affordances of different multimedia. Computers & Education, 143, 103683. https://doi.org/10.1016/j.compedu.2019.103683
- Xu, B., Chen, N. S., & Chen, G. (2020). Effects of teacher role on student engagement in WeChat-Based online discussion learning. Computers & Education, 157, 103956. https://doi.org/10.1016/j.compedu.2020.103956
- 36. Xu, Y. (2019). Changes in interlanguage complexity during study abroad: A meta-analysis. System, 80, 199-211. https://doi.org/10.1016/j.system.2018.11.008
- Zahner, W., Milbourne, H., & Wynn, L. (2018). Developing and refining a framework for mathematical and linguistic complexity in tasks related to rates of change. The Journal of Mathematical Behavior, 52, 21-36. <u>https://doi.org/10.1016/j.jmathb.2018.04.003</u>