

CHAPTER II

LITERATURE REVIEW

This chapter is divided into two significant parts, discussing the theoretical framework and previous studies. Academic studies comprise related theorists in this study, while previous studies discuss the implementation of that related theories in prior studies.

2.1 Theoretical Framework

2.1.1 Online Collaborative Learning

Research on collaborative online learning has recently increased dramatically due to the influence of the social dimension of constructivist learning in EFL education (Jeong, 2019). The impact from a social constructivist point of view on second language and foreign language teaching has expanded research on collaborative learning compared to competitive classes and private learning assignments from conventional education (Jeong, 2019). The hallmark of collaborative online learning is that it involves students collaborating to create knowledge. Students are sustained and nurtured to collaborate to generate and share information or to uncover and investigate new and innovative ways to disseminate ideas through collaborative online learning that offers a framework for understanding (Chen, Chuang, & Laceste, 2021).

In social constructivism, students will mutually support their learning achievements. Especially in web-based online environments, cooperation with linguistic and strategic information can lead to positive perceptions of

collaboration among learning communities (Kessler, Bikowski, & Boggs, 2012). Students can enhance their cognitive growth through cooperative group assignments with the help of more experienced classmates and showcase their competency skills through social interactions with others. Students receive external support through collaborative learning in small groups because they can discover their unique abilities and support each other (Lai, Lei, & Liu, 2016). This has much to do with research (Anas, 2019; Lai, Lei, & Liu, 2016), which states that students collaborate in teams and contribute to achieving common goals and completing learning assignments.

Collaborative computer-supported learning is based on a pedagogy in which students construct knowledge through online group discussions (Zhu, 2012). Instructors base their teaching on knowledge construction by gradually building knowledge primarily through asynchronous online discussions between students and instructors. Therefore, discussion or interaction is an essential part of online collaborative learning. Although collaborative online learning structures and approaches are often difficult to adopt, research generally shows they enhance students' perceptions of learning (Buchs, Filippou, Pulfrey, & Volpe, 2017).

2.1.2 Online Collaborative Projects

Online collaborative projects generally require members to work together to create a result or product with the help of a digital meeting platform. In an online learning setting, where building something physical is impractical, the output of online collaborative projects usually takes the form of reports or wiki pages, or digital artifacts, such as websites (Donelan & Kear, 2018). Thus, the use

of technology facilitates collaborative learning and enables people to share activities and projects to remove barriers of time, distance, and resources (Bessagnet, Schlenker, & Aiken, 2005).

Technology provides new opportunities for learning in an increasingly connected world, where working collaboratively has become an essential skill (García-Valcárcel-Muñoz-Repiso, Basilotta-Gómez-Pablos, & López-García, 2014). However, collaboration does not come naturally within a group; therefore, it is necessary to implement strategies to coordinate individual efforts and monitor the learning process to provide the conditions for effective collaboration (Wang, 2010). In the EFL context, technology can promote collaborative work in several ways. Wikis, Blogs, and social networking services such as Facebook or Twitter offer many possibilities for online collaborative projects among EFL students (Donelan & Kear, 2018).

Brindley, Blaschke, and Walti (2009) make several recommendations for designing successful online collaborative projects, and many of them relate to the task or project: clarifying expectations and instructions for the task, selecting the task or project that the group best carries out; allow sufficient time for necessary tasks and collaboration; and striking a balance between structure and autonomy for students. Online collaborative projects include collaborative writing projects (Hsu & Lo, 2018), cross-cultural projects (Chen, Chuang, & Lacaste, 2021), collaborative reading (Li, Li, Su, Peng, & Hu, 2020), video projects (Huang, 2021), IELTS projects (Fischer & Yang, 2022), picture book projects (Lee & Wang, 2013), technology workshop projects (Mali, 2017), digital stories (Priego & Liaw, 2017), and essays (Kitjaroonchai & Suppasetsee, 2021).

2.1.3 The Role of Technology Tools as a Platform in Online Collaborative Projects

Educators have emphasized project-based learning for decades, and the current trend is to use technology to support it (Donelan & Kear, 2018). Several studies support using social media to build community and increase student engagement in higher education. On the other hand, Kyndt, Raes, Lismont, Timmers, Cascallar, and Dochy (2013) argue that students who study together are more than students who work individually. L2 education has long been interested in technology-enhanced language learning, and numerous scholars have performed review studies in this area (Zhang & Zou, 2021). It has been demonstrated that using technology among students fosters collaboration and cooperation since it encourages the writing process and creates an interactive atmosphere (Arsanjani & Faghieh, 2015; Dizon, 2016). Second-language university students' writing scores and favorable views of their writing experience have increased while participating in collaborative writing projects or assignments (Bikowski & Vithanage, 2016).

Other studies have also shown that using Web 2.0 social application tools and websites, including wikis, Google Docs, WebQuest, and Youtube, is the best way to conduct collaborative writing (Ebadi & Rahimi, 2017, 2018; Fathi & Rahimi, 2020; Hsu, 2019, 2020). By fostering efficacious and competent communication between L2 students to deal with and inquire about their own and their peers' writing tasks, as well as to create and amend various texts jointly, an online platform such as Wiki and Google Docs can eliminate the constraint on collaborative writing exercises that traditionally exist in the classroom (Elola &

Oskoz, 2017; Lai, Lei & Liu, 2016). In addition, project-based learning activities allow them to learn certain technologies from their group mates and other students in other groups. The participating students attempt to solve specific problems they encounter by learning new technologies (Mali, 2017).

Li (2018) systematically reviewed 21 prominent articles posted between 2008 and 2017 to understand computer-mediated collaborative writing better. She paid particular attention to the relation and members, the theory/educational scheme, the writing assignments, the technology used, and the focus of the inquiry. The findings demonstrate that most studies were conducted in superior L2 settings, that socio-cultural theory was the most frequently used framework, and that most studies looked at collaborative writing in small group assignments. The three technologies most usually utilized in collaborative writing computer mediation are wikis, Google Docs, and chat.

2.1.4. Benefits of Online Collaborative Projects

Teachers have attempted to offer language learners an excellent online learning environment to create groups, work together, and resolve issues using modern digital tools (Jeong, 2019). Over the past few decades, foreign language educators have paid a lot of attention to the benefits of collaborative learning. For instance, in cooperative learning, group members bring their unique motivating ideas, attitudes, and goals together (Jeong, 2019). Online application tools have made it easy for L2 student-centered learning environments to collaborate, participate, and use language to structure various L2 assignments, particularly L2 writing assignments (Awada, Burston, & Ghannage, 2019; Fathi & Rahimi, 2020;

Krishan, Black & Olson, 2020). For example, as a Web 2.0 technology, wikis allow users to collaboratively and asynchronously compose text online (Cho & Lim, 2015; Reinhardt, 2019).

English as a foreign language (EFL) students can develop ideas and offer criticism on their writing assignments' subject matter, structure, and linguistics through collaborative writing exercises mediated using wikis. Similarly, Hsu and Lo (2018) looked at the effects of wiki-mediated collaborative writing on the organization, complexity, and accuracy of the writing produced by EFL students. They discovered that the writing quality of EFL pupils had greatly improved. Ma (2020) also demonstrates that EFL students' writing skills can significantly benefit from wiki-based online peer feedback. According to Kukulska-Hulme and Viberg (2018), collaboration can help solve problems when communicating with coworkers, completing interactive tasks, or writing a project. Online collaborative projects also bridge socio-economic gaps because students who cannot afford to go abroad to study can interact with international students through the cross-cultural collaboration aspect of the projects (Chen, Chuang, & Laceste, 2021).

Wiki collaborative writing's potential to enhance L2 students' writing abilities has been the subject of considerable study (Hsu, 2019; Hsu & Lo, 2018; Li & Zhu, 2017; Ma, 2020; Wang, 2015). EFL students can develop ideas and offer feedback on their writing assignments' subject matter, format, and linguistic style while participating in collaborative writing exercises on a wiki (Hsu, 2019). By enabling students to study, edit, and revise texts at their convenience and at any time and location, wikis also allow collaborative writing efforts outside of the classroom (Castaneda & Cho, 2013). The same was expressed in Schultz and

Quinn's (2013) research, which revealed that students could successfully link their individual and team efforts to complete more complex tasks while gaining social skills and a sense of responsibility.

When students work together on collaborative writing projects using wikis, they may be able to better control their thoughts, feelings, motivations, and actions. This may also increase their sense of self-efficacy. This means that when students participate in collaborative writing tasks facilitated by wikis, their writing self-regulation and self-efficacy can be increased, further improving their writing performance in online environments (Alberth, 2019; Wang, 2019). In addition, active collaboration has been demonstrated to have advantages and promote cognitive growth (Hsu, 2020). Furthermore, researchers (Krishnan, Yim, Wolters & Cusimano, 2019; Zioga & Bikos, 2020) revealed that online word processors such as Google Drive could boost students' enthusiasm and participation in group tasks and personal writing growth. Students can develop their crucial thought and written communication capacity through synchronic or synch online discussions (Afify, 2019).

2.1.5. Challenges of Online Collaborative Projects

Collaborative learning is a form of social knowledge construction involving various forms of communication, such as essay writing or problem-solving activities (Miyake & Kirschner, 2014). Through online collaboration, L2 learners can participate formally and informally to improve language skills and proficiency (Yim & Warschauer, 2017). As stated by Kukulska-Hulme and Viberg (2018), collaboration can assist in communicating problems with peers,

completing interactive assignments, or developing written projects. However, although collaborative writing offers many benefits and is reportedly an effective and valuable tool for language learning, it also comes with some challenges. Brodahl and Hansen (2014) found that collaborative writing can sometimes be time-consuming, mainly because of the often-frustrating disagreements on paper style among writing group members. Consequently, some teachers may find that implementing collaborative writing slows students' writing processes.

Lee, Huh, and Reigeluth (2015) reported that conflict during collaborative activities stimulates members' thinking by making them explain, debate, and negotiate their positions. Some types of conflict or differences of opinion during collaboration can be complicated to resolve, and this, of course, will hinder reaching a consensus and will eliminate all learning processes. Al-Rawahi and Al-Mekhlafi (2015) also found that some students did not understand the ideas conveyed by group members because they had difficulty understanding English, leading to inaccurate language. MacNeill, Telner, Sparaggis-Agalotis, and Hanna (2014) also report that online collaborative group work is time-consuming and resource-intensive and may not be ideal for brief interactions.

On the other hand, other literature explains that carrying out group work online is more complex than group work in face-to-face settings. Researchers (Chang & Kang, 2016; Gillet-Swan, 2017) found some of the most common challenges in online group learning, such as a lack of community and connection. This aligns with the research by Arnold, Ducate, and Kost (2012) that this so-called social laziness undoubtedly occurs in collaborative classes. Some students use this opportunity to discuss unimportant subjects and not concentrate on the

current work. In addition, researchers also found obstacles to collaborative writing using Google docs during the learning process. Although Google docs is a free service, it requires an internet connection. Students cannot open or type text on Google docs if they do not have internet access (Sa'diyah & Nabhan, 2021). Even though Google Docs can be accessed from any device, including mobile phones, laptops, tablets, or PCs, some students cannot install the media because their phones do not support it or because the memory card is full. Furthermore, Alqasam (2022) reported that students' difficulties in online collaborative projects are unsure of how to use the media, such as inserting pictures and exchanging files. In addition, the platform is dull, use can be distracting, and there is no seriousness, as students are engaged in several other jobs simultaneously, creating distraction and no sincerity.

2.1.6 Theory Activity

An analytical framework for analyzing constraints and suggestions for online collaborative learning is provided by Activity theory (Engeström, 1999). Activity theory is increasingly being used in research fields such as the humanities and computer interaction (Kuutti, 1996; Mwanza & Engeström, 2003), distributed learning research (Russell, 2002), the conceptualization of online communities in educational settings (Barab, Schatz & Scheckler, 2004) and to design constructivist e-learning environments (Jonassen & Murphy, 1999; Said, Hassan, Idris, Zahiri, Forret, & Eames, 2013). In a computer-supported learning environment, studying the context in which technology is implemented helps to understand the domain in terms of the relationships between individuals, artifacts,

and social groups. Internet-based collaborative technology is implemented with complex interactions between participants and learning materials. Therefore, understanding the knowledge construction involved in collaborative assignments is essential. Building knowledge is the practice of making meaning in the context of shared activities (Stahl, Koschmann, & Suthers, 2006). Activity theory provides a theoretical lens for understanding knowledge-building and activity-oriented design methods (Cheung & Vogel, 2012).

Activity theory has evolved through different generations. The first generation of Activity theory originates from the sociocultural theory of Vygotsky, Leont'ev, and Luria (Engeström, 2001) and has developed to reach the third generation of activity theory by Engeström (1987, 1993, 1999). Vygotsky and others developed the concept of mediation that served as the core of the first generation of Activity theory. According to Vygotsky (1978), humans do not interact directly with their environment. They do so through interactions mediated by signs and tools. According to Vygotsky's theory of mediated action, social activity articulates the developmental transformation of internalized cognitive structures. Engeström defines a simple structural model of culture-mediated activities and relationships. Engeström (1987) stated that activity is the smallest and simplest basic unit that retains every human activity's essential, integral quality. The formulation of Vygotsky's mediation triangle (Vygotsky, 1978) is depicted in Figure 1. In the basic mediation model, a system activity consists of a subject and an activity object. Tools or artifacts mediate the relationship between subject and object. The activity-oriented design method provides a valuable framework for designing collaborative learning environments because it argues

that learning takes place as students engage in activities. An activity system aims to transform objects (objectives) into results through mediated tools or artifacts.

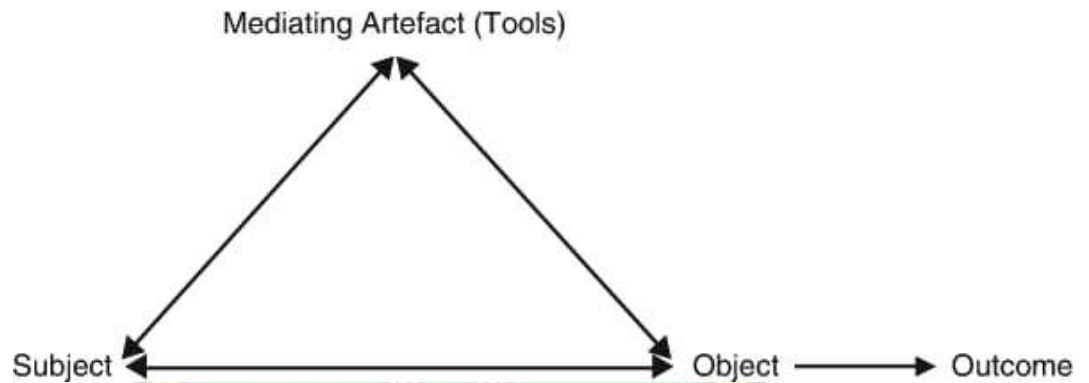


Figure 2.1 First generation of activity theory (Vygotsky, 1978)

However, the transformation process, as depicted in Figure 2.1, is limited because the primary unit of analysis only occurs at the individual level, which is missing the component of collective activity (Engeström, 2001). Inspired by Leont'ev's famous example of the ancient collective hunt, Engeström presents a much more integrated model of a collective human activity system that borrows Leont'ev's explication of the crucial differences between individual action and collective activity. Engeström defends his action by claiming that Leont'ev never explicitly expanded Vygotsky's model into a triangular model of a collective activity system as depicted in Figure 2.2.

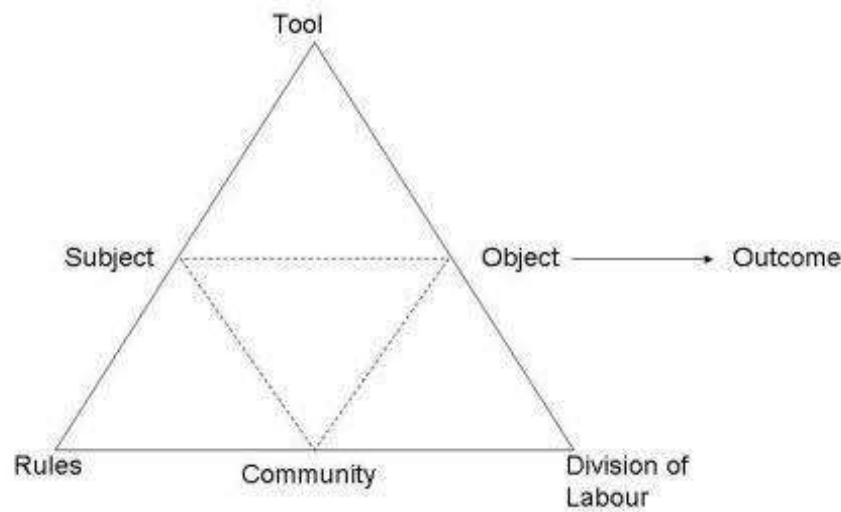


Figure 2.2 Second generation of activity theory (Engeström, 1987)

An activity system contains six interacting components: subjects, objects, tools, rules, division of labour, and community. Subjects consist of individuals or groups of individuals who are involved in an activity. Objects are particular directions of an activity, sharable materials to be transformed or modified by the participants in an activity, or abstractions such as plans or ideas, and an activity system aims to transform objects (objectives) into valuable outcomes. Tools are anything used to help the transformation process, such as computers and pens, psychological concepts such as languages or ideas that help to carry out activities, or they can be models or experiences. Rules are customs, conventions, social relationships, schedules, or processes that govern the behaviors of community members. The division of labor is the distribution of subjects' roles, powers, and responsibilities. Lastly, the community of an activity system refers to a group of people who consistently interact with the environment to pursue the object (Ng & Hung, 2003).

The activity system formed by Engeström is shown in Figure 2.2. The activity system shown in Figure 2.2 is an expanded form of the basic mediating triangle developed by Vygotsky. The triangular model consists of two overlapping triangles: the outer and inner triangles. The outer triangle of the triangular model includes artifact, rule, and division of labor components, while the internal triangle includes subject, object, and community. In activity systems, the relationship between subject and object is primarily mediated by tools; rules primarily mediate the relationship between subject and community, and the division of labor primarily mediates the relationship between community and object (Engeström, 1993).

2.2 Previous Studies

Research related to online collaborative projects is not new research. Much previous literature relating to the benefits and challenges of online collaborative projects has been carried out. Rojabi (2020) conducted a study to explore students' perceptions of online group learning via Microsoft Teams. The study included twenty-eight students at Open University. The results show that online learning promotes student-student and student-teacher engagement. Nonetheless, miscommunication is also common in online classrooms. For example, students indicate via a questionnaire that they have communication problems with their classmates and lecturers.

Suwantarathip and Wichadee (2014) investigated the effect of collaborative writing activities using Google Docs, and the results showed that students in Google Docs-based collaborative writing groups obtained higher

results than those working in face-to-face groups. Additionally, they report that students collaborate more efficiently on Google Docs, and most students highlight the ease of using Google Docs as a collaborative writing tool. Similarly, Kessler, Bikowski, and Boggs (2012) investigated using Google Docs-based collaborative writing to plan and report on research projects. Their findings showed that students focused more on the content than the form of writing and highlighted that their grammatical edits were generally more correct than incorrect.

In a wiki-based collaborative writing project, Lee and Wang (2013) studied EFL college students' perceptions, engagement, and writing developments. Two classes of sophomore college students from two Taiwanese universities participated in the study. Their study showed that participants' general perceptions of the wiki were positive, and the students were satisfied with collaborating with peers. They also concluded that participating in a joint project was challenging for students, and students' engagement varied because of their different English proficiency levels.

Kuo, Chu, and Huang (2015) studied the effectiveness of an online collaborative learning platform with TOEIC English tests as learning content. A total of 48 graduate university students participated in this study. Two experimental groups and a control group were part of this research. A pre-test and a post-test were used from a grammar book to understand the effects of learning style-based grouping collaborative learning on students' English grammar and vocabulary. The main results indicate that students who used the online English collaborative learning approach outperformed those who used the traditional paper-based collaborative learning approach.

Several studies have been conducted on online collaborative projects, especially utilizing online media platforms. Previous research has investigated the effect and use of Google Docs/Wiki on aspects of online collaborative projects, especially on student writing assignments. Previous studies explained that in the context of online collaborative project-based learning, technology has an essential role in the success of student collaboration. The novelty and difference between this study and previous studies are that this study does not focus on utilizing online technology platforms that students use when working on collaborative projects. This research also does not focus specifically on the types of online collaborative projects students undertake, such as collaborative writing projects. However, this research investigates and focuses on the benefits and challenges EFL students perceive during their online collaborative projects.

In addition, this study uses narrative review as a research approach. This narrative review approach is used because there are already related documents in previous journals or scientific articles relevant to the research topic. The existing articles need to be analyzed or collaborated to produce an in-depth understanding of the phenomena associated with this research. In addition, current technological developments make it easier for this study to find data sources from the internet and other trusted sources by utilizing existing technology. Narrative review research also has many advantages, such as obtaining many sources of information without consuming a lot of money, time, and effort.