



How to cite this article:

Jamali, M., & Krish, P. (2021). Fostering 21st century skills using an online discussion forum in an English for specific purposes. *Malaysian Journal of Learning and Instruction*, 18(1), 219-240. <https://doi.org/10.32890/mjli2021.18.1.9>

FOSTERING 21st CENTURY SKILLS USING AN ONLINE DISCUSSION FORUM IN AN ENGLISH FOR SPECIFIC PURPOSE COURSE

¹Mazura Jamalai@Jamali & ²Pramela Krish

¹School of Languages, Civilisation and Philosophy
Universiti Utara Malaysia

²Centre for Research in Language and Linguistics
Faculty of Social Sciences and Humanities
Universiti Kebangsaan Malaysia

¹Corresponding author: jmazura@uum.edu.my

Received: 23/4/2020

Revised: 18/11/2020

Accepted: 21/11/2020

Published: 31/1/2021

ABSTRACT

Purpose – This study explored English for Specific Purpose (ESP) students' utilisation of an online discussion forum (ODF) via the university Learning Management System to assist them in executing their group project task of constructing a Company Profile.

Methodology – A case study was employed, guided by Socio-Constructivism theory and the Partnership for 21st Century Learning framework. A total of 26 undergraduates participated voluntarily in the ODF. The group project was carried out virtually among group members in three online sessions. Prior to the project, students were briefed by the instructor, who posted questions to students via the portal in stages to carry out the discussion online. Besides the online postings, students wrote about the ODF experience in their reflective journals and took part in interviews. The data were qualitatively analysed.

Findings – Students valued the learning experience and perceived the ODF as beneficial in facilitating English language learning as well as fostering 21st century skills. The positive impact on English language learning was realised in students’ *linguistic attainment*. Meanwhile, *flexibility trait*, *reference for documentation*, *confidence increase* and *attentiveness provision* were identified as factors that influenced the students’ optimistic views on the use of the ODF. The students also saw the online environment as an inclusive venue for developing *critical thinking*, *leadership*, *discipline*, *time management* and *digital skills*.

Significance – The study demonstrated the potential of ODF as a convenient and flexible platform that is able to promote linguistic improvement among students through discussions and knowledge sharing relative to the assigned group task. The non-threatening learning and the conducive atmosphere of their group discussion experience also supported active participation, giving passive students more opportunities to express their opinions confidently.

Keywords: Online discussion forum, English for specific purpose, language learning experience, 21st century skills.

INTRODUCTION

In tertiary educational institutions, both teachers and learners are facilitated by technological advancements in computers, the internet and telecommunication. The thoughts and concerns of academics in the field of English language teaching, particularly researchers, have been stimulated by developments in 21st century language teaching and learning approaches (Shadieff & Yang, 2020), as learners have to strive to develop these competencies to thrive and stay relevant in a changing global society. A shift has ensued from conservative teacher-centred approaches to the much-preferred learner-centred approaches that emphasise on how learners construct knowledge individually and socially from the information and experiences in their repertoire. This can be seen especially in the emergence of social constructivism in the 1970s. In order to stay relevant, therefore, an active learning approach which aligns well with 21st century learning should be applied in a social constructivist English classroom to ensure students’ exposure to more profound learning and understanding within a meaningful context.

The current study was part of the researchers’ efforts in utilising an ODF to aid passive students who attained only a fraction of quality learning through

conventional teaching and learning practices in their ESP course. A lack of participation in face-to-face learning or discussion was observed among the students throughout the process of completing their tasks. Students also mostly used the Malay language in their discussions, except for a few extroverted learners. In an attempt to foster the use of English and other 21st century skills among students, ODF was selected to be integrated in this ESP course. The learners needed to play an active part in acquiring English and other vital skills. Thus, English language instructors needed to inspire students to adapt to an online mode. Hancock (2016) suggests that ODF is among the easiest computer facilitated communication instruments that can be incorporated to promote active participation and to stretch discussions beyond the classroom.

This study was guided by Social Constructivism theory (Vygotsky, 1978) and the Partnership for 21st Century Learning framework (P21, 2015). The epistemology of constructivism theory has remained a clear perspective for many educational organizations such as the Partnership for 21st Century Skills, which is supported by the National Education Association (NEA) of the United States (P21, 2015). In 21st century learning, the basic learning skills of reading, writing and arithmetic, known as the 3Rs, are highlighted alongside other 21st century skills. However, in this study, the investigation focused only on 2Rs (reading and writing) and critical thinking skills as these were relevant to the students' English for Professional Communication course.

According to the National Research Council of the National Academies of Science, USA (as cited in Sparks, 2012), 21st century skills include cognitive skills (e.g., analytical and critical thinking skills); interpersonal skills (e.g., collaboration and complex communication); and intrapersonal skills (e.g., flexibility, reflectivity and conscientiousness). Thus, it becomes possible to set up a framework exemplified by linking the knowledge of core subjects with proficiencies in learning and innovation, such as creative thinking, critical thinking, communication and collaboration skills; life and career skills such as time management, leadership, discipline; and information media and technology skills, including computing and digital literacy (Ali et al., 2018).

In the current ESP study, this framework was grounded in language instructors' capability to incorporate an online learning environment using ODF, where students could practice and engage in language learning to complete a task on writing a CP. It was based on the need to teach not just the target language or how to execute the writing of business proposals, but predominantly to enable students to develop essential 21st century skills while practicing the English language in authentic situations (Eaton, 2010; P21, 2015) for today's global

needs. It was also related to the social constructivist approach to language learning, which focuses on students' ability to construct meaning through social interaction and applying their knowledge in real settings (Wang, 2014).

The integration of technology such as the ODF should positively affect language teaching and learning (Giacumo & Savenye, 2020; Green et al., 2013; Mohammadi et al., 2018). Pinto-Llorente et al. (2017) demonstrated that ODFs contributed to the development of grammar skills such as parts of speech, sentence types and vocabulary. Similarly, studies on language and writing development have investigated the success of the ODF platform in enhancing vocabulary, grammar and spelling (Tolosa et al., 2013; Vinagre & Muñoz, 2011). In the 21st century, the ODF has become a relatively beneficial and prospective technical instrument, capable of attaining significant advancements in tertiary education through its potential to facilitate and alter education, as well as refine existing teaching and learning styles (Ahmadi, 2018) among instructors and learners (Sun & Chen, 2016). The ODF is a text-based, computer-facilitated communication setting that permits interaction among individuals, given the liberty of time, learning pace and space in the learning process (Pramela & Supyan, 2015). Besides, students' communication can take place through the ODF realm, where they can post text messages and share content (Brown et al., 2016). The evolution of online learning through ODF has been useful to teaching and learning in higher education, where "flexibility and convenience have facilitated wider participation for increasingly diverse students than would be possible with face-to-face delivery alone" (Delahunty, 2018, p.12).

ODF generates an inspirational setting for learners to convey their opinions and thoughts confidently without restrictions, further than they are able to do in a conventional classroom. Introverts or reserved students may effortlessly participate in the teaching and learning process through ODF, as they would be more relaxed and less apprehensive in sharing views from any setting (Onyema et al., 2019). Gruber (2015) discovered that silent or hesitant learners in face-to-face settings would regularly participate more commonly and more expressively in online discussions.

On another note, researchers have implied that ODF is capable of taking discussions to a higher critical level (Afify, 2019; Al-Husban, 2020) in that it offers a channel for sharing diverse viewpoints, conveying sense and perceiving knowledge gaps (Klisc et al., 2017). Sun and Bin (2018) investigated students' critical thinking skills when interacting with each other on ODF. They found that students who utilised ODF displayed higher levels of knowledge and analysis skills. Foo and Quek (2019) asserted that ODF can improve the skills

required in critical thinking, such as deliberating on different perspectives and shaping opinions through written subjective substantiation. Consequently, attributable to the depth that ODF learning possesses, it can be reasoned that learners would gain from expanded learner-to-learner interactions which are absent in face-to-face classrooms (Bell & Fedeman, 2013).

Hence, the objectives of the study were as follows:

- 1) to investigate the use of ODF in enabling language learning alongside fostering 21st century skills in an ESP course.
- 2) to gain insights on the utilisation of the online learning setting for constructing and completing an assigned task known as ‘Company Profile’ (CP).

METHODOLOGY

Using a single case-study method, this study displayed a specific explanation of the occurrence being explored in its real situation (Yin, 2013). It delved into using ODF as an English language learning experience from students’ insights, and how its utilisation could develop other related 21st century skills. The research design employed was qualitative in nature as the data collection and analysis methods were deemed appropriate to achieve the study objectives.

The Study

In constructing the students’ CP document task for the English for Professional Communication course, the implementation of ODF activities was organised according to the topics from the lesson plan prepared by the researcher, and approved by the class instructor and course coordinator. Students were given guidelines to adhere to during the ODF participation. The discussion was divided into three sessions; each session had its own topics and activities accordingly planned (refer to Table 1) to produce a profile document for a newly created company. Each online discussion session was opened for a week, during which students discussed and collaborated in constructing and executing their CP. For example, when the instructor asked a question about the types of business they preferred, students were expected to discuss and brainstorm among themselves within the respective groups that they had formed prior to the ODF. They were also expected to be active, responsive and productive in their discussions.

Table 1

Topics Posted for Students' Online Discussion Activities

ODF Number	Instructions	Company Profile Components
ODF #1	<ul style="list-style-type: none">- Discuss the product/service.- Type of business.- Justify why you have chosen it.- Justify why you have chosen the location. Provide 3 reasons.	<ul style="list-style-type: none">- Nature of business and type- Company background
ODF#2	<ul style="list-style-type: none">- Discuss more on building capital- Origin, source of funds- How the capital will be spent- Slogan and motto; show company's aura, goal & recognition.	<ul style="list-style-type: none">- Capital and Resources- Slogan and Motto
ODF#3	<ul style="list-style-type: none">- Vision and mission--must be clearly stated, must be proper, unique, original & easy.- Logo--must have symbols reflecting your company value, quality and convey message of your brands.- Letterhead--must clearly demonstrate features of company information.Chart--flow must clearly show line of organisation and designation.	<ul style="list-style-type: none">- Vision and Mission- Logo- Letterhead- Organisational Chart

Participants

The data was collected from a group of 26 undergraduate students majoring in various disciplines. The participants, comprising 5 males and 21 females, were selected through purposeful sampling to participate in the ODF. For the confidentiality of participants, abbreviations of their names were used. The participants had to meet several criteria, such as adequate existing knowledge of computers and internet use, and adequate proficiency in the English language.

Instrumentation

Semi-structured questions for three reflective journals and an individual interview protocol were designed. Both instruments were used to assess students' experiences, views and feelings regarding the ODF participation, together with their development of skills while constructing the CP task.

All data from the individual interview were transcribed verbatim, organised and imported to Microsoft Word files, then saved in a Students' Interview Transcripts folder. The ready transcribed data obtained from students' reflective journals were directly saved in other Microsoft Word files in a Students' Reflective Journal folder and numbered consecutively. Then the data were categorised into main themes which served as a foundation structure for initial categorisation to explore the data (Gibson & Brown, 2009). They were identified and coded within the main themes and categorised into potential sub-themes drawing on the inductive (data-driven) approach, which resulted in the emergence of several categories of themes. The data analysis was conducted through six steps, based on Creswell (2014): prepare and organize data, explore data through coding, utilise codes for constructing themes, represent discovery themes through the narrative, interpret the meaning of the findings and validate the accuracy of the findings.

The data from the students' reflective journals and individual interview were grouped into several themes. They showed that the students were positively inclined towards ODF in regards to how using the platform in the learning process of constructing the CP was beneficial to their linguistic knowledge. In addition, from the students' optimistic views on the use of ODF to complete their CPs, the idea of flexibility, time frame, documentation, and attentiveness generally emerged as influential factors in ODF usage.

FINDINGS AND DISCUSSION

The students in this study valued the learning experience and perceived the virtual setting in the ODF as beneficial while constructing the CP task. The ODF was deemed a potential platform in promoting the enhancement of students' language skills, together with several related 21st century skills. In the discussion below, excerpts from the data are presented to support the findings. The abbreviations (e.g., AZ) refer to a participant's name; "rj," the reflective journal; and "Ii," the individual interview, while the numbers refer to the series number of the respective data.

Linguistic Attainment

Firstly, the data obtained from the individual interview and reflective journals conveyed the students' positive perception regarding the use of the ODF, which had enriched their linguistic knowledge in terms of syntactic structure construction; wordlists, pronunciation, spelling and grammar checks; proper word usage in context, WH-questions, and parts of speech.

Syntactic Structure Construction

Some students claimed that through the utilisation of the ODF, they had learnt something about the syntax of the English language, such as the grammatical arrangement of words in a written sentence. This ensured that the precision of sentence arrangement, continuity of information or thought, arguments and subject matter were understood by peers in the group. The notion of English syntactic structure acquisition was shared by the students in their reflective journals and individual interview.

To ensure my ideas was well-explained, I had to ensure the structure of the sentence was correct...in order to build a good sentence while constructing and writing my Company's Profile. (NJ, rj3)

I learn much things on the online discussion forum like, uhh, how to construct a good sentence in English...also if I write in discussion, I need to organise it well so that...so to make others understand the content, or what ideas I shared, or argued with them. (LK, Ii)

New Wordlist, Pronunciation, Spelling and Grammar Check

Spelling and grammar checks were other English language learning skills that students mentioned acquiring while participating in the ODF. The participants stated that computer software applications such as MS-Word, and online spelling and grammar checkers on the Web, such as online dictionaries, Language-Tool, Grammarly Lite, and online Thesaurus were used. These applications helped them learn about the precision of words by checking spelling, assisting in phonetical word utterances, highlighting basic grammar errors, and proposing suggestions for corrections. Through software applications and website artificial intelligence, wrongly spelled words were avoided while typing their posts in the ODF. With this, students learned to produce English language output accurately.

I learned how to pronounce the word correctly. For example, the word "rendezvous," I know how to say it accurately after I listened to word when I search for online dictionary to find the definition. I can hear how the word

was pronounced from my laptop. Yeah... and also, I learned how to correct my spelling using the spelling check from Microsoft Word when I typed my comments. (AZ, Ii)

I had used LanguageTool.com website to check whether my grammar and spelling used were correct or not. This can make the discussion more interesting. (LK, rj2)

I usually will use Grammarly Lite. It will correct me anytime I've made a mistake. Other than that, if I am using in Microsoft Word, there is free spelling checker in there. (FS, rj2)

In addition, one participant asserted that the use of Google Translate practically facilitated her language learning. The efficiency and reliability of the translation app in interpreting unfamiliar English diction to Malay words were helpful in assisting NQ to acquire and expand her English wordlist.

I use Google Translate to translate the word that I don't know. It is effective and useful because we will know and learn the new vocabulary. (NQ, rj3)

Furthermore, a mixture of commentaries and feedback from group members offered different options for checking diction, syntactic structure or grammar. This kind of partner responses and comments widened students' knowledge and facilitated the learning of English linguistics rules.

What I have learned with group members is something new such as vocabulary and grammar that correct. (NS, Ii)

Uhhh yeah sometimes. I learnt new things like I gained knowledge on new words or vocabulary...haa... how to make a good sentence properly just by looking at my group member way of writing, from members who have good English. (NJ, Ii)

In contrast, NJ felt that Google Translate was an unreliable app for her to learn vocabulary and proper word arrangement to form written sentences. Therefore, she utilised Thesaurus glossary online in learning how to compose appropriate and accurate sentences in the process of completing her task. The extract below illustrates her reflection.

I learnt that Google Translate was not always right. So, I also used Thesaurus dictionary to spell words in order to build a good sentence while constructing and writing my Company's profile. (NJ, rj2)

Words in Context and Parts of Speech

The students expressed that some English language elements were acquired by associating with the proper use of words in context and parts of speech. These language components were gained from discussing and working on the execution and construction of the CP task project in the ODF. In the following extract, a student (SO) mentioned how ODF had triggered awareness about her sentence construction. The selection of precise words and sequence order should align with the business context and related terms. Hence, she listed some commercial jargon such as “capitals” and “funds” to illustrate words she thought were appropriate to be used in the constructing the company profile.

I have learnt to be more careful with my sentence structure like when to use the correct prepositions and nouns...vocabularies are suitable to be used when discussing on the company profile as some terms are not suitable to be used. For example, the words ‘capitals,’ ‘funds,’ and others are used. (SO, rj2)

Likewise, MH revealed how he had learned to choose adjectives to describe the motto to suit his company’s nature of business. He classified the wording of his motto, i.e., “Simple, Stylish, and Stunning,” as adjectives, demonstrating his awareness of English parts of speech. Nonetheless, MH considered it important that the words selected for his company’s motto should also reflect its business description in the marketplace. Besides, he learned that word choice should be straightforward, precise, exceptional, and neutral, in order not to offend any group of consumers.

I learn so much about the English language in completing the company profile. For example, is language use for motto which is ‘Simple, Stylish, and Stunning.’ They are adjective, describing nouns. In selecting this motto, we need to make sure the language of adjective use is suitable with our company business and also need to make sure this the language will not upset other people. (MH, rj3)

The students acknowledged the usefulness of the ODF in facilitating their development as English language learners when they practiced actively in it. The use of the ODF clearly assisted in familiarising the learners with language structures and vocabulary. The interactions resulted in linguistic gains, including awareness of spelling, appropriate use of grammar and sentence structure. Such interactions are often considered meaningful in language acquisition as they encouraged the use of vital language features to construct the CP. The findings of the current study are similar to Pinto-Llorente et al. (2017), Tolosa et al. (2013) and Vinagre and Muñoz (2011).

Preference for ODF Usage

The analysis of the data from reflective journals and individual interviews further indicate other positive perceptions regarding ODF usage, which have been labelled as Flexibility Trait, Reference Documentation, Attentiveness Provision and Increase in Confidence Level.

Flexibility Trait

Students were positive about using the ODF as it was flexible, especially in terms of time and space. The virtual setting of the discussion activities meant that they could discuss the CP task in a more practical manner, as time and space constraints were removed, unlike face-to face encounters. They were able to interact and meet in a virtual realm at any time they desired, without physically attending an actual location or showing up at a particular venue.

I personally felt at ease as all of the group members are able to discuss and interact in the same space provided. I am able to save time as when discussing face to face we have to go to one place physically. By doing so, we are able to discuss anytime anywhere as long as there's an access to the Internet. (SO, rj1)

The ODF's adaptability in terms of allowing group discussions to take place at the students' convenience also helped them obtain new knowledge relevant to the CP task. The process of information expansion on this platform occurred especially when they were searching for relevant information on the internet, and after they had shared the retrieved information with peers. The internet was useful in orientating students to an unfamiliar topic and was able to deliver accessible information instantly during their research discussion. The apt use of the platform encouraged students' engagement in completing their CP to the point of obligation. This idea was mentioned by two students in their individual interviews.

By using online discussion, the discussion still can...can run no matter...umm, notwithstanding where the group members are located. I can also directly search info, the information from website while doing the discussion. Other than that, its flexibility, it is flexible for us...for everyone...for group members to commit with the discussion to finish the task. (SS, li)

If I... really, I do not understand, uh, the topic that we discussed, I would again, uh...search it online, on the spot...and just open a new tab in my, you know...laptop. So, on the spot I would get the answer I want...to find. It's easier for me to access and find out about certain information that I want to find. (SO, li)

Participants agreed that the primary reasons for their appreciation towards the ODF platform included flexibility, convenience, the ability to access the Web wherever an internet connection was available, and doing so at their own pace. These findings also support previous studies (e.g., Bouhnik & Marcus, 2006, Delahunty, 2018; Gray & Smyth, 2012; Hara et al., 2000; Pramela & Supyan, 2015).

Reference Documentation

Some students shared their positive views of ODF in their reflective journals, regarding it as comprehensive and systematic, and highlighting its function as a reference document. Clearly, the ODF allowed students a great deal of flexibility in terms of revisiting previously posted ideas that they had constructed and shared. The students could engage in referencing or revisiting ideas in a more organised manner because they were able to identify what they had discussed, where they had stopped and where they had to continue. All the posts made by participants could be easily traced through historical manuscripts as they were all saved in the web-based archives, as captured in the excerpts below.

...can save or we can look back our conversation about assignment, as it can last forever. (NF, rj1)

...can take a look again the notes and info we discuss in online forum. (IA, rj1)

We are easily to refer back all the information history. (EC, rj1)

Information is recorded, and we can review it if we forget. (NK, rj1)

A study by Hew et al. (2010) similarly found that the ability of ODF to keep data virtually provided data retrieval for students' postings archive, which can create a long-term memory and effective learning.

Attentiveness Provision

Participants also claimed that the ODF platform was able to help them retain attention. Participants did not deviate from discussing topics related to the execution and completion of their CP task. Students appeared to have stayed more focused on the topic and showed greater commitment in the ODF than they normally would have done during a classroom discussion where, for example, conversations were often side-tracked by extraneous issues such as social events. This increased focus during ODF sessions might be attributable to the students' desire to cover as much material as possible to save time in meeting deadlines for the task.

It can make me talk about to do Company Profile only. Standard 'lah' [i.e., normally] you know, when we talk in group by face to face, we sometimes talk about other things also, umm, about personal life and many more. So, this online discussion can make me focus to finish the assignment fast. (NS, Ii)

If we do face to face discussion, we...we take longer times to think, sometimes the idea came out is not relevant. But with online forum, it can save my time a lot because I can give more attention on topics for the project assignment. We won't be wasting to discuss or chit chatting on unrelated topics. (SS, Ii)

Increase in Confidence Level

In the ODF, the students appeared to have freedom of expression. Students expressed their feelings of consolation and calmness regarding their participation in this platform. The non-intimidating virtual setting encouraged openness for the students to share their knowledge and to support each other. They felt comfortable in expressing their views without feeling embarrassed. For some students, articulating their views in writing helped overcome their lack of confidence in having to speak. When speaking in a face-to-face setting, they felt more exposed as they had to put in the effort to communicate their ideas, and at the same time needed to be mindful of language. Nevertheless, online communication, specifically in text-based or written form, enabled learners to become less inhibited and allowed more time for them to contemplate on and organise their responses. This mode also gave them a better chance to provide conceptual clarity in a more perceptive response, allowing them to communicate with fellow learners in a comfortable atmosphere (Bassett, 2011). Thus, the ODF provided equal opportunity for all types of students to participate confidently without feeling intimidated, and provided better preparation for them to work together in their groups to complete their CP task.

When I used the online discussion forum, it can...can make me feel more comfortable and also confident. So, when increasing, when my confidence level is increased, will encourage me to use English language more and more and also can, will improve my language skills. (AZ, Ii)

Using online forum, I can comfortably give an idea as I am a timid person, so it becomes difficult to give an idea in class. (SN, rj1)

Online discussion give opportunity to me and group members who are usually passive in face-to-face discussion to talk without fear or shy. (NS, rj1)

Based on their responses, students' inclination toward online rather than face-to-face interaction can be attributed to their personality. Passiveness and

shyness were among the reasons for preferring online interaction. This finding resonates with Gruber (2015) and Onyema et al. (2019) who found that shy students feel less reticent to express themselves in the ODF environment, and confidence levels were elevated as there were more participatory opportunities for apprehensive individuals.

21st Century Skills Enhancement

ODF was able to improve a variety of abilities, such as critical thinking skills, leadership, discipline, time management and computer skills.

Critical Thinking Skills

The students' felt that their ability to engage in critical thinking changed as a result of the ODF sessions. Analysis of the reflective journals and individual interview data ascertained some subthemes:

i. Advancement of thinking.

Some students noted that their thinking skills were enhanced when using ODF. AZ stated that his level of thinking developed, which allowed him to think in multiple directions for idea generation to accomplish the group task. Similarly, NT claimed that her thinking process in developing ideas accelerated as an outcome of using ODF.

I can develop my critical thinking skill as I considered myself as a matured person. I can try to think of many ways of solution to complete the group project as my level of thinking is developed. (AZ, rj3)

...critical thinking skill – now make my brain a bit progressive to think faster than before to search for ideas. (NT, rj3)

ii. Multiplicity of viewpoints.

Some students told that reading peers' postings and comments helped in generating diverse perspectives. Discussing through ODF gave them multiple perspectives on revising and improving ideas or their knowledge of writing. The participants felt their own ideas and contributions were enriched by a variety of new ideas about how to support their arguments with reasons, evidence, photos, diagrams and examples.

Everyone's ideas are different, so...you know, like we can't just see something, uh...only from our own eyes, so...yeah, like what they said, for

example like...uh, about the logo...like they said that...uh, this is clearer and they...one of our group members, uh...they posted it in the online discussion and we're able to clearly see and compare the two logos...so, yeah, I learn a lot from my group members, as well as using the online discussion forum. (SO, Ii)

Student LZ mentioned that she learned from reading what other team mates wrote through postings. As she believed that working together would generate better ideas, she accepted others' viewpoints.

Yeah, I feel I've learned something from my group members, need to think out of box, means that we cannot think in the, what we already have. Then we need to think in other ways, in many ways, from many...many perspectives and not just one perspective. (LZ, Ii)

These students felt that by using ODF, their critical thinking ability had improved. In this platform, they were capable of progressing in their thinking method and constructing various perspectives. This finding is consistent with research by Al-Husban (2020) and Rajprasit (2015) on the acquisition of critical thinking abilities through ODF, since learners assessed the written text of other participants by reading them. The students also believed that they exercised their mental capacity more regularly in asynchronous online discussions compared to discussions in the classroom. They obtained significant learning from group members' writing, as the numerous common viewpoints in similar topics were able to intensify their understanding effectively. By way of active commitment in discussions and deliberation, participants' critical thinking abilities were enriched. This finding validates the outcomes described in past research endeavours (e.g., Afify, 2019; Alexander et al., 2010; Bell & Federman, 2013; Klisc et al, 2017).

The learners needed to concurrently construct rational verdicts on their group members' opinions by considering and assessing any substantiated claim. By debating against refutations, demanding explanations and challenging disapproval of contradictory interpretations and principles, participants could hone their reasoning skills and enhance critical thinking. This resonates with the assertion that peer interactions produce a noteworthy variation in a learner's aptitude for generating argumentative exchanges and thus, in this regard, participants will expand their mentally analytical competencies (Sionti et al., 2011). Therefore, from a Socio-Constructivism view, as learners participate in ODF activities, they embrace what they construct and reconstruct from working together (Vygotsky, 1978). In this study, the students felt that ODF improved their critical thinking when executing their CP task. This is where a

paradigm shift from conventional learning to more effective learning occurred, built on the idea that students have to construct and reconstruct knowledge.

Leadership

NQ shared the fact that she acquired executive competency to ensure the group functioned efficiently. The group efficiency could be realized when the duties performed by the group leader was fairly distributed to other members in steering the group interaction successfully.

I gained leadership skill which is important in order to make the group become more effective because the leader play the important role to conduct the group discussion. Leader must know what to do and split the task. (NQ, rj3)

Similarly, SS asserted that her leadership skill was gained through ODF involvement. She was accountable for ensuring all of her team members executed tasks on target, following their group's aim.

From this project, I learnt how to be a leader. I need to do decision, lead the group, and make everyone clear and understand our aim or objective. I also need to ensure that everything is on track and done on time. (SS, rj3)

Students' descriptions of leadership skills attainment indicated positive associations with participation in the ODF. The execution of the CP task as collaborative group discussion activities via ODF prepared the students to put their leadership quality to practice in managing group discussions, which helped them to develop stronger leadership skills. Xie et al. (2019) suggest that the co-regulatory influence of students in leadership roles depends on individual self-regulation; they found encouraging connections between the use of self-regulatory activities, perceived leadership and online postings conduct. In fact, learners who demonstrated high participation levels in asynchronous online forums were also most likely to have a chance to sharpen their leadership skill behaviours (Gaul & Kim, 2020). These findings suggest that leadership skill development increases with participation in ODF.

Discipline

NK mentioned in her first reflective journal that she developed a sense of self-discipline through ODF participation. She became more self-controlled in order to keep herself updated on the group discussion activities:

...this learning experience made me more disciplined, always checking online discussion so I do not be left behind. (NK, rj1)

Time Management

Another skill obtained from online participation was time management. NF described in her first reflective journal that she acquired this skill and acknowledged it as vital. The ability to manage her time reflected the extent to which she could execute tasks.

[The] skill I learned is time management. Time management is very important because it shows how we managed our time in doing our work and carried out our responsibility in life. (NF, rj1)

Likewise, IA expressed that she obtained the skill of managing her time through ODF by participating in activities with group members.

I learn how to manage time when they have discussion and try to make it together that I will not lost the information. (IA, rj1)

The findings of the current study support those of Markova et al. (2017), where the virtual platform for online learning was conceived with the intent to discipline learners, thus increasing the necessity for accountability towards completing tasks in an autonomous manner. In the same vein, other studies such as Beketova et al. (2020) have concluded that tertiary level online learning utilising asynchronous ODF can stimulate learners to engage in a more disciplined routine, such as being aware of class matters and applying better time management.

Digital Skills

ODF was also able to improve students' computer skills. For instance, SG mentioned that her technical skills were developed through online discussion engagement. She further elaborated that it was essential to acquire computer skills as the technology has become a necessity, now and for the future.

I think I learned computer skills. It is a must have for everybody because we all need to use computer for our future. This is because, our technology become more sophisticated and maybe one day, everything that we want to do must use the computers or other technology. So, it is more important to use that skill. (SG, rj1)

The use of ODF also trained students to be more capable in using digital skills, specifically when learning through this virtual platform. AN learned how to impart information relative to the final group project among her team members. She was able to extract relevant information and store it, enclose

visuals and images, and provide website address links to other members for further exploration. This act of knowledge sharing electronically aided them all in completing the project task. Congruent with SG, AN also stressed that digital skills were a must, as globalization required everyone to encompass this skill to succeed in life.

The skill that I learn from using online forum is I know how we can share anything about our project like download and save appropriate text, attach graphics and photos, link website address so our group friends can see what we share for more information, and we can discuss more about our project. This skill is important because nowadays we are in era globalization that need computer IT skills in our life to be successful. (AN, rj1)

By incorporating the use of digital technologies including the computer and internet, ODF not only promotes learning of the subject matter (in this case, English) but also fosters students' digital skills simultaneously (Gil & Petry, 2016; Nouri, 2018). Therefore, it is established that ODF has a positive influence on the development of digital skills. The emphasis on the need to use ODF in developing digital skills must be balanced with the ability to stay relevant to 21st century technological developments.

CONCLUSION

This study reported students' insights from their experience of using an ODF in their ESP course. On the whole, it was found that the majority had positive perceptions towards the implementation of ODF to assist in their English language learning, specifically in the task of constructing a company profile. The students benefitted linguistically in terms of development of *syntactic structure, wordlists, pronunciation, spelling and grammar checking, use of appropriate words in context and parts of speech*. Besides that, several influential factors played a vital role in the students' positive perceptions on the use of ODF, namely *flexibility trait, reference for documentation, confidence increase and attentiveness provision*. In terms of cultivating 21st century skills, the findings indicate that students valued the learning experience and viewed the online environment as an inclusive place where they were able to develop their critical thinking. Two other themes that emerged most consistently were *advancement of thinking and multiplicity of viewpoints*. Moreover, other skills such as *leadership, discipline, time management and digital skills* were also gained through the use of ODF. Learners who seldom participated in conventional classroom discussions also became willing to share their opinions liberally without being looked down upon by the more dominant learners. Their participation in ODF added to the quantity of alternative perspectives,

in contrast to the conventional classroom discussion. ESL instructors ought to utilise this benefit critically so that the gap in achievement between diverse types of learners in the ESL classroom can be reduced.

Further research may be conducted utilising other current technologies such as augmented reality, robots and Clicker, using a larger sample. It is hoped that the findings of this study will contribute to both the growing knowledge on and future directions of ODF use, with a view to facilitating English language learning alongside developing other related skills that are required for students to survive in the globalised era of the 21st century.

ACKNOWLEDGMENT

This research was funded by the Ministry of Higher Education, Malaysia under the SLAB scheme, and Universiti Utara Malaysia.

REFERENCES

- Ali, S. M., Harun, H., Mahir, N. A., Massari, N., Saad, N. S. M., & Simkin, K. (2018). Meeting the demands of the 21st century English language learning through PBL-LcCRAFT. *GEMA Online Journal of Language Studies*, 18(2). <https://doi.org/10.17576/gema-2018-1802-17>
- Affify, M. K. (2019). The influence of group size in the asynchronous online discussions on the development of critical thinking skills, and on improving students' performance in online discussion forum. *International Journal of Emerging Technologies in Learning (IJET)*, 14(5), 132-152. <https://doi.org/10.3991/ijet.v14i05.9351>
- Ahmadi, M. R. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 116-125. <https://doi.org/10.29252/ijree.3.2.115>
- Alexander, M. E., Commander, N., Greenberg, D., & Ward, T. (2010). Using the four-questions technique to enhance critical thinking in online discussions. *Journal of Online Learning and Teaching*, 6, 409-415.
- Al-Husban, N. A. (2020). Critical thinking skills in asynchronous discussion forums: A case study. *International Journal of Technology in Education*, 3(2), 82-91. <https://www.ijte.net/index.php/ijte/article/html>.
- Bassett, P. (2011). How do students view asynchronous online discussions as a learning experience? *Interdisciplinary Journal of E-Learning and Learning Objects*, 7(1), 69-79. <https://doi.org/10.28945/1376>
- Bell, B. S., & Federman, J. E. (2013). E-learning in postsecondary education. *The Future of Children*, 23(1), 165-185. <https://doi.org/10.1353/foc.2013.0007>

- Beketova, E., Leontyeva, I., Zubanova, S., Gryaznukhin, A., & Movchun, V. (2020). Creating an optimal environment for distance learning in higher education: Discovering leadership issues. *Palgrave Communications*, 6(1), 1-6. <https://doi.org/10.1057/s41599-020-0456-x>
- Bouhnik, D., & Marcus, T. (2006) Interaction in distance learning courses. *Journal of the American Society for Information Science and Technology*, 57(3), 299-305.
- Brown, B., Schroeder, M., & Eaton, S. E. (2016). Designing synchronous online interactions and discussions. In Takeuchi, W.A., Babb, A.P Preciado, & Lock, Jennifer (Eds.). *Proceedings of the IDEAS: Designing for Innovation* (pp. 51-60). University of Calgary.
- Creswell, J. W. (2014). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education.
- Delahunty, J. (2018). Connecting to learn, learning to connect: Thinking together in asynchronous forum discussion. *Linguistics and Education*, 46, 12-22. <https://doi.org/10.1016/j.linged.2018.05.003>
- Eaton, S. E. (2010). *Global trends in language learning in the 21st century*. Onate Press. <https://files.eric.ed.gov/fulltext/ED510276.pdf>
- Foo, S. Y., & Quek, C. L. (2019). Developing students' critical thinking through asynchronous online discussions: A literature review. *Malaysian Online Journal of Educational Technology*, 7(2), 37-58. <https://doi.org/10.1080/01587910701611328>
- Gaul, C., & Kim, M. K. (2020). Learner participation regulation supported by long-term peer moderation and participation feedback during asynchronous discussions. *Journal of Computers in Education*, 1-37. <https://doi.org/10.1007/s40692-020-00158-5>
- Giacumo, L. A., & Savenye, W. (2020). Asynchronous discussion forum design to support cognition: Effects of rubrics and instructor prompts on learner's critical thinking, achievement, and satisfaction. *Educational Technology Research and Development*, 68(1), 37-66. <https://doi.org/10.1080/08923640701341653>
- Gibson, W., & Brown, A. (2009). *Working with qualitative data*. Sage.
- Gil, J. S., & Petry, P. P. (2016). Promoting digital competence in secondary education: Are schools there? Insights from a case study. *Journal of New Approaches in Educational Research (NAER Journal)*, 5(1), 57-63. <https://doi.org/10.7821/naer.2016.1.157>
- Gray, C., & Smyth, K. (2012). Collaboration creation: Lessons learned from establishing an online professional learning community. *Electronic Journal of e-Learning*, 10(1), 60-75. <https://doi.org/10.14297/jpaap.v2i3.111>
- Green, R. A., Farchione, D., Hughes, D. L., & Chan, S.-P. (2013). Participation in asynchronous online discussion forums does improve student

- learning of gross anatomy. *Anatomical Sciences Education*, 7(1), 71-76. <https://doi.org/10.1002/ase.1376>
- Gruber, S. (2015). Ideologies in online learning environments: The need for multiple stories. *Journal of Interactive Online Learning*, 13(4), 39-53.
- Hancock, C. J. (2016). Discussion roles: Helping adult students create a meaningful online discussion. *The Journal of Continuing Higher Education*, 64, 65–68.
- Hara, N., Bonk, C. J., & Angeli, C. (2000). Content analysis of online discussion in an applied educational psychology course. *Instructional Science*, 28, 115–152.
- Hew, K. F., Cheung, W. S., & Ng, C. S. L. (2010). Student contribution in asynchronous online discussion: A review of the research and empirical exploration. *Instructional Science*, 38(6), 571-606. <https://doi.org/10.1007/s11251-008-9087-0>
- Klisc, C., McGill, T., & Hobbs, V. (2017). Use of a post-asynchronous online discussion assessment to enhance student critical thinking. *Australasian Journal of Educational Technology*, 33(5), 63-76. <https://doi.org/10.14742/ajet.3030>
- Markova, T., Glazkova, I., & Zaborova, E. (2017). Quality issues of online distance learning. *Procedia-Social and Behavioral Sciences*, 237, 685-691. <https://doi.org/10.1016/j.sbspro.2017.02.043>
- Mohammadi, M. O., Jabbari, A. A., & Fazilatfar, A. (2018). The impact of the asynchronous online discussion forum on the Iranian EFL students' writing ability and attitudes. *Applied Research on English Language*, 7(4), 457-486. <https://doi.org/10.22108/are.2018.112792.1351>
- Nouri, J. (2018). Students multimodal literacy and design of learning during self-studies in higher education. *Technology, Knowledge and Learning*, 24(4), 683-698. <https://doi.org/10.1007/s10758-018-9360-5>
- Onyema, E. M., Deborah, E. C., Alsayed, A. O., Noorulhasan, Q., & Naveed, S. S. (2019). Online discussion forum as a tool for interactive learning and communication. *International Journal of Recent Technology and Engineering*, 8(4), 4852-4859. <https://doi.org/10.35940/ijrte.D8062.118419>
- P21 Framework Definitions. (2015). Frameworks for 21st century learning. P21 Partnership for 21st Century Learning. https://en.wikipedia.org/wiki/21st_century_skills
- Pinto-Llorrente, A. M., Sanchez-Gomez, M. C., Garcia-Penalvo, F. J., & Casillas-Martin, S. (2017). Students' perceptions and attitudes towards asynchronous technological tools in blended-learning training to improve grammatical competence in English as a second language. *Computers in Human Behavior*, 72, 632-643. <https://doi.org/10.1016/j.chb.2016.05.071>

- Pramela, K., & Supyan, H. (2015). *Online forum and language learning pedagogical consideration*. Universiti Putra Malaysia Press.
- Rajprasit, K. (2015). Using online discussion in the English language classroom: an opportunity to develop critical thinking skills among Thai tertiary students. *University of the Thai Chamber of Commerce Journal Humanities and Social Sciences*, 35(4), 165-179.
- Sionti, M., Ai, H., Rosé, C. P., Resnick, L. (2011). A framework for analyzing development of argumentation through classroom discussions. In Pinkwart, N. & McClaren B. M. (Eds.), *Educational technologies for teaching argumentation skills* (pp. 28-55). Bentham Science Publishers.
- Shadiev, R., & Yang, M. (2020). Review of studies on technology-enhanced language learning and teaching. *Sustainability*, 12(2), 524. <https://doi.org/10.3390/su12020524>
- Sparks, S. D. (2012, July 10). Study: ‘21st-century learning’ demands mix of abilities. *Education Week*. <https://www.edweek.org/education/study-21st-century-learning-demands-mix-of-abilities/2012/07>
- Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education: Research*, 15, 157-190. <https://doi.org/10.28945/3502>
- Sun, G., & Bin, S. (2018). Topic interaction model based on local community detection in MOOC discussion forums and its teaching application. *Educational Sciences: Theory & Practice*, 18(6), 2922-2931. <https://doi.org/10.12738/estp.2018.6.191>
- Tolosa, C., East, M., & Villers, H. (2013). Online peer feedback in beginners’ writing tasks. *IALLT Journal of Language Learning Technologies*, 43(1), 1-24. <https://doi.org/10.18823/asiatefl.2017.14.1.9.130>
- Vinagre, M., & Muñoz, B. (2011). Computer-mediated corrective feedback and language accuracy in telecollaborative exchanges. *Language Learning & Technology*, 15(1), 72-103.
- Vygotsky, L. (1978). *Mind in Society: The development of higher psychological processes*. Harvard University Press.
- Wang, Y. C. (2014). Using wiki to facilitate interaction and collaboration among EFL learners: A social constructivist approach to language teaching. *System*, 42, 383-390. <https://doi.org/10.7220/2335-2027.5.8>
- Xie, K., Hensley, L. C., Law, V., & Sun, Z. (2019). Self-regulation as a function of perceived leadership and cohesion in small group online collaborative learning. *British Journal of Educational Technology*, 50(1), 456-468. <https://doi.org/10.1111/bjet.12594>.
- Yin, R. K. (2013). *Case study research and applications: Design and methods*. Sage Publications.